



RELATIONSHIP BETWEEN SPEED OF THE TRAFFIC FLOW ON RURAL ROADS AND ROAD TRAFFIC SAFETY

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The aim of this research is to perform a comprehensive analysis of the data obtained during flow speed measurements on Latvian national roads. An algorithm for data selection was developed and implemented allowing analysis of comparable and unbiased traffic flow measurement data. In the course of the work, more than 190,000,000 traffic flow record data received from the State Limited Liability Company Latvian State Roads for the period from autumn 2011 to the end of 2023. Above 42,000,000 records from 18 road sites have been selected and processed. The results obtained during the analysis are visualized by depicting flow characteristics – average daily traffic, car proportion in traffic flow, average speed, speed histograms, speed rates - V25, V50, V75, V90, V95, V99 and proportions of vehicles driven below various speed levels and speeding data. The obtained results made it possible to quantitatively evaluate the influence of speed on road traffic safety criteria. For example, an increase in the speed at which 85% of passenger cars choose to drive by 1 km/h can increase the number of fatalities on Latvian roads by at least 15%.