

Cost Optimization of Cantilever Retaining Wall

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Abstract: *This study researches optimal design in provisions of minimum cost of reinforced concrete cantilever retaining walls. For the optimization practice, the process which is a combination of genetic algorithm and local search method was executed. Evolutionary method was utilized in this study as it can efficiently resolve extremely nonlinear problems and problems that characteristic irregular functions as demonstrated by numerous works available in the literature. The main objective was to reduce the total cost of the wall, which covers costs of concrete, steel, and excavation. Material strength and soil characteristics are treated as design parameters where they are considered as constants during solution of the problem. This study is about analysis and design of relieving platform and cantilever retaining wall with height changing from 3m to 10m and SBC 160KN/m². It also gives comparative study such as economy, cost and bending moment of both the retaining wall. In this study it is also concluded that the relieving platform retaining wall is efficient than cantilever retaining wall.*

Keywords: Cantilever Retaining Wall.

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