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16. Abstract

Tire/road noise levels for Ohio Department of Transportation (ODOT) pavement types were investigated to provide an additional criterion for pavement selection in noise sensitive areas. Tire/road noise measurements were conducted in accordance with the International Organization of Standardization (ISO) 11819-1 Statistical Pass-By Method, the first use of this standard in the U.S. A Statistical Pass-By Index (SPBI) was determined for each pavement test, which enabled the ranking of the pavement types according to tire/road noise levels, as well as a means of comparing results with other studies conducted according to the standard. There was found to be a difference of 6.7 dB between the lowest (open graded asphalt) and the highest (random-transverse grooved concrete) SPBI for all of the pavements measured. Additionally, the data was analyzed to produce Reference Energy Mean Emission Levels for future use with traffic noise prediction modeling.

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