

Highway 2A Sound Mitigation Update

Date: March 16, 2026

To: Scarborough Community Council

From: Deputy General Manager, Transportation Services

Wards: Ward 25 - Scarborough-Rouge Park

SUMMARY

At its meeting on June 4, 2021, Scarborough Community Council requested Transportation Services to report back on sound mitigation along Highway 2A. In response to Community Council direction, Transportation Services retained a consultant to undertake a feasibility study to consider sound mitigation along Highway 2A.

The length studied is approximately 1.5 km per side, for approximately 3.0 km in total along Highway 2A, generally between the Highland Creek overpass and Newmains Court. The intent was to evaluate extent of transportation noise in the area and opportunities to mitigate the noise, including the exploration of building a noise barrier.

As part of the feasibility study, a noise study was completed to confirm the location and desired height of the sound barrier infrastructure and investigate alternative sound mitigation approaches, such as lowering the road classification or reducing posted speeds. Additional studies, including an Arborist Report, Geotechnical Report, and Soil Characteristic Report, were also completed. The final deliverable provided an options-assessment and a Functional Design of sound barriers and informed high-level capital cost estimates for sound mitigation infrastructure.

The City of Toronto does not have a program to assess the eligibility to implement sound mitigation infrastructure along municipal roadways or expressways. While some jurisdictions have programs for assessing the eligibility of noise wall mitigation at locations adjacent to roadways or expressways (e.g. the Ontario Ministry of Transportation, the Region of Peel, and the Town of Oakville), at the municipal level these programs typically include a requirement for cost-sharing between residential property owners and the municipality.

Given that the City of Toronto does not have a means of assessing and prioritizing eligibility for sound barriers (except where those requirements exist as part of the development approval process), or a mechanism to fund (and potentially cost-share with adjacent landowners) such infrastructure, Transportation Services does not recommend advancing the implementation of sound mitigation for Highway 2A.

RECOMMENDATIONS

The Deputy General Manager, Transportation Services recommends that:

1. Scarborough Community Council receive this report for information.

FINANCIAL IMPACT

There are no financial implications resulting from the adoption of the recommendations in this report.

DECISION HISTORY

On June 25, 2021, Scarborough Community Council adopted Item SC25.26 entitled "Safety Improvements and Sound Mitigation on Highway 2A" and in so doing, requested staff to report back on the on the Highway 2A - Toronto Hydro Street Lighting Assessment in Fall of 2021., The Committee decision can be found at: <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.SC25.26>

On April 23, 2021, Scarborough Community Council adopted item SC23.21 (Safety Improvements and Sound Mitigation on Highway 2A) and requested Transportation Services to report back in June 2021 regarding the location of existing noise barriers on the Highway 2A corridor, the status and scope of current and future noise studies, timelines, and recommendations for sound barrier infrastructure, and recommendations for additional noise studies and additional infrastructure to mitigate noise impacts. The Scarborough Community Council decision can be found at: <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.SC23.31>

COMMENTS

The study area generally extends between the Highland Creek overpass and Newmains Court and includes both sides of Highway 2A.

Existing Conditions

Highway 2A is a divided roadway with rural cross sections and a large, grassed median separating eastbound and westbound traffic. There are two eastbound and two westbound lanes with a speed limit of 80 km/h. It is classified as a City expressway in the Road Classification System. There is no direct access to Highway 2A from side streets or residential properties.

There is an existing privately-owned partial concrete sound barrier along Highway 2A, located on the south side of townhome addresses 54 through 90 on Stagecoach Circle. This existing sound barrier (constructed as part of private development) is approximately 200 metres in length with a height of approximately 3-4 metres. New

developments may require sound barriers as part of their applications based on the results of [noise impact studies](#). Existing privately-owned wooden fence structures located along the property lines are also present along various sections of Highway 2A.

Noise Impact Study

To assess the levels of vehicular traffic noise that residential areas of concern are exposed to, a noise impact study was completed. Noise sensitive receptors were placed along properties located within the noise-sensitive areas. These areas were selected as they were representative of the worst-case based on proximity and line-of-sight noise exposure to Highway 2A. The results from the study showed 80% (72/90) of residential properties along this section of Highway 2A are exposed to sound levels above 60 dBA Leq-24hr (the 24-hour average sound level, adjusted to reflect how people perceive sound) with the average observed noise level of 64 dBA Leq-24hr. 60 dBA is a threshold used by some jurisdictions to support the justification for the installation of a noise barrier, subject to other criteria related to cost and/or agreement from adjacent properties.

Arborist Report

This was completed as part of the feasibility study. The purpose of the study was to characterize baseline conditions of the existing vegetation communities within the study area and identify and inventory existing tree species. Six field surveys were conducted, and a total of 1,083 trees were assessed, ranging in size from 10 cm to 176 cm diameter at breast height. The summary of the existing vegetation conditions was used to identify constraints and opportunities during the functional design phase, indicating a preliminary assessment that approximately 250 trees would have to be removed to deliver a noise barrier.

Geotechnical Investigation

An investigation was completed as part of the project to determine the prevailing subsurface soil and groundwater conditions for the area of interest and provide geotechnical design recommendations for the foundations and earth pressure parameters. No geotechnical concerns were found in the subject area that would preclude the installation of a noise barrier.

Alternatives and Evaluation

Staff explored the possibility of erecting a noise barrier with a minimum height of 4.4 metres, which would feasibly mitigate road noise impacts by at least 5 dBA, on average, across the first row of properties closest to the expressway.

Two design alternatives were explored. The first design concept included the installation of sound barriers along the property line, at the limits of the City's right-of-way. The sound barrier would follow the residential property lines along the study area, extending to the backyards and side yards of the residences. The second design concept involves sound barriers installed adjacent to the edge of the expressway shoulders. As part of the evaluation, it was deemed that a property line alignment would be the preferred option of the two (based on a number of factors including: cost, environmental impact, impact to trees, constructability, resident disturbances, noise reduction, and maintenance).

Preliminary cost estimates were developed based on construction costs only, and in order to account for costs associated with detailed design, soil sampling, construction staging, easements, and other unforeseen costs, an additional 50% would need to be added to the total cost estimate to reflect the total cost anticipated to be required.

A cost estimate was completed for the property line alignment. The preliminary cost estimate of a full property-line barrier is estimated to be approximately \$8.7 million. This wall would provide noise abatement to 90 properties, 72 of which experience sound levels above 60 dBA Leq-24hr. This represents a cost of nearly \$100,000 per residence, or approximately \$121,000 per residence experiencing sound levels above 60 dBA Leq-24hr.

Further refinement of the design considered an approach where the barrier could be designed to target areas with the most residential properties, resulting in a barrier that would not run continuously from the Highland Creek overpass to Newmains Court and would only be built in select locations on the south side of Highway 2A. These refinements to the length of the sound barrier, limited to 57 residential properties, 49 of which experience sound levels above 60 dBA Leq-24hr, resulted in a property line barrier cost estimate of approximately \$5.1 million. For a limited treatment, targeting only the homes on the south side of the roadway, the approximate cost would be approximately \$89,000 per residence, or approximately \$104,000 per residence experiencing sound levels above 60 dBA Leq-24hr.

The City of Toronto does not have a policy or program to assess, fund, and implement sound mitigation infrastructure along municipal roadways or expressways. While some area jurisdictions have programs for assessing the eligibility of noise wall mitigation at locations adjacent to roadways or expressways (e.g. the Ontario Ministry of Transportation (MTO), the Region of Peel, the Town of Oakville), at the municipal level these programs typically include a requirement for cost-sharing between residential property owners and the municipality.

MTO's Environmental Guide for Noise includes a guideline that noise mitigation measures should be considered for study areas adjacent to highways and expressways with sound levels above the 60 dBA Leq-24hr limit. The Guide was developed for MTO's application in the analysis of highway/freeway noise, its effects, and mitigation options. Other jurisdictions may use this Guide but may need to adapt it for alignment with local requirements. MTO aims to achieve sound levels below 55 dBA Leq-16hr adjacent to provincial highways, where feasible, subject to an established cost threshold. To determine the cost threshold, under which a noise wall is generally considered to be economically feasible the provincial 'industry standard' is to use a \$100,000 per receptor limit (i.e. maximum cost per 'benefiting' property).

Based on MTO's guidelines, the proposed noise barrier would only be considered economically feasible, if limited to only the properties on the south side of Highway 2A, limiting the number of benefiting properties to 57 residences at a cost of \$5.1 million and approximately \$89,000 per residence, or approximately \$104,000 per residence experiencing sound levels above 60 dBA Leq-24hr.

At the municipal level, jurisdictions such as Brampton, Oakville, Peel, and Ottawa utilize cost-sharing models or 'local improvement charges' to fund noise wall installations, requiring residents who will benefit from the noise mitigation to provide a financial contribution to the project of between 25-50% of the overall cost. In some cases, these programs also involve a poll requiring a two-thirds resident majority demonstrating support of the project and a guaranteed noise reduction of at least 5 dB(A) to justify the investment.

Given that the City of Toronto does not have a means of assessing and justifying eligibility for sound barriers (except where those [requirements](#) exist as part of the development approval process), or a mechanism to fund (and potentially cost-share with adjacent landowners) such infrastructure, Transportation Services does not recommend advancing the implementation of sound mitigation for Highway 2A.

The Ward Councillor has been advised of the recommendations in this report.

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SIGNATURE

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