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THE CONSTRAINTS OF USING DESIGN AND BUILD FOR THE PROCUREMENT OF CONSTRUCTION PROJECTS IN SOUTH AFRICA

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A research report submitted to the Faculty of Engineering and the Built Environment, University of the Witwatersrand, in partial fulfillment of the requirements for the degree of Master of Science in Building.

Johannesburg, 2010

DECLARATION

I declare that this research report is my own unaided work. It has been submitted for the Degree of Master of Science in Building in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.

_____

Ndonwi Gerald Mfongeh

_____ Day of _____ (year) _____

Dedication:

This work is dedicated to my parents Mr. and Mrs. Mfongeh for their love, encouragement and total commitment toward the betterment of my life. They have compromised their well being continuously to make sure that I achieve whatever success that I have accomplished up to this moment, and still continue to guide me morally, financially and otherwise.

Acknowledgment:

My sincere gratitude goes to my supervisor, Professor Alfred Talukhaba for his guidance, advice and continuous encouragement throughout this project. I thank you very much Sir. Special thanks also go to my boss Mr. Seeraj Mohamed who created the space for me to be able to complete this work despite the tight schedules that the job usually entailed.

I thank sincerely my friends and family for all the love, support, encouragement which gave me the courage to bring this study to completion. I am thinking of my siblings, Barbara, Elvis, Vera, Ngwa and Noel, my good friend Charles Nyuykonge who edited and proofread this work, , Fon Mbakwa Emmanuel, WA Mpama, Olivier Pamen Meneukeu and Mpolokeng Manoto. I thank you all whole heartedly.

Abstract

Despite the numerous advantages that design and build has as a procurement method for construction projects, which have made it the procurement method of choice for construction projects in Europe and North America, not many South African construction companies are making use of it. This study investigates the constraints which are associated with design and build in South Africa. It also seeks to find out how certain performance indicators in construction fare when design and build is used. It then proposes recommendations on how the method can be improved in order to increase its use in South Africa.

Data for the study was collected from six major professions in the construction industry including contractors, engineers, quantity surveyors, project owners, project managers and architects in order to give a more balanced view of the problems. Questionnaires, emails and telephonic conversations were methods used to collect the data. Sample t-tests were then conducted on the data using the statistical package, Statistical Analysis Systems (SAS).

The results obtained show that there are numerous problems faced in all phases of construction projects when design and build is used as the procurement method of choice in South Africa. Most of the problems are around the issues of inadequate knowledge by project owners in construction, and also the unavailability of manpower to help owners with technical issues. Of the performance indicators investigated, time management and project quality are found to perform poorly. Project owners should deploy their own project managers in the construction process.

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