DEPARTMENT OF QUANTITY SURVEYING
FACULTY OF ARCHITECTURE, PLANNING & SURVEYING
UNIVERSITI TEKNOLOGI MARA
PERAK

# CHALLENGES DURING PLANNING FOR STEEL STRUCTURAL WORKS: A CASE STUDY OF KL118 MENARA WARISAN

Final Project Submitted in partial fulfilment
Of the requirement for award of
Bachelor of Quantity Surveying (Honours)

PREPARED BY : FARAH FARHANA BINTI HAMZAH
(2017488458)
SEMESTER : MARCH 2019 – JULY 2019

# ABSTRACT

Merdeka PNB 118, formely known as KL118 or Menara Warisan Merdeka is a 118 storey, 630-metre (2,070-foot) mega tall skyscraper currently under construction in Kuala Lumpur, Malaysia. When completed in 2020, the tower will be the tallest building in Malaysia and the third tallest in the world. This paper is aimed to study the challenge of planning process in skyscraper steel structures projects of KL118 Menara Warisan. While the objectives for this paper are to study the process of fabrication and erection planning of steel structure works, to determine the productivity of fabrication and erection planning of steel structure works and to analyse the risks faced during planning for this mega tall skyscraper steel structural project. The methodology used in this research is qualitative by interviewing. The fundamental idea of this research is to explore the challenge of planning process in skyscraper steel structures projects of KL118 Menara Warisan. This is one of mega projects that used steel structural frames in Malaysia and is a quite new challenge because of our standard construction, which uses reinforced concrete. It is recommended to assist in social development and fulfillment. Constructing productivity studies and expertise are very essential because they impact the economy of the construction sector. This is because prior crew productivity experience can save time and money during construction. Significantly, this study would be beneficial to our construction sector so that projects are more successful if the plans are carefully prepared and developed in advance.

# ACKNOWLEDGEMENT

With high gratitude to Allah s.w.t who gave me the ideas and physical strength in preparing this dissertation. I wish to express my gratitude to the person and all parties who responded to the survey and offer their contribution in carrying out this dissertation.

My gratitude also goes to all those who agreed be interviewed, for who shared their knowledge, ideas and experience during the preparation of this final project. Other than that, I would like to thank my beloved parents and family, who never stop giving me their encouragement and full support.

Last but not least, an appreciation to my friends who always give me idea and moral support in preparing this final project.

Thank You

# TABLE OF CONTENTS

# CHAPTER 1

# INTRODUCTION

## 1.1 INTRODUCTION

Construction industry is a major element in the economy of Malaysia. Any improvement in the construction industry will probably lead to a clear improvement in economy. Steel structural projects are relatively special field of construction projects because the characteristics of steel work well for industrial purposes. The productivity gains are due to technological advances in materials and construction techniques. In this sector, there are several variables affecting productivity. The construction sector is considered one of the most important sectors in particular for the building of concrete structural projects. It contributes to society's development and achievement. Successful initiatives involve careful design, up-to-date design, knowledgeable scheduling and proper construction. Projects will be more effective if plans are adequately prepared and produced accurately before executed the job. (Rashid et al 2016).

## 1.2 PROBLEM STATEMENT

KI118 Menara Warisan is the one of the mega project which is using fully steel structure frame in Malaysia and it is quite a challenge in new industry due to our conventional building which is using reinforced concrete. The steel construction processes are different from existing structural engineering projects primarily because of the specific issues to be dealt with in constructing transport, assembly and operation. (Rashid et al 2016).