

DESIGN OF RIGID HARDWARE THICKNESS WITH MANUAL METHODS OF ROAD HARDWARE DESIGN REVISION SEPTEMBER 2017

(Case Study: Jl. Jenderal Sudirman - Pahlawan, Rupert Utara)

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Abstract

Jenderal Sudirman and Pahlawan Roads, Rupert Utara sub-district is a road that is used as connecting access between villages and transportation which has an important role in the smooth mobilization of people, goods, and services. Jenderal Sudirman and Pahlawan roads have a total length of 9.1 km of the length of the road. At km 0 (zero) to km 4.5, it has been covered with rigid pavement but at km 4.5 to 9.1, it is still stockpiled with class B aggregates. With the current conditions, several problems occur in the aggregate pile, namely the surface of the road embankment with holes, so that if the rainy season the road is flooded by water and the vehicles passing through it will be disturbed. a lot of dust that disturbs road users.

To answer the problems listed above, and as the purpose of this planning, it is necessary to plan the thickness of the pavement, using the Revised Road Pavement Design Manual method of September 2017, a field survey data for the CBR value is needed to determine the strength of the basement using DCP tools, and surveys Existing road topography to obtain elongated and transverse elevation values using a water pass tool, and LHR surveys for traffic growth, and the draft budget (RAB) using the 2016 Work Unit Price Analysis method.

This research data, obtained standard LHR data, field CBR results of 6.3%, design age 40 years, type of concrete plan pavement with reinforcement (BBDT), concrete quality K-300 kg / cm², then the pavement thickness is 170 mm. using tie bars with a diameter of 12 mm, a length of 600 mm and a distance between tie bars of 750 mm, as well as a welded wire mesh reinforcement with a diameter of 8 mm with a distance of 200 mm and 200 mm long, with a planned budget of Rp. 9,023,960,000.00 (Nine billion twenty-three million nine hundred and sixty thousand rupiahs.).

Keywords: Pavement, MDPJ September 2017, and AHSP 2016.