



October 16th, 2020

JDE Project 19070

City of Barrie

70 Collier Street,
Barrie, ON L4M 4T5

RE: RE: Headlamp Review
521 Huronia Road, City of Barrie

Huronia Barrie Land Inc. [The Developer] is proposing to develop a site municipally known as 521 Huronia Road, generally located in the southeast quadrant of the Huronia Road / Loon Avenue & Commercial Access intersection in the City of Barrie [City]. **JD Northcote Engineering Inc.** [JD Engineering] has been retained to review the impact of vehicle headlamps on the adjacent residents.

According to the provincial standards, the top edge of the low-beam headlamps must not be above the horizontal line of the headlamp. Permitted headlamp mounting height ranges from 0.559m to 1.375m; however, for the purpose of this analysis we have assumed a typical mounting height for a pick-up truck / SUV / van (0.85m).

Based on our review of the typical cross-sections, light from vehicle headlamps will not have a notable impact on the existing residents that are located across from the proposed townhouse driveways or the surface parking spaces. This is illustrated in Section 1 on drawing SECT-1 in the **Appendix**.

Our analysis also included a review of the impact of headlamps for vehicles exiting from the underground parking lot (illustrated in Section 2 on drawing SECT-1 in the **Appendix**). Three scenarios were reviewed:

- 1) Vehicle travelling on the 12% slope;
- 2) Vehicle traveling on the 6% transition slope; and
- 3) Vehicle stopped at the top of the ramp.

Based on our review the headlamps for vehicles on the transition slope and at the top of the ramp will not have a notable impact on the adjacent properties, as the light will be blocked by the proposed 2.0 metre high board on board fence along the north property line.

The headlamps for vehicles travelling along the 12% slope of the parking ramp will project above the board on board fence. It is recommended that coniferous plantings are provided within the boulevard across from the parking ramp to block the light from the vehicles travelling on the 12% slope of the parking ramp. The minimum height of the plantings would need to be 2.5 metres to block the majority of the light from the approaching headlamps.



JD Engineering
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521 Huronia Road
City of Barrie

Headlamp Review

Date: 10/15/20
Project No.: 19070

We trust you will find this submission acceptable. Should you have any questions or concerns or require any additional information in this regard, please contact our office.

Yours truly,

JD Northcote Engineering Inc.



John Northcote, P.Eng.
President

Appendix



1. THIS DRAWING IS NOT INTENDED FOR CONSTRUCTION.
2. DO NOT SCALE DRAWINGS.
3. THE DRAWINGS ARE THE PROPERTY OF JD ENGINEERING AND MUST BE RETURNED ON COMPLETION OF THE PROJECT.
4. BASE DRAWING PROVIDED BY WE MERCHANDISE SPACE INC. ON OCTOBER 15th, 2020.