Executive Summary - City Noise Scan

Attachment 1

The framework for researching the noise mitigation approaches in other cities was to both explore opportunities and to identify and summarize trends to consider in development of CR_4772, Q2 2018. The summary from the Noise e-scan analysis presents noise mitigation tactics and approaches ranging from legislative, enforcement, education, technology and engineering application. The cities researched according to this methodology included Edmonton, Calgary, Vancouver, Ottawa, Halifax, Denver (USA) and Melbourne (Australia).

In addition, key insights were collected from four scholarly articles to determine additional approaches that are working. The data in the table below highlights these findings of the cities that adopt and apply these noise reduction strategies. The cities scanned take a multi-level approach to noise mitigation. Observed through a high level analysis - factors such as public complaints, city density, vehicular traffic patterns, environmental best practices and construction impacts affect the scope and scale the seven cities' approach to noise issues.

STRATEGY APPROACH	HOW (Operations)	WHY (Social, Economic, Environment)	CITIES THAT ADOPTED THE STRATEGY APPROACH
Sound Walls	Apply in high traffic areas, commuter routes, LRT/Trams	Reduce noise dB - Quality of Life (QOL), Public Safety Health	All 7 cities scanned[1]
Reduce Speed Limits	Reduce speed in critical areas (schools, neighbourhoods, library, hospital, downtown,etc)	Noise and speed are connected - QOL and Public Safety	All 7 cities apply some form of speed reduction[2]
Traffic Management ● Road surface (asphalt makeup) ● Speed limit control	City Planning (Engineering/Design) for new development, refurbishment, Legislation and Enforcement and Police Coordination	3 specific tools to help reduce vehicle noise on traffic routes. QOL and Public Safety.	Melbourne (Road surface, speed), Calgary (Road surface)
Noise abatement via anti-propagation or insulation ● space/proximity between road and residential area	City Planning (Engineering/Design) for new development, refurbishment	An engineering tool and technique in planning to reduce vehicle noise in dense and populated areas/centres - QOL, Public Safety,Environment.	Melbourne, Calgary
Road Speed Reducers ● Speed bumps/humps	City Planning (Engineering/Design), Community Input/Engagement, Legislation/Enforcement and Police	Reduce vehicle noise dB and public safety- QOL, Public Safety	All 7 cities scanned

[1] All cities apply sound walls to mitigate vehicular noise subject to residential proximity to high traffic zones
[2] Appetite to address sound dB and safety in zones per city and number of complaints

• Sleeping police officer	Coordination		
Road Narrowing • Concrete blocking • Traffic Islands • Parking bays	City Planning (Engineering/Design), Police Coordination	Reduce vehicle noise dB - QOL, and Public Safety	All 7 cities scanned
Urban Traffic Management • Roundabouts, • Signal controlled junctions • One Way roads • Speed limits postings	City Planning (Engineering/Design), Police Coordination	Reduce vehicle noise dB and public safety- QOL, Public Safety	All 7 cities scanned
Environmental Engineering Noise Regulation	City Planning (Engineering/Design),Legislation and Enforcement	Reduce dB - Quality of Life, Public Safety, Environment	All 7 cities scanned
Controlling Construction Noise/acoustic barriers at the source	City Planning (Engineering/Design), Legislation and Enforcement	Reduce dB, reducing negative health impacts - Quality of Life, Public Safety, Environment	All 7 cities scanned
Inspection/Enforcement of Environmental Regs	Legislation and Enforcement	Ensure compliance of keeping dB lower and reducing negative health impacts - Public Safety, Environment	All 7 cities scanned