

Noise Reduction

Background	Initiatives
<p>Conceptual noise analysis by Patching Associates Acoustical Engineering Ltd. modelled “worst-case” noise impacts at the west property line adjacent to 101st Street (Rocky Ridge Road). Worst case assumptions included:</p> <ul style="list-style-type: none">• Winds from the east at 7.5 km/hour• Crusher located in the centre of the site at the top of the gravel layer.• Asphalt/concrete plants located near the 85th Street entrance• Temperature of 0 degrees <p>Key findings of the Noise Assessment Study include the following:</p> <ul style="list-style-type: none">▪ The maximum “worst-case” noise levels for extraction activities would be 61 dBA at the west property line, lower than the City of Calgary Noise Bylaw daytime maximum of 65 dBA.▪ Key noise sources that will require attention are the crushing operations and the temporary surface stripping operations near the west side of the site.	<p>Alberta Transportation and the BLV Group recognizes that noise levels from the operation should be maintained at levels that are well-below City of Calgary bylaw requirements. A combination of the following noise mitigation techniques can be used wherever feasible and appropriate.</p> <ul style="list-style-type: none">• Construction of 3-4 metre tall berm along the west edge of the operation.• Consider enclosing the crusher with a noise attenuating structure.• Placement of gravel stockpiles to provide a barrier effect to the receiver locations.• Orientation of the equipment to direct noise away from the receptor location.• Locating noise sources at lower depths (e.g., crusher will normally be located at the bottom of gravel layer, 30 metres below the surface).• Adding additional noise control to the electrical power plant enclosure.• Operator awareness when operating mobile equipment.• Limiting the duration of an activity in a particular location (limited hours of operation for specific activities).• Keeping equipment maintained for peak efficiency and overall reduction of noise.• Installing noise reducing accessories for equipment where available.