

Mixed Traffic Speed-Flow Behavior under Influence of Road Side Friction and Non-Motorized Vehicles: A Comparative Study of Arterial Roads in India

Authors : Chetan R. Patel, G. J. Joshi

Abstract : The present study is carried out on six lane divided urban arterial road in Patna and Pune city of India. Both the road having distinct differences in terms of the vehicle composition and the road side parking. Arterial road in Patan city has 33% of non-motorized mode, whereas Pune arterial road dominated by 65% of Two wheeler. Also road side parking is observed in Patna city. The field studies using vidiographic techniques are carried out for traffic data collection. Data are extracted for one minute duration for vehicle composition, speed variation and flow rate on selected arterial road of the two cities. Speed flow relationship is developed and capacity is determine. Equivalency factor in terms of dynamic car unit is determine to represent the vehicle is single unit. The variation in the capacity due to side friction, presence of non motorized traffic and effective utilization of lane width is compared at concluding remarks.

Keywords : arterial road, capacity, dynamic equivalency factor, effect of non motorized mode, side friction

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