

***DOWNSTREAM DRAINAGE CAPACITY ANALYSIS
USING HEC-RAS SOFTWARE
(Case Study: Jln.Baiz, Jln.M.Tayib, Jln.H.R.Soebrantas
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ABSTRACT

One of the areas in Pedekik Village, especially at the intersection of 3 Jln.Baiz, Jln.M.Tayib, Jln.H.R.Soebrantas, Pedekik Village, often experiences flooding with a height of 0.15-0.25 m on the road body this is caused by high rainfall at the location. This study aims to determine the existing discharge in the drainage whether it is able to accommodate the size of the design flood discharge with a return period of 5 years and to predict the height of the flood water level. The method used in this research is hydrological analysis with the maximum rainfall method, log pearson type III and calculation of plan discharge with the rational method. Hydraulic analysis uses the help of the HEC-RAS 6.5 program. Based on the results of the analysis, the maximum planned flood discharge is 2.96 m³/sec and the maximum flood water level is 2.9 m because the Q design flood discharge $> Q$ storage of the existing channel, the cross section is not able to accommodate the debir 5 years in the future. This is due to the less than optimal drainage channel in accommodating the flow discharge.

Keywords: Drainage, Rainfall, HEC-RAS