

January 25, 2023

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**Re: 121 Vansitmart Avenue, Hamilton, Class 4 Considerations**

**1. Introduction**

Thornton Tomasetti (TT) previously prepared the following report for the subject Site.

- *Noise and Vibration Impact Study, 121 Vansitmart Avenue Hamilton, Ontario, SW22183.00, prepared by Robert Fuller, dated November 28, 2022*

As part of the recommendations made in the above report, TT noted that a Class 4 Designation would be appropriate for the Site.

**2. Class 4 Considerations**

TT understands that preliminary communication with the City of Hamilton has identified the following items as being relevant to the discussion of a Class 4 Designation. TT's comments in regard to these items are included.

- *Identify the specific noise source that is creating issues with complying to the MECP requirements.*
  - As noted in Section 6.2.2 and 6.4.1 of the report, TT has considered both steady and impulsive noise resulting from Rail Yard activities, and found that both result in issues with complying with the MECP Class 1 requirements.
- *When stationary noise sources are involved given that in such a source the noise is measured from the exterior plane of the window and therefore enhanced windows and walls would have no barring on compliance to MECP requirements, analysis is provided as to what is the lived experience (noise levels in the unit) would be from the mitigation measures such as the enhanced windows and wall.*
  - As described in Section 6.5.1 of the report, TT has provided recommendations for façade construction in order to achieve an indoor sound level of ~40 dBAI, based on the predicted impulsive noise levels at the exterior of the façade. This would be in line with the indoor background sound levels identified in NPC-300 for transportation noise sources.

121 Vansitmart  
TT Project #SW22183.00  
January 25, 2023

- *What mitigation measures would need to be implemented in order to comply with the existing noise criteria as a Class 1 area if Class 4 area was not granted and why it is not possible or desirable to undertake those measures. (Ex. If to comply under a class 1 area a noise barrier 30m tall would be required one could argue that such as noise barrier / wall would not be desirable).*
  - Section 6.5 of the report briefly describes this, and indicates that mitigation to achieve Class 1 limits would likely not be feasible, although detailed analysis of mitigation options to achieve Class 1 is not provided. Based on preliminary modelling, a noise barrier wall in the range of ~10m tall across the entire rear of the property and partway down the sides would be required in order to meet the Class 1 impulse noise limits identified in the report. Even in that case, enhanced acoustical construction would still be prudent, due to the high level of residual impulse noise.

### 3. Concluding Remarks

As described in TT's report, the Project Site is located in a challenging acoustical environment, and a Class 4 designation would be appropriate.

Please do not hesitate to contact us if there are any questions.

Yours Truly,  
Thornton Tomasetti



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Robert Fuller, P.Eng.  
Project Engineer