

# SENES Consultants Limited



121 Granton Drive, Unit 12  
Richmond Hill, Ontario  
Canada L4B 3N4  
Tel: (905) 764-9380  
Fax: (905) 764-9386  
E-mail: [senes@senes.ca](mailto:senes@senes.ca)  
Web Site: <http://www.senes.ca>

## MEMORANDUM

---

**TO:** Murray Thompson, URS Canada

**FROM:** Paul Kirby

**DATE:** 13 March 2009

**CC:** Geoff Coy (URS)  
Fred Bernard, Ramani Ramkrishnan, Nick Shinbin (SENES)

**SUBJ:** SENES Review of Valcoustics Report, City of Windsor Submission

---

Further to your request we have completed a review of the Valcoustics Canada Ltd, *DRIC Windsor Essex Parkway and Greenlink Windsor, Comparative Sound Level Assessment of Greenspace/Recreational Areas and Comments on the Adequacy of the DRIC Parkway Vibration Assessment* report.

Please also note that the MTO has specific policy agreements with the MOE for transportation projects and are not subject to the policy documents referenced to by Valcoustics. The TEPA study was based on the MTO/MOE protocol *A Protocol for Dealing With Noise Concerns During the Preparation, Review and Evaluation of Provincial Highway Environmental Assessments (1996)* and its subsequent revision the *MTO Environmental Guide for Noise (2006)*.

Our summary comments are provided below:

### Noise

- The TEPA Noise and Vibration Impact Assessment did not assess the impact of noise levels on green space areas along the Windsor-Essex Parkway, as these areas are not considered as sensitive receptors. Nor did the study consider the Greenlink option.
- The Valcoustics modelling assessment appears to have been completed using Cadna-A to assess the Parkway and Greenlink options. As no modelling was completed at any receptor points in the Green Space areas for the Parkway option (as per the agency approved Acoustics and Vibration Work Plan) we do not have comparable data points to evaluate the

accuracy of the Valcoustics results. Furthermore, SENES used the STAMSON model to predict noise impacts (as per MOE/MTO requirements).

- Valcoustics did not include any consideration to tunnel ventilation in their assessment of the Greenlink; although this may only be relevant to the tunnel portals (given that jet fans are proposed). This may increase the overall noise impact for residents near portals.
- As noted above, noise assessments for environmental assessment of provincial highway projects are assessed in accordance with the requirements of the MTO/MOE protocol. It is important to note that the MOE LU-131 criterion used by Valcoustics (i.e. 55 dBA) is based on a 16-hour exposure period (i.e. 16 hr, from 07:00 - 23:00) – it is highly unlikely that an individual would be exposed for a full 16 hours in the green space areas. It may not be appropriate to use 16-hour criteria for an assessment of this type;
- It appears that the future background traffic noise was not considered in the Valcoustics assessment (i.e. simply used the minimum criteria of 55dBA), which if considered may lessen the predicted severity of the Parkway option.
- No information on the modelling parameters was included in the Valcoustics report (i.e. ground absorption, etc). Validation of the results will require additional review.

### Vibration

- The vibration levels measured at the side of the road for different operations varied between 0.05 mm/sec to 0.1 mm/sec. Similar levels of vibrations can be expected with the proposed highway alignments. These levels will further reduce at the receptor locations identified within a 25 m distance from the edge of the roadway. These locations were highlighted in the TEPA report to identify potential receptors that fall within the influence region of the highway. For most of these 138 receptors the levels would be well below 0.14 mm/sec. Only in stray instances for a roadway that may have an expansion joint, the vibration level may come close to the threshold of perception. That is the only reason these 138 locations were identified in 1.5.1 of the TEPA document.