

AHD Lessard Interchange Open House Noise Bullets

Criteria

- Criteria from *Noise Attenuation Guidelines for Provincial Highways Under Provincial Jurisdiction Within Cities and Urban Areas* by Alberta Infrastructure and Transportation.
“For construction or improvement of highways through cities and other urban areas where noise in residential areas is expected to exceed 65 dBA L_{eq24} , Alberta Infrastructure and Transportation will consider noise mitigation...”
- The noise levels are to be assessed for the first row of dwellings adjacent to the highway at 1.2 m above ground level, 2 m inside the property line.

Measurement Methods

- Baseline 24-hour noise monitoring at 14 locations throughout study area in May, 2007.
- Measurements with mild downwind or cross-wind conditions.
- Simultaneous digital audio recording and local weather monitoring for detailed analysis.

Modeling Methods

- Used baseline monitoring as calibration tool for baseline modeling.
- Modified baseline model with future road configurations (i.e. interchanges) and future traffic conditions.
- Modeling done with downwind conditions for all receptors relative to all noise sources (worst case).
- Future Traffic volume of 80,000 vehicles per day on Anthony Henday Drive and double the current traffic on all intersecting roads (conservative estimate)
- Sensitivity analysis with absolute worst case for traffic volumes, speeds and % heavy trucks.

Results

- Current noise climate 50 – 58 dBA L_{eq24} (well below AIT limit of 65 dBA L_{eq24})
- Future noise climate 52 – 62 dBA (below AIT limit of 65 dBA L_{eq24})
- With sensitivity analysis (worst case for traffic conditions) noise levels still below AIT limit of 65 dBA L_{eq24} at all receptor locations.