

May 17, 2019

Surface Developments
88 Spadina Avenue
Ottawa, ON K1Y 2C1

Attn: Jakub Ulak, President
jakub@surfacedevelopments.com

Dear Mr. Ulak:

Re: Environmental Noise Study Memo
16 Hamilton Avenue North, Ottawa ON
GWE File No.: 18-158- Memo

This memo follows our submission of an environmental noise study to satisfy site plan control requirements for the planned mixed-use residential and retail development located at 16 Hamilton Avenue in Ottawa, Ontario (ref. Gradient Wind Report #18-158- Environmental Noise R1, dated April 12, 2019). This brief letter addresses comments from the City of Ottawa regarding the relative distances and exposure angles for transportation noise due to the 400 series highway south of the site.

A summary is provided on the following pages explaining how each of the comments relating to the environmental noise study have been addressed. The number sequences and text in bold are in reference to each of the numbered comments continued in the City's correspondence.

1. TRAFFIC NOISE FEASIBILITY STUDY

1. *As per the ENCG and NPC-300 (as amended) all 400 series highways in proximity of 500m from the site is to be included in the study. Revise report according or provide engineering memo with supporting data, tables and scaled plan with distances etc. as required.*

GWE Response: The main travel lanes of Highway 417 westbound are just under 500 m from the south property line of the subject property, as measured on GeoOttawa. Based on engineering judgment and the number of dense buildings, and the existing 4 m noise wall along the highway. The Highway was ruled as an insignificant source of noise. However, Gradient Wind has performed additional calculations to

address noise from Queensway (Highway 417) located south of the site. It should be noted, STAMSON 5.04 is limited in modeling transportation sources beyond 500 meters.

The exposure angles between the highway and Receptors 1-3 ranged between -42 and 13 degrees at a maximum distance of 500 meters due to the curvature of the roadway. A roadway elevation of 73 meters was measured using recent satellite imagery and applied to the model. Satellite imagery also depicts a 4-meter-tall sound barrier which spans across the entire north side of the roadway, which assists in blocking direct line of site of the study building. Figure 1 below demonstrates the distance between the highway and the subject property.

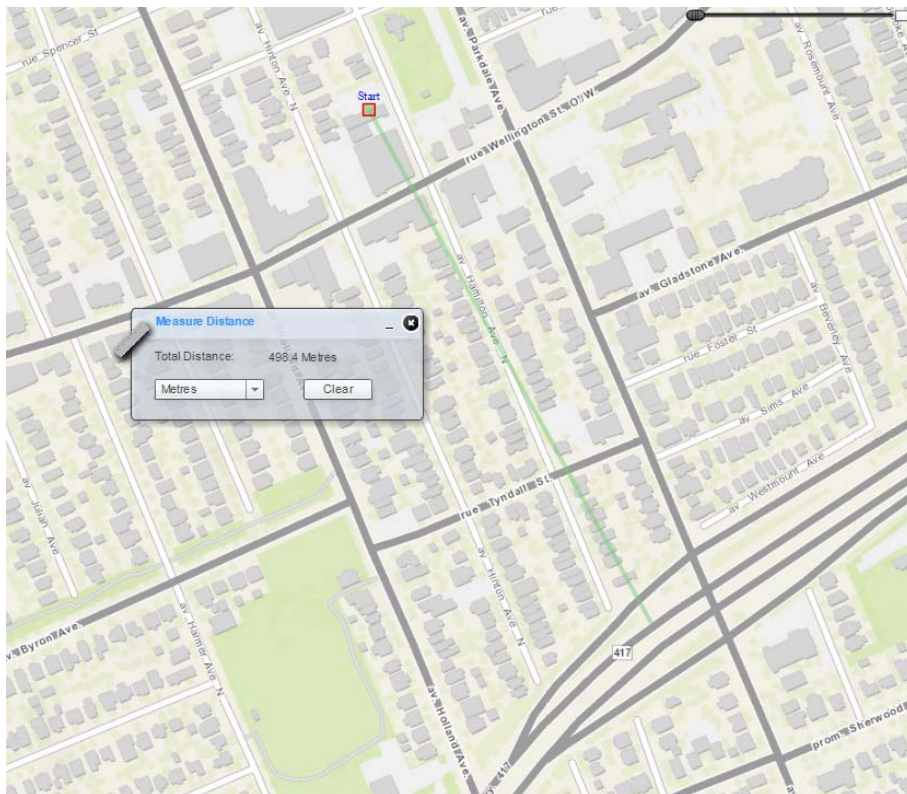


FIGURE 1: GEOOTAWA EXTRACTION OF SOURCE TO RECIVER DISTANCES

The results of the updated roadway traffic calculations, including transportation noise from the Queensway, are presented in Table 1 below. An updated Appendix A including a complete set of STAMSON 5.04 input and output data has also been provided.

TABLE 1: EXTERIOR NOISE LEVELS DUE TO ROAD TRAFFIC

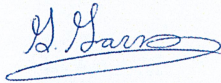
Receptor Number	Receptor Height Above Grade (m)	Receptor Location	Noise Level (dBA) Excluding Highway 417		Noise Level (dBA) Including Highway 417	
			Day	Night	Day	Night
1	6.5	2 nd Level – Front Terrace (OLA)	56	-	57	-
2	24.5	8 th Storey – East Façade (POW)	57	50	58	51
3	27.5	Rooftop Terrace (OLA)	52	-	54	-

As expected, traffic noise from the highway provides a marginal impact on the study building due to the relative distance, exposure angle, and blockage from surrounding buildings. The with and without is less than 1 dBA and the differences presented in Table 1 are more due to rounding. It should be noted that the highway is situated further from the study site than what was modelled, due to STAMSON modeling limitations, meaning sound levels experienced on site will be similar to the sound levels that were presented in our previous analysis.

Should you have any questions, or wish to discuss our findings further, please call us (613) 836-0934 or contact us by e-mail at joshua.foster@gradientwind.com. In the interim, we thank you for the opportunity to be of service.

Sincerely,

Gradient Wind Engineering Inc.



Giuseppe Garro, MASC.
Junior Environmental Scientist
GWE18-158



Joshua Foster, P.Eng
Principal