

THE DESIGN AND ANALYSIS OF A GRAVITY DAM

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ABSTRACT

This project report is intended primarily to serve as a subject for the undergraduate Civil Engineering students to complete their Diploma in Civil Engineering Program. The objectives of this project are to expose the project students to the process of Engineering design management and practices through the appropriate use of skills and knowledge learned throughout the Program.

In everyday life everybody need treated water to live. A suitable water supply scheme is needed to provide treated water to all the citizens. Therefore water storage is very important when the catchments due to dry period. To store water, dam is a kind a water retaining wall to stop a river flow by blocking the outlet of a river. Therefore the water will be store for the used to supply water.

To know the volume of water to store in the storage, we have to use hydrological method to determine. By estimating the yield, mass curve analysis is a very useful tool to estimate the yield by plotting cumulative runoff versus duration. Besides that, storage versus draw-off analysis also can estimate the yield of the reservoir. After that, comparison between these two methods will be discussed in this report.

Last but not least, design the gravity dam is the most interesting part in my project. In this part I will know the concept of design to figure out the shape of the dam which satisfactory with the entire safety requirement. Reinforcement is needed to reduce thermo and shrinkage of the concrete.