

# Manitoba Infrastructure Traffic Noise Policy and Guidelines

Manitoba Infrastructure (MI) has adopted the City of Winnipeg's "Motor Vehicle Noise Policies and Guidelines" when examining traffic noise adjacent to residential properties. The full document can be viewed [here](#).

## Purpose

1. To consider the need for attenuation of sound along Provincial highways when existing facilities are expanded or new facilities are proposed; and
2. To establish guidelines for assessing sound levels to determine when sound attenuation measures are warranted.

## Application

- » MI's noise policy is applied to highways where the land use within 100 metres of the roadway is residential with a ground level outdoor recreation area.
- » The policy is applied to new highways and to modifications to existing highways that result in the travelled lanes moving closer to existing residential lands or there is a significant change in elevation (e.g., addition of an interchange).
- » Where new residential development is built adjacent to an existing or proposed highway, the developer is responsible for noise attenuation, as required.

## Guidelines

1. When considering mitigation of traffic noise from an adjacent highway, MI uses a threshold of 65 decibel (dBA) Ldn (Day-Night Level) to measure traffic related noise in the outdoor recreation area of residential properties (deemed to be the rear yard).

2. Intruding traffic-related noise must exceed the existing sound level by 5 dBA or more if noise attenuation measures are to be considered, and attenuation measures must reduce sound levels by at least 5 dBA.
3. Considerations for implementing noise attenuation include whether noise mitigation is technically and economically feasible and whether it is broadly supported by affected residents.

## Quick Facts



- » Ldn is a 24-hour equivalent sound level with a 10 dBA penalty applied to sound levels during nighttime hours (11:00 p.m. to 7:00 a.m.) to recognize that nighttime noise is more intrusive than daytime noise levels.



- » A change in sound level less than 3 dBA is considered unnoticeable by the human ear.



- » If intruding noise is less than 5 dBA louder than the background noise, sound attenuation measures will be ineffective at achieving a perceptible reduction in sound level.



- » 65 dBA Ldn of traffic noise is a common threshold level for considering noise mitigation in many North American jurisdictions.

## 2020 Noise Study at PTH 101 and PTH 59N

- » Noise monitoring and sophisticated noise models were developed by experienced noise monitoring professionals to review traffic noise from the PTH 101 and PTH 59N interchange for existing year 2020 and future year 2035
- » Although noise monitoring was conducted in 2020 during the COVID-19 pandemic, pandemic adjustment factors were developed to adjust traffic volumes to account for non-pandemic conditions. The 2035 noise forecast modeling was based on non-pandemic conditions.
- » Study findings included the following:
  - » 65 dBA Ldn noise levels were found close to PTH 101 and PTH 59N roadways in 2020 and slightly farther from PTH 101 and PTH 59N roadways in the 2035 horizon year
  - » No residential properties experience 65 dBA Ldn or higher in the outdoor recreation area in 2020 or 2035
  - » Noise attenuation measures are not warranted based on the 2035 forecast traffic volumes

## Some Common Sound Levels for Comparison

