

ABSTRACT

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(XIX+95+Attachments)

Gedong Village, Pasar Rebo District, especially on Jalan Dana Karya, Dana Prasetya and Jalan H. Taiman Barat 1, is a road that is always flooded. Floods occur due to drainage that cannot accommodate excess water during high rainfall, it is necessary to redesign the drainage channel so that the water discharge can be accommodated optimally by the drainage channel and can minimize the occurrence of puddles or flooding again. The purpose of this study was to obtain the design flood discharge, channel discharge and RAB required for re-designing this channel. The area of the catchment area studied is 12,63 ha with a total channel length of 1.102 meters which is divided into 7 segments. The method used to calculate the planned flood discharge is a rational method while for hydraulics analysis using the HEC-RAS 5.0.7 software. The results of the analysis of the planned flood discharge obtained on the S1 channel is 0,280 m³/s while the existing channel discharge is 0,508 m³/s where the channel is flooded or overflows, the redesign with dimensions of 60×60 cm using U-Ditch Precast channel material. After that, a design drawing is carried out for volume calculations when calculating the budget plan. The redesign of 4 channels using U-Ditch Precast costs Rp. 844.827.905.

Keywords : Drainage, Hec-Ras, Re-planning, RAB