

Performance of Bridge Approach Slabs in Bridge Construction: A Case Study

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Abstract : Long-term differential settlement between the bridge structure and the bridge embankment typically results in an abrupt grade change, causing driver discomfort, impairing driver safety, and exerting a potentially excessive impact traffic loading on the abutment. This paper has analysed a case of study showing the effect of an approaching slab realized in a bridge constructed at Tirane-Elbasan Motorway. The layer thickness under the slab is modeled as homogenous, the slab is a reinforced concrete structure and over that the asphaltic layers take place. Analysis indicates that reinforced concrete approaching slab distributes the stresses quite uniformly into the road fill layers and settlements varies in a range less than 2.50 cm in the total slab length of 6.00 m with a maximum slope of 1/240. Results taken from analytical analysis are compared with topographic measurements done on field and they carry great similarities.

Keywords : approach slab, bridge, road pavement, differential settlement

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