



Surface transportation noise policy

- The City's policy sets out conditions for noise barrier construction adjacent to residential properties.
- Crowchild Tr. is designated as a truck route with a threshold noise level L10 (peak hour) of **65 decibels**, which is equivalent to the sound of a truck 15m away.

Noise sources

- The majority of traffic noise is produced by the tires on pavement at highway speeds.
- Total noise we hear from traffic depends on numerous factors:

Traffic speed

- Slower speeds typically mean decreased noise levels.
- Free flow traffic is usually quieter than accelerating traffic.
- Removing lights and decreasing stop-and-go will normally decrease noise levels at urban speeds.

Traffic volume and type

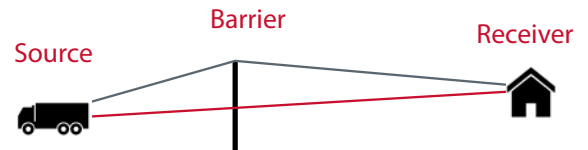
- Because the noise we hear is a cumulative quantity, fewer vehicles result in decreased noise levels.
- Barriers are ineffective in blocking sudden loud noises such as motorcycles.

Pavement conditions

- Dry pavement is quieter than wet pavement.

Noise barriers

- Noise is affected by the location of the source (see image to the right).
- Noise barriers decrease the amount of noise which reaches the receiver.
- When tall enough to break the line of sight between a roadway and the receiver, a noise barrier will effectively achieve a 5 decibel noise reduction.
- Noise barriers usually reach a practical limit of a 15-20 decibel noise reduction. After this, increasing the height of a barrier has a minimal affect on sound attenuation.



Lowered and elevated roadways

- Depending on the situation, lowering or elevating a roadway can effectively increase noise attenuation and reduce the noise heard by residents.

Common barrier types

- Including fences, walls, berms, and concrete planks (see images to the right).
- Available space, material costs, City specifications and community preference all influence which barrier type is used.

Fences



Walls



Berms



Concrete planks



Innovative barrier types

- Including curved walls, vegetative walls, green walls, and concrete walls (see images to the right).
- The City explores opportunities to implement innovative barrier types, where possible, on an on-going basis.

Curved Wall



Curved and vegetation



Green Wall



Concrete and acrylic

