

ABSTRACT

THE EFFECT OF VEHICLE VOLUME ON THE LEVEL OF RIGID PAVEMENT AND ITS CORRELATION WITH STREET CARE COSTS (Case Study: Class I Concrete Road in Bintaro Region)

Aldiansyah Yulianto¹⁾, M. Ryan Septiady²⁾, Resdiansyah³⁾

¹⁾ *Student of Civil Engineering Department, Pembangunan Jaya University*

²⁾ *Lecturer of Civil Engineering Department, Pembangunan Jaya University*

³⁾ *Dean of Technology and Design Faculty, Pembangunan Jaya University*

This rigid pavement is generally used on roads that have quite heavy traffic, with the increasing number of vehicles it is possible for the road to be damaged in a relatively short time. But if the rigid pavement is maintained properly and remains in good condition, the cement concrete road will have a longer life. This study aims to determine the effect of Vehicle Volume on the Level of Road Damage and its correlation with Road Maintenance/Repair Costs. The research method used is qualitative, with data collection from observations or surveys directly at the location of research and data collection at PT. Jaya Real Property. The results of the Light Vehicle research ($0,000 < 0,05$), Heavy Vehicles ($0,029 < 0,05$) and Motorbikes ($0,021 < 0,05$) had a significant effect on the Road Damage Level. While Non-Motorized Vehicles do not have a significant effect on Road Damage Levels ($0.451 > 0.05$). The Light Vehicle regression equation for road damage is $Y = 12,885 + 0,006X$, which means 100 Light Vehicles per day will increase Road Damage by 0,6. The regression equation for Heavy Vehicles on Road Damage is $Y = 12,885 + 0,006X$, which means 100 Heavy Vehicles per day will increase Road Damage by 11,9. The Motorcycle regression equation for road damage is $Y = 3.008 + 0.006X$, which means 100 Motorbikes per day will increase Road Damage by 0.4. The regression equation for Non-Motorized Vehicles for Road Damage is $Y = 12,885 + (-0,027X)$, which means that Non-Motorized Vehicles do not have an influence on the addition of Road Damage Levels.

Keywords: *Vehicle Volume, Road Damage, Road Maintenance Costs*

Libraries :22

Publication Years : 1995 – 2019