

## عنوان مقاله:

Simulating the Effect of Speed Humps on the U-Turn Traffic

## محل انتشار:

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## خلاصه مقاله:

Traffic simulation represents an effective tool for evaluating the suggested alternatives to enhance traffic conditions prior to their application in real sites. U-turn sections represent examples of the complicated sections that cannot be analyzed properly without applying microsimulation approach. Recently, in Iraq, speed humps were applied in prior to the merging locations and U-turn sections to enhance traffic safety. However, the characteristics of traffic at U-turn section with the presence of speed humps have got little attention in previous literatures. This paper uses VISSIM microsimulation model to emulate traffic movements at selected U-turn sites in the cases of with and without speed humps. Three median U-turn sites have been selected where two of these sites have speed humps prior to the turning locations. Real traffic data have been obtained from these sites using video recordings to estimate specific parameters. The developed simulation models were successfully calibrated and validated with the real data. The models have been used in testing different scenarios including the effect of having different locations/ types of speed humps and finding the capacity of U-turn sections. The results showed that closer the speeds hump to the turning location is lower the time spent for merging. The time spent values are increased with the increasing of traffic speeds at humps. Higher capacity value is obtained for the site with an auxiliary lane and speeds hump compared with the other sites.

## کلمات کلیدی:

Microsimulation, traffic calming, U-turn, Speed Humps, travel time

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