

June 1, 2022

CN
c/o WSP
1600 Boulevard Rene-Levesque West
11th Floor
Montreal, Quebec
H3H 1P9

Attention: Ms. Saadia Jamil/Mr. Ashkan Matlabi

VIA E-MAIL
proximity@cn.ca

Ladies/Gentlemen:

Re: Noise & Vibration Impact Study
Peer Review
Proposed Residential Development
178 Centre Street East
City of Richmond Hill
Our File: 22-042



As requested, Jade Acoustics Inc. has reviewed the *Noise & Vibration Impact Study* dated May 27, 2022, prepared by Aercoustics Engineering Ltd. on behalf of 2702485 Ontario Inc. This report is an update of the April 22, 2022 report previously prepared by Aercoustics Engineering.

Jade Acoustics Inc. provided peer review comments of the April 22, 2022 report in a letter dated May 16, 2022.

The site is located on the south side of Centre Street East, east of Station Street in the City of Richmond Hill. The CN Bala Subdivision (principal main lines) is located to the east of the subject site. The Bala Subdivision is used by both Metrolinx and CN.

The proposed development is comprised of twenty-two, three storey dwellings and two, three storey detached dwellings.

We have reviewed the report with respect to noise/vibration issues related to rail traffic and CN. Other sources of noise/vibration have not been evaluated as part of this peer review. The CN, the Federation of Canadian Municipalities (FCM) and Railway Association of Canada (RAC) "Guidelines for New Development in Proximity to Railway Operations" (RAC/FCM guidelines) and the Ministry of the Environment, Conservation and Parks (MOE) guidelines have been used in this review. No original analyses have been conducted.

We find that the report has generally been prepared in accordance with the applicable guidelines and has responded to most of the comments in the May 16, 2022 peer review letter.

The updated report now includes the updated warning clauses, brick veneer/masonry requirements for the first row of dwellings and confirms that the ground-borne vibration measurements did include both passenger trains and freight trains.

The outstanding items are summarized below.

Noise

1. The rail traffic data from CN has not yet been provided to Aercoustics. As previously noted, the traffic data used by Aercoustics is low compared to data Jade Acoustics has obtained in the vicinity of the development. Aercoustics does note that the report will need to be updated when they receive the most current rail traffic data from CN. This approach is acceptable.
2. The Federation of Canadian Municipalities (FCM) and Railway Association of Canada (RAC) "Guidelines for New Development in Proximity to Railway Operations" were not consulted in preparation of the noise report and need to be included in the final report.
3. Though not a CN issue, the noise report is proposing that the site be designated Class 4; as per the MOE guidelines this requires mandatory central air conditioning for all dwellings. The use of mandatory central air conditioning would be beneficial to address rail noise. In addition, with the inclusion of freight trains at night, mandatory central air conditioning may be required to meet the MOE/CN guidelines with respect to rail noise.
4. The updated report has added Warning Clause "D" which is the required warning clause if mandatory air conditioning is being provided; however, the report does not recommend mandatory central air conditioning for any dwellings.
5. The proposed sound barrier is 1.8 m in height to achieve 59 dBA in the outdoor amenity areas. CN requires that every effort be made to achieve as close to 55 dBA as possible. Therefore, the use of higher sound barriers, including a berm/fence combination should be explored. This has not been addressed in the noise report. There is a note that the sound barrier requirements may change once the updated rail traffic data is obtained.

Conclusions/Recommendations

Based on our review of the noise and vibration report, we can conclude that the proposed development is feasible and can be designed to meet the CN, RAC/FCM and MOE guidelines.




We recommend that once the most current rail data is received from CN, that these peer review comments be addressed and incorporated into an updated noise and vibration assessment report as additional or alternate mitigation measures may be required to meet the applicable guidelines. A subsequent peer review is to be completed when the updated noise and vibration report have been submitted as the mitigation measures will need to be incorporated into the CN Agreement.

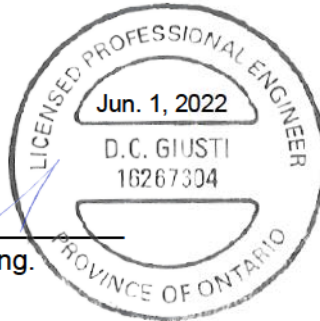
Yours truly,

JADE ACOUSTICS INC.



Per:


Dalila C. Giusti, P.Eng.



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