

DRAINAGE PLANNING IN JALAN IMAN BULQIN VILLAGE BANTAN TUA KECAMATAN BANTAN

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ABSTRACT

The condition of the existing drainage that is not concretised causes silting due to the collapse of the drainage wall which is made of soil, besides that the drainage which is still walled from soil can be overgrown with wild plants, which hampers the flow of water in the drainage and causes puddles to overflow at some drainasse points to residential areas. One of the drainages that is experiencing this problem is located on Jalan Iman Bulqin, Bantan Tua Village, Bantan District.

The method used in analyzing the intensity of rainfall is using the Gumbel distribution and the Mononobe method with rainfall data obtained from the peer system, stations located in the New Strait in 2014-2018. Meanwhile, to analyze the discharge of rainfall and drainage discharge using the Rational method based on data obtained from the field, including the longitudinal profile measurement data, transverse profile, flow velocity measurement and existing water level measurements.

From the calculation, it is obtained that the existing capacity of the drainage channel on Jalan Iman Bulqin, Bantan Tua Village is $Q_n = 1.7666 \text{ m}^3 / \text{second}$. Calculation of rainfall discharge of $Q_{ch} = 0.2344 \text{ m}^3 / \text{second}$. Calculation of the channel capacity $Q_s = 2.1600 \text{ m}^3 / \text{sec}$. Planned discharge calculation $Q_T = 2.001 \text{ m}^3 / \text{sec}$. And the calculation of channel dimensions $B = 1.6 \text{ m}$, $h = 0.9 \text{ m}$, and $W = 0.671 \text{ m}$. With the construction of this drainage channel is able to provide solutions to problems that occur, especially in preventing flooding and landslides on the shoulder of the road.

Keywords : Existing Channels, Dimensions, Discharge, Rainfall.