

## **ABSTRACT**

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*Electric level crossings between highways and railway lines are one of the causes of transportation problems. The problem that arises is if the volume of vehicles passing through the crossing is so dense, it causes delays and queues. The data taken during normal flow is the vehicle flow level. Speed and density, the data obtained was then analyzed using Greenshield modeling, and obtained a free flow speed ( $U_f$ ) value of 12,158 km/hour, a traffic jam density ( $D_j$ ) value of 100.47 pcu/km and a maximum volume ( $V_m$ ) of 305,378 pcu/hour at the time of observation. Meanwhile, the data taken when the crossing gate is closed is the duration of the closure, traffic flow and vehicle speed and then analyzed using the shockwave method. Based on the results of the analysis, it can be concluded that the queue conditions and maximum delays that occur in the closing time period from 18.15 - 18.30 are large and when the train passes. 292.2 seconds, the number of vehicles experiencing a queue is 2.51 pcu/km, the queue length is 44.5 meters and the level of service on the Jalan Raya Bojong Gede level crossing is E. This condition shows the poor performance of this level crossing. An alternative solution for improving road performance at this level crossing is by widening the road.*

*Keywords: Level crossings, delays, queue length, greenshield, shockwave.*

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