

# GRADIENTWIND

ENGINEERS & SCIENTISTS

October 28, 2022

Andrew Lay  
Owner  
184 Main Street, Ottawa, ON  
K1S 1C2

Dear Mr. Lay:

Re: Traffic Noise Assessment  
180 Main Street, Ottawa  
GWE File No.: 22-312

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Gradient Wind Engineering (Gradient Wind) has been retained by Andrew Lay to provide a noise opinion letter for a 3-storey mixed-use development located at 180 Main Street in Ottawa, Ontario. This development is adjacent to a development owned by Mr. Lay for which a traffic noise study was previously conducted (GW16-053 – Traffic Noise, dated June 6, 2016). As setback distances, building footprint, and exposure to traffic noise sources surrounding the current study site are similar to the previous study, the conclusions presented for 184 Main Street can be applied to the new development. Mainly, the noise levels will range between 50 and 68 dBA during the daytime period (07:00-23:00) and between 43 and 60 dBA during the nighttime period (23:00-07:00). As noise levels exceed 65 dBA across the east façade, upgraded building components with higher Sound Transmission Class (STC) rating will be required. The ground level of the development will be used as a restaurant, therefore negating the need for upgraded components on that level. Standard building components in compliance with OBC 2020 will be sufficient to attenuate indoor noise levels to acceptable limits in the restaurant. The STC requirements for the residential spaces are seen below:

- **Bedroom Windows**
  - (i) Bedroom windows facing east will require a minimum STC of 34
  - (ii) All other bedroom windows will require minimum OBC 2020 construction
  
- **Living Room Windows**
  - (i) Living room windows facing east will require a minimum STC of 27
  - (ii) All other living room windows will require minimum OBC 2020 construction

The ground level of the development will be used as a restaurant, therefore negating the need for upgraded components on the that level. Standard building components in compliance with OBC 2020 will be sufficient.

The development will also require central air conditioning or a similar mechanical ventilation system, which will allow occupants to keep windows closed and maintain a comfortable living environment. In addition to ventilation requirements, a Type D Warning Clause will also be required to be placed on all Lease, Purchase and Sale Agreements, as seen below:

**Type D:**

*"This dwelling unit has been supplied with a central air conditioning system which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment."*

Lastly, if the east rooftop deck is to be used as an outdoor living area, it will require a 1.3 m noise mitigating guard rail around the perimeter of the deck, similar to the east terrace for 184 Main Street. 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](mailto:joshua.foster@gradientwind.com). In the interim, we thank you for the opportunity to be of service.

Sincerely,

**Gradient Wind Engineering Inc.**



Essraa Alqassab, B.A.Sc.  
Junior Environmental Scientist  
GWE22-312 – Noise Brief



Joshua Foster, P.Eng.  
Lead Engineer