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# **COST EFFECTIVE CONSTRUCTION MATERIALS AND METHODS**

**BY**

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This thesis was submitted to the Department of Civil Engineering of the University of Moratuwa in partial fulfillment of the requirements for the Degree of Master of Science in Construction Project Management

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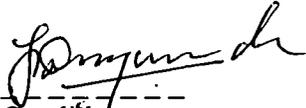


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## DECLARATION

The work included in this thesis in part or whole has not been submitted for any other academic qualification at any institution.



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## ABSTRACT

Housing demand is constantly increasing and the capital cost of construction of a house too is escalating. Main reasons for this price escalation – traditional construction materials are becoming scarce and depleting resources, traditional construction methods are becoming expensive.

This ever-increasing cost of construction is an acute problem to house builders and developers. Several cost effective building materials and methods have been introduced to Sri Lanka to reduce the capital cost involved. Out of above methods, several slab systems – NERD system, ICC's SBS system, reinforced concrete beam slab system developed by University of Moratuwa, compressed stabilized earth blocks and MCR tiles are becoming popular.

In this detailed research, cost analysis was done on already introduced popular systems and based on the cost analysis, recommendations would be made to prospective builders on actual cost effectiveness. In addition, a questionnaire survey was carried out to assess the awareness, preference and adaptability on popular systems among engineers and construction workers as well. Further, an attempt has been made to automate the cost analysis on popular systems. Now average house builders can easily obtain the cost of walling and roofing materials and slab systems once the market price of the materials are being input to the work sheet.



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