IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 1, May 2022
Impact Factor: 6.252

Hydrological Study and Design of Box Culvert with Comparative Study with and without Cushion Loading

Diksha R. Sakore[1], Dr. S. G. Makarande[2], Dr. P.P. Sakalecha, Prof. Ms. R. K. Kakpure[4]
PG Student/Research Scholar, Department of Civil Engineering[1]
Professor, Department of Civil Engineering[2,3]
Assistant Professor, Department of Civil Engineering[4]
Bapurao Deshmukh College of Engineering, Sevagram, Maharashtra, India

Abstract: *The hydrology and hydraulic calculations has been carried out for the proposed box culvert to justify the waterway required for the river crossing the alignment. Structural analysis is a process to analyse a structural system in order to predict the responses of the real structure under the action of expected loading and external environment during the service life of the structure. The present work reflects on the analysis and design of bridges which are the main source of human life which helps to travel from place to place. The modeling and analysis of bridge is carried out by using the software Staad-pro software. The bridge we designed is box culvert bridge. The design loads are considered as per IRC 6. Box culvert is designed by using Staad-pro and results are compared manually.*

Keywords: Reinforced cement concrete box culvert, hydraulics calculation, cushion loading, earth pressure, structural design, theoretical calculation, STAAD PRO etc.

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ISSN (Online) 2581-9429
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Impact Factor: 6.252

(Foundation and Substructure)

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