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**Simulation of highway traffic noise with utilization of equivalent
sound level of pass-by vehicle**

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This paper presents study and building of a highway traffic noise simulation model by utilizing equivalent sound level over 20 seconds of passing-by vehicular noise in the analysis of 9 types of vehicular basic noise. The basic noise of each vehicle type is applied into the formulation of the main highway traffic noise simulation model. The coefficient of propagation and ground effect for this model is also estimated and applied to the highway traffic noise model. This highway traffic noise model is then tested for its goodness-of-fit to field observations. The testing result shows that this model provides an effective prediction for highway noise in Thailand.