

ABSTRACT

Evaluation of Rigid Pavement Thickness Using AASHTO 1993 Method (Case Study: Jatake – Babakan Highway)

Refi Fauziah Andini¹⁾, Fredy John Philip Sitorus²⁾, Pratika Riris Putrianti²⁾

¹⁾ Student of Civil Engineering Department, Universitas Pembangunan Jaya

²⁾ Lecturer of Civil Engineering Department, Universitas Pembangunan Jaya

Road is a land transportation infrastructure that covers all parts of the road including its complementary buildings. The current condition of Jalan Raya Jatake - Babakan fall under the category of road pavement thickness evaluation level. So it is necessary to evaluate the rigid pavement thickness to determine the pavement thickness and how traffic volume affects it. In this study, the evaluation of pavement thickness used the AASHTO 1993 method by taking into account parameters such as design life, direction distribution, lane distribution, subgrade modulus, serviceability, reliability, standard deviation, elastic modulus, concrete flexural strength, drainage coefficient, load transfer coefficient, and design traffic volume. The research was conducted by collecting primary data regarding road conditions, traffic volume data, and daily traffic data. This data is complemented by secondary data from the Highways and Water Resources of Tangerang Regency. This data was processed and the result was that on Jalan Raya Jatake - Babakan there were 618 pcu/hour vehicles with an average volume of 536 pcu/hour during the 5 (five) days of data collection. The pavement thickness using the AASHTO 1993 method found that the rigid pavement thickness on Jalan Raya Jatake - Babakan was 8 inches. In the prediction for the next 20 years, assuming traffic growth increases by 1% annually, it is found that within 5, 10, 15, and 20 years, the pavement thickness will be 8, 9, 10, 11 inches. It can be said that at least it is necessary to add 1inch thick rigid pavement on Jalan Raya Jatake - Babakan. By evaluating this research, it is hoped that in the future a better evaluation can be carried out regarding comparisons with other methods and a more complete traffic survey.

Keywords: Rigid Pavement, AASHTO Method 1993, Traffic Volume

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