July 24, 2019

Natan Ary
Greatwise Developments
333 Wilson Avenue, Suite 200
North York, Ontario M3H 1T2

Dear Mr. Ary:

Re: Traffic Noise Assessment Cover Letter
2710 Draper Avenue, Ottawa ON
GWE File No.: 17-059- Cover Letter- July 24 2019

Following our submission of a traffic noise study for the proposed residential subdivision located at 2710 Draper Avenue in Ottawa, Ontario (ref. Gradient Wind report #17-059 - Traffic Noise Final R2, dated November 2, 2018), this brief letter addresses comments from the City of Ottawa regarding the proposed noise barrier located within the rear yard of Block 11.

A summary is provided on the following pages explaining how each of the comments relating to the traffic 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 STUDY

1. *As per the Traffic Noise Assessment prepared by Gradient Wind Engineering Inc. dated November 2, 2018 a 2.82m noise barrier is located within the rear yard of Block 11. Rear yard drainage and the rear yard overland flow route is impacted by the location of this proposed noise barrier. No details have been provided on the plan. As per the Environmental Noise Control Guidelines (January 2016) acoustic barriers should have no gaps or opening in a noise barrier. If a gap or small opening is being proposed to accommodate rear yard overland flow this would be considered a deviation requiring cover letter to be submitted from the noise consultant for review and approval stating the deviation, the reason/justification for the deviation and further analysis completed with a gap modelled within the noise barrier. Noise barrier details are required be provided on the plan.*

GWE Response: Without the wall along the west property line of Block 11 sound levels at the rear yard will be 59 dBA assuming Phase 3 massing or a noise wall to the south, see Figure 1. The STAMPSON output file for this calculation is attached to the end of this letter and Figure 2 illustrates the source to receiver distances and angles. The primary sound source at this location is roadway traffic along Morrison Drive situated to the west of the site. According to the City of Ottawa's Environmental Noise Control Guidelines (ENCG) as well as the Provincial Environmental Noise Control Guidelines (NPC-300), the sound level criterion for outdoor living areas is 55 dBA, which applies during the daytime (07:00 to 23:00). When noise levels exceed 55 dBA but are within 60 dBA, mitigation is recommended to reduce noise levels where technically and administratively feasible to acceptable levels at or below the criterion.

Gradient Wind has considered the requirements of easement access and overland drainage with the project architect and civil engineer. Given the requirement for access to the rear yards via a gate, or similar opening, a noise wall spanning the entire west side of the rear yard of Block 11 is unfeasible at this location. Any gate in an acoustic wall would significantly reduce the effect of the wall on the west side of Block 11. In addition to a gate the overland flow of the site slopes down toward the proposed wall and small gaps would be required to allow proper drainage. While small gaps of less than 20 cm at the base will not have a significant impact[1] on the performance of a noise wall, the combined effect further reduces the acoustic properties of the noise wall at this location. Since noise levels without the wall are less than 60 dBA this section of the wall can be deleted. Figure 1 outlines the location of the 2.82 meter noise wall in addition to the section of the wall replaced by a gate.

Great Wise is also proposing a third Phase of townhomes under a separate application. Should construction of this Phase begin prior to occupancy of Block 11, the portion of wall along the south property line would not be required and can be substituted with privacy fencing, as illustrated in Figure 3.

Subsequently since submitting our addendum letter dated May 31, 2019, the City in their comment letter dated July 3, 2019 have since asked for barrier details and modified warning clauses as related to comments 41 and 42.

[1] https://www.fhwa.dot.gov/ENVIRonment/noise/noise_barriers/design_construction/design/design07.cfm#sec7.1.2

Below is the modified warning clause for Block 11 and conceptual details of the noise barrier are provide in Figure 4. The structural details of the noise wall will need to be reviewed by a qualified structural engineer prior to construction of the wall. Shop drawing of the noise wall should be provided to Gradient Wind for approval prior to construction.

> *"Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing roadway traffic may, on occasion, interfere with some activities of the dwelling occupants, as the sound levels exceed the sound level limits of the City and the Ministry of the Environment and Climate Change.*
>
> *This dwelling unit has also been designed with forced air heating with provision for air conditioning. Air conditioning will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the City and the Ministry of the Environment and Climate Change.*

This concludes our addendum. 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

Joshua Foster, P.Eng
Principal

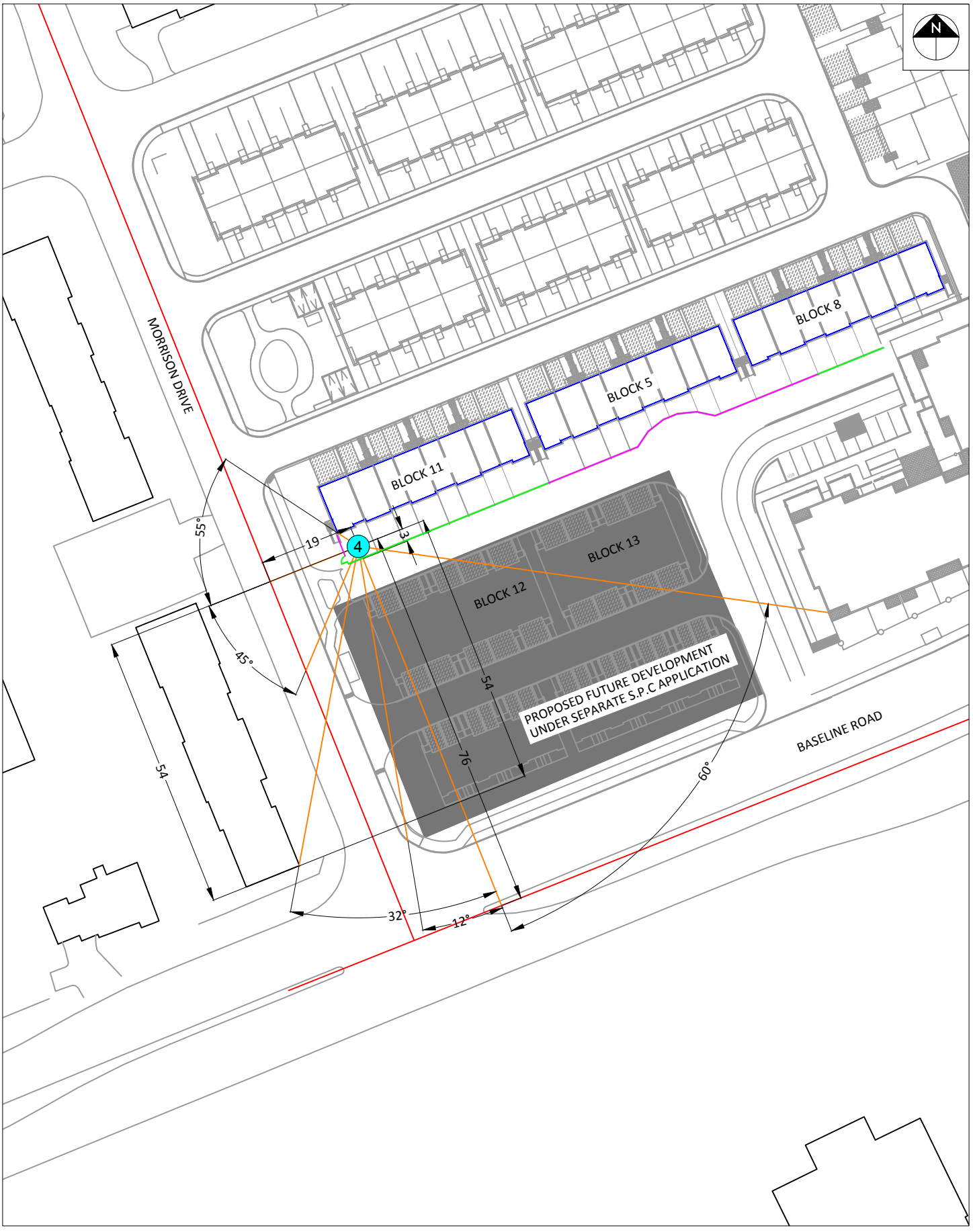
Gradient Wind File #17-059 – Cover Letter – July 24 2019

GRADIENTWIND
ENGINEERS & SCIENTISTS
127 WALGREEN ROAD , OTTAWA, ON
613 836 0934 • GRADIENTWIND.COM

PROJECT	2710 DRAPER AVENUE, OTTAWA TRAFFIC NOISE ASSESSMENT
SCALE	1:500 (APPROX.)
DRAWING NO.	GWE17-059-1
DATE	JULY 18, 2019
DRAWN BY	G.G.

DESCRIPTION

FIGURE 1:
REQUIRED GAP LOCATION FOR OVERLAND FLOW



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PROJECT	2710 DRAPER AVENUE, OTTAWA TRAFFIC NOISE ASSESSMENT		
SCALE	1:1000 (APPROX.)	DRAWING NO.	GWE17-059-2
DATE	JULY 18, 2019	DRAWN BY	G.G.

DESCRIPTION

FIGURE 2:
BLOCK 11 REAR YARD STAMSON INPUT PARAMETERS

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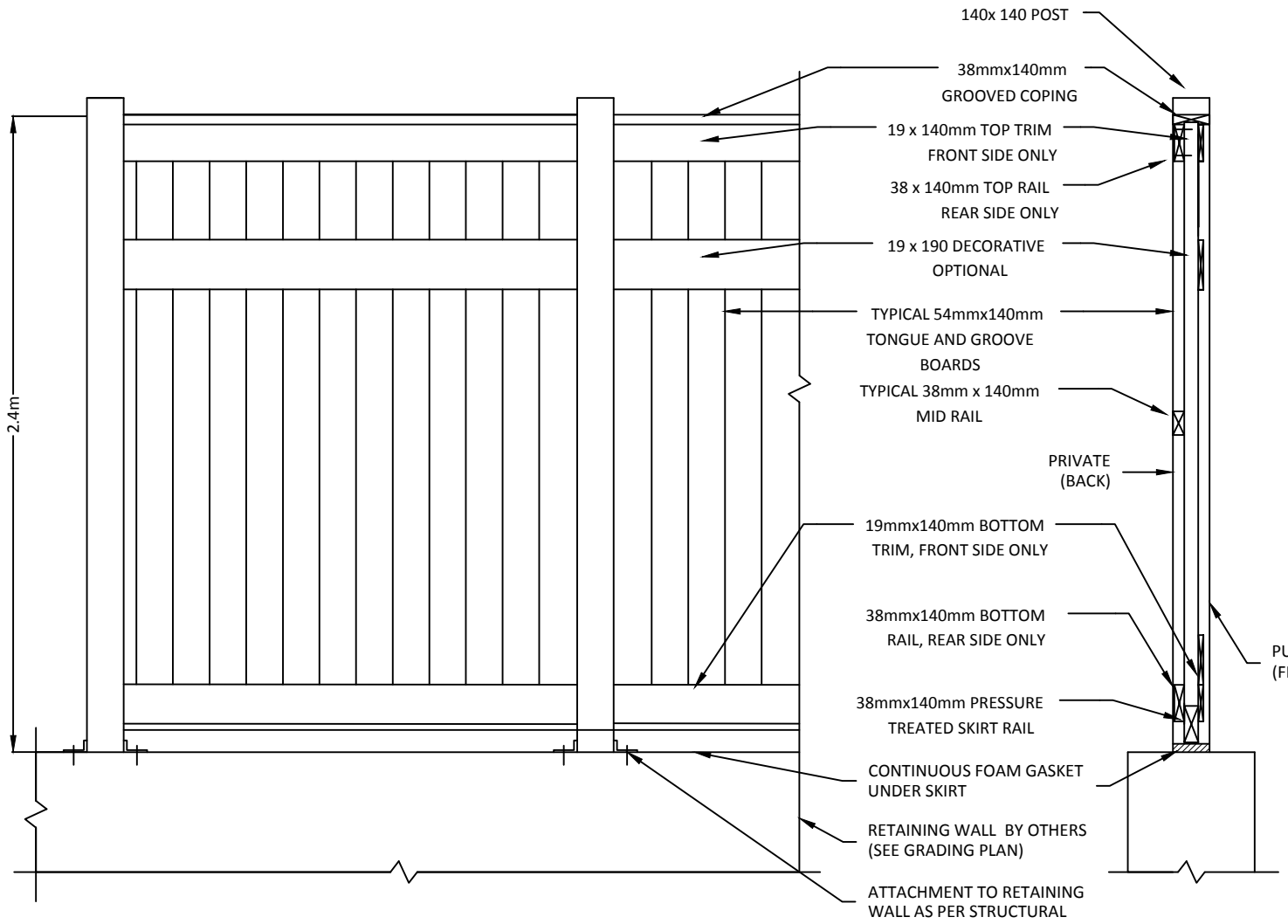
PROJECT	2710 DRAPER AVENUE, OTTAWA TRAFFIC NOISE ASSESSMENT
SCALE	1:500 (APPROX.)
DRAWING NO.	GWE17-059-3
DATE	JULY 18, 2019
DRAWN BY	G.G.

DESCRIPTION

FIGURE 3:
PROPOSED NOISE BARRIER LOCATION ALONG SOUTHERN PROPERTY LINE



NOTES:

1. ALL WOOD COMPONENTS SHALL BE PRESSURE-TREATED WOOD.
2. ALL WOOD COMPONENTS SHALL BE TREATED WITH 2 COATS OF STAIN. COLOUR TO BE APPROVED BY THE OWNER AND LANDSCAPE ARCHITECT.
3. USE GALVANIZED FASTENERS AND HARDWARE THROUGHOUT.
4. ACOUSTIC FENCE SHALL BE CONTINUOUS WITH NO GAPS AND HAVE A MINIMUM SURFACE DENSITY OF 20 kg/m2
5. ACOUSTIC FENCE TO CONFORM TO APPROVED NOISE REPORT

NOT FOR CONSTRUCTION

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PROJECT	2710 DRAPER AVENUE, OTTAWA TRAFFIC NOISE ASSESSMENT
SCALE	NTS
DRAWING NO.	GWE17-059-4
DATE	JULY 24, 2019
DRAWN BY	M.L.
DESCRIPTION	FIGURE 4: NOISE BARRIER DETAILS