



DEPARTMENT OF BUILDING SURVEYING
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING
UNIVERSITI TEKNOLOGI MARA

A COMPARISON STUDY BETWEEN BAILEY BRIDGE AND
PRESTRESSED CONCRETE BRIDGE

This academic project is submitted in partial fulfillment of the
requirement for the Bachelor Of Building Surveying (Hons.)

KAMARUL IZWAD BIN CHE KAMARUDIN
(2006699685)

APRIL 2008

ABSTRACT

This study was aimed to study about the Bailey bridge system and the reinforced concrete bridge in Malaysia. As we know, bridge is one of the road system or as a transportation medium for all people and vehicle. There are many bridge that construct based on many methods. But normally the bridge construction needs more times to construct. So, there have a problem for those who want to use the bridge immediately.



So, we have a new technology that can apply to the bridge construction that we call it Bailey bridge system which can help the construction industry and the people especially when an emergency case. The country requires road and bridges which can cope with the increasing demands of growing internal and external commercial market. Bailey bridge system is one of the alternatives to solve the problems likes in term of time, installation and labors.



Therefore, the construction of common bridge in Malaysia used reinforced bridge system. This method is totally different from the Bailey bridge system. In term of the construction method, cost, design and construction period, the reinforced concrete bridge is more complicated. This is caused by the reinforced concrete has a lot of thing to be consider before, during after the construction. These dissertations also focus the advantages and disadvantages of these two types of bridge construction and system.

ACKNOWLEDGEMENT

In the name of ALLAH SWT most Benevolent and most Merciful,

I, Kamarul Izwad b. Che Kamarudin, am so grateful to complete this dissertation. As a token appreciation, I would like to express my thank you wishes to those who offered their invaluable contributions either directly or indirectly in carrying out this dissertation. These people had given their best effort in helping me to complete this study. First and foremost, I would like to express my highest appreciation and acknowledgement to my supervisor, En Ellemy Iskandar Khalid who had gave a lot of supportive suggestion, advices and constructive criticisms in preparing this dissertation.

I also owe a special thanks to those who agree to be interviewed formally or informally which gave meaningful and valuable information for their knowledge, views and experiences and times for the purpose of this dissertation goes to such people from:

- Lt Col(R) Tan Koon San, Manager Solid Partner Sdn.Bhd
- En Abdol Rahim b. A. Talib, Manager RC Development Sdn. Bhd.
- En. Ir. Salihudin Hassim, Engineer RC Development Sdn. Bhd.
- En. Shuhamizan b. Mohammad Shukor, Site Supervisor RC Development Sdn. Bhd.
- En. Gopinath A/L Muniandy, Project Manager Acre Works Sdn. Bhd.

I also want to convey my special thanks to my parents, my siblings and my friend for the untiring encouragement and help me through the process of preparation of this dissertation until the very end. Without them, it would be a long and bitter struggle to destination. Thank you for the constant support, understanding and patience.

And for those are by no mean exhaustive, I would like to express my greatest appreciation for making this dissertation completed and gratitude to those who mere directly or indirectly involved in making this final report success. Without these people, it would not have seen the light of the day.

I hope that the experience and knowledge gained during this research would be useful to all in future.

Thank You.

Kamarul Izwad b Che Kamarudin
Department of Building Surveying,
Universiti Teknologi Mara, Shah Alam.

LIST OF CONTENTS

| CONTENT | PAGE |
|-----------------------|------|
| Abstract | i |
| Acknowledgement | ii |
| Contents | iv |
| List of Figures | xii |
| List of Table | xxi |
| List of Abbreviations | xxii |

| | |
|-----------|--------------|
| Chapter 1 | Introduction |
|-----------|--------------|

| | | |
|-----|--------------------------------|---|
| 1.1 | General Background | 1 |
| 1.2 | Aim | 3 |
| 1.3 | Objective | 3 |
| 1.4 | Scope of Study and Methodology | 4 |
| 1.5 | Framework of the study | 6 |
| 1.6 | Outline of chapter 1-7 | 7 |