

APPENDIX T

Noise Impact Assessment



MEMORANDUM

TO: Peter Yu
FROM: Megan Beauchamp / Cris delos Santos
SUBJECT: Noise Barrier Assessment – SW Agincourt Transportation Connections EA
DATE: March 1, 2023

WSP Canada Inc. (WSP) Acoustics, Noise & Vibration group completed a noise barrier assessment for the proposed road connecting Village Green Square to Sheppard Avenue East, in the district of Scarborough, Toronto, Ontario.

DESIGN OBJECTIVE

The City of Toronto does not have specific noise guidelines for road construction projects adjacent to noise sensitive land uses. However, the MECP document, “*A Protocol for Dealing with Noise Concerns during Preparation, Review and Evaluation of Provincial Highway Environmental Assessments*”, dated February 1986, suggested design objectives and has been adapted for the purposes of this assessment.

Since a new road extension is proposed to connect Village Green Square community to Sheppard Avenue East, the design objective of 55 dBA for outdoor living areas (OLA) has been conservatively chosen as the applicable criteria. The City allows up to 5 dB excess over the design objective (for up to 60 dBA) at the rear yards due to road traffic.

ANALYSIS METHOD

Road traffic sound levels have been determined using calculations of the noise levels from the road traffic using Ontario Road Noise Analysis ORNAMENT calculation procedure as recommended by the MECP.

RECOMMENDATIONS

The unmitigated sound levels at the backyards immediately siding onto the new proposed road is predicted to be up to 59 dBA. This is less than the maximum allowable sound level by the City and thus, noise mitigation measures is not required.

To comply with the design objective of 55 dBA at the affected OLAs, acoustic fences 1.8 meters in height, as shown in **Figure 1** in blue, would be needed.

Other rear yards are expected to meet the design objective without the need for noise mitigation due to increased setback distance and screening from intervening building structures.

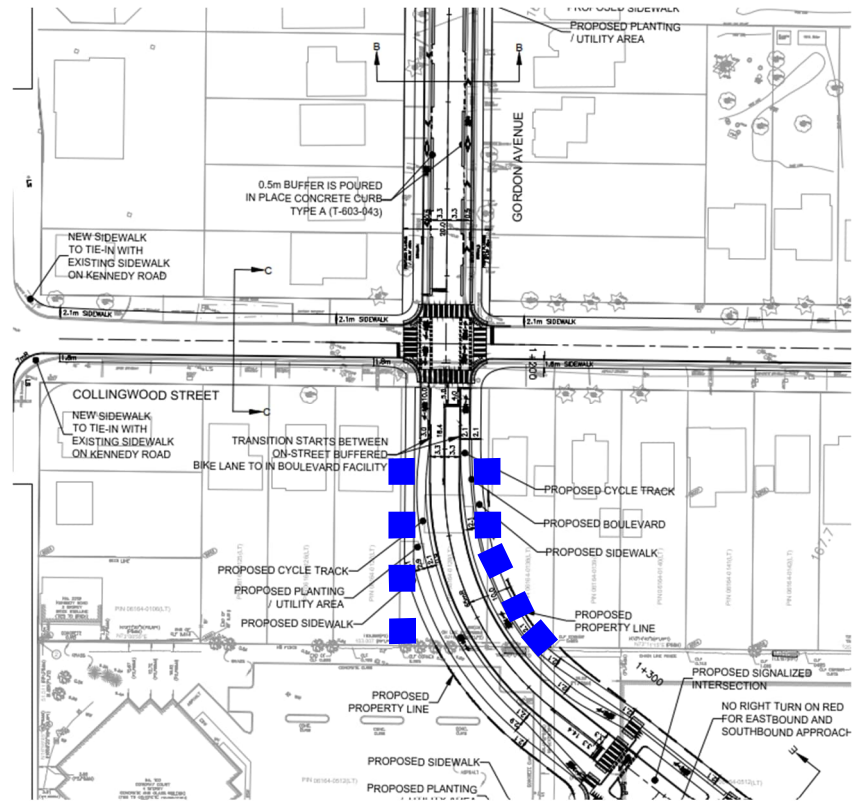


Figure 1: Location of Acoustic Fences

To be acoustically effective, sound barriers should be structurally sound, appropriately designed to withstand wind and snow load, constructed without cracks or surface gaps and must meet the minimum surface density of 20 kg/m². Alternatively, the barriers should comply with the requirements and certification of CAN/CSA-Z107.9-00 (R2004) – Standard for Certification of Noise Barriers (Reaffirmed 2004) or recent version.

Sound barriers can be constructed of wood, masonry, composite materials, earthen berms or a combination of these materials. The acoustic fence should have proper returns and should connect to the dwelling. Alternatively, this barrier can be extended along the side of the dwelling for a length equal to three times the width of the opening. If a gate is provided in the return, the gate should also meet the minimum surface density of 20 kg/m² and the vertical joints should be closed by stops or batten strips.

Yours sincerely,

Megan Beauchamp, B.Eng.
Acoustics, Noise & Vibration Specialist

Cris delos Santos, M.Eng., P.Eng.
Senior Engineer, Acoustics, Noise & Vibration