

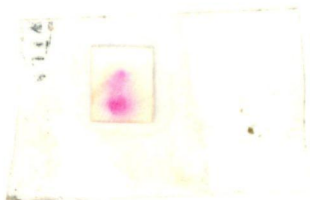
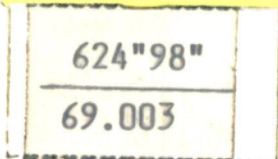
# LIFE CYCLE COSTING AND VALUE ANALYSIS FOR DESIGN OF BUILDINGS

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DEPARTMENT OF CIVIL ENGINEERING  
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**LIFE CYCLE COSTING AND VALUE ANALYSIS FOR  
DESIGN OF BUILDINGS**

BY

**SHANMUGARAJAH KUNASEELAN B.Sc(Q.S)(Hons)**

THE THESIS SUBMITTED IN PARTIAL FULFILMENT

OF

THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE

IN

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**CONSTRUCTION PROJECT MANAGEMENT**

AT

DEPARTMENT OF CIVIL ENGINEERING

SUPERVISED BY

**DR.A.A.D.A.J. PERERA**

**UNIVERSITY OF MORATUWA**

15<sup>th</sup> OCTOBER 1998



To my daughter "*Shalini*"



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## **ABSTRACT**

The research was conducted to evaluate the feasibility of life cycle costing and value analysis for design of buildings in Sri Lanka. Data were collected from different designers to analyze how the designers' design decisions vary relevant to the life cycle costing and value analysis aspects and to find what are the difficulties faced by the designers to use the same for their designs.

It was found that the most of the designers are willing to change their designs when they are considering the life cycle costing and value analysis aspects for their designs. But, there are some obstructions taking away the designers from using the same for their designs, which are explained under conclusion chapter.

Further, it was found that 93.75%(15 out of 16) of the designers do not consider life cycle costing and value analysis aspects for their design of buildings in Sri Lanka.

If the followings are satisfied, it will be feasible to perform life cycle costing and value analysis aspects for the designs of buildings by most of the designers in Sri Lanka.

- a) The awareness of life cycle costing and value analysis aspects are to be improved.
- b) There should be a readily available source of running cost and replacement period.
- c) Designers should have sufficient time period at pre-contract stage.
- d) Designers should be paid additional fee for performing life cycle costing and value analysis.

## ACKNOWLEDGEMENTS

This research project is completed with the encouragement, ideas and the ready assistance from all wonderful people I have met. Gratitude must be personally extended to every one of them.

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Further, I like to thank my wife “Bamini” who helped in several ways to prepare this document.

Finally I owe my special appreciation to my parents for giving me both spiritual and emotional support.

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## LIST OF ABBREVIATIONS

1. G.F.A            Gross Floor Area
2. LCC            Life Cycle Cost
3. LCCA           Life Cycle Cost Analysis
4. LCCM          Life Cycle Cost Management
5. LCCP          Life Cycle Cost Planning
6. NPV            Net Present Value
7. RIBA            Royal Institute of British Architect
8. V.I             Value Index



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