

**A LESSON FROM THE SEDYATMO PACKAGE 4 ADDITIONAL ELEVATED LANE  
TOLL ROAD PROJECT**

ENDAR TRI PRAKOSO

A thesis submitted in fulfillment of the  
requirements for the award of the degree of  
Master of Science (Construction Contract Management)

Faculty of Built Environment  
Universiti Teknologi Malaysia

JULY 2011

## ACKNOWLEDGMENT

The first and foremost, I would like to thank Allah SWT, the Compassionate and the Merciful, for blessing that enabled me to finish this thesis.

This thesis was completed with the contribution of many people whom I would like to express my sincere gratitude. They have contributed towards my understanding and thought.

In preparing this thesis, I was in contact with many people, authors, academicians, and practitioners. They have contributed towards my understanding and thoughts. In particular, I wish to express my sincere appreciation to my main thesis supervisor, Dr. Yahya Mohamad Yatim, for encouragement, guidance, critics and friendship. Without his continued support and interest, this thesis would not have been the same as presented here.

I am also indebted to Ministry of Public Works Indonesia for funding my master study, PT Adhi Karya (Persero) Tbk. for supporting my master study also give their assistance in supplying the relevant literatures.

I would like to acknowledge the support given by Prof. Ir. Iswandi Imran, MASc.,Ph.D., P.Eng., all key personnels, and Companies that involved in Sedyatmo Package 4 Additional Elevated Lane Toll Road Project made this thesis possible.

My fellow postgraduate students should also be recognised for their support. My sincere appreciation also extends to all my colleagues and others who have provided assistance at various occasions. Their views and tips are useful indeed.

Finally, thank you to my beloved wife, my children, my parents who always have strong faith in me and provide me with countless support in terms of time, materials and morals.

## ABSTRACT

*The construction of additional elevated lanes in the Prof. Dr. Ir. Sedyatmo Toll Road (Sedyatmo) on both its north and south sides was a fast track project to provide better accessibility to Jakarta's International Airport Soekarno-Hatta and vice versa. Sedyatmo designed using pile slab bridge structure. Pile slab bridge is a structure which consists of a reinforced concrete slab in one direction (one way slab) and supported by the pile group system. This structure has been tested for application and suitable for soft soil condition. In the phase of construction Sedyatmo, many factors challenges the Contractor to complete this project on time. Demand of toll road project in Indonesia nowadays is still promising. Challenges in optimizing design, cost and construction method of Sedyatmo should be a lesson learned when dealing with the next future project similar to Sedyatmo. The objectives of this study are to compare the design, cost and construction method of Sedyatmo and to suggest factors should be followed when dealing with the pile slab structure project similar to Sedyatmo. Three designs pile slab of Sedyatmo is Original Design, Propose Design and Review Design. Comparasion analysis are employed to compare these design, cost and construction method respectively. Qualitative analysis on key personnels Sedyatmo is conducted to search suggest factors. The analysis found that among those designs, the most desirable is Review Design. The analysis also suggest that factor construction resources are the most suggest factor which should be followed. It should be noted that the best alternatives found in this study are limited to Sedyatmo. If this lesson used, are applied for other projects, they may not yield the same results. This is mainly due to the uniqueness and circumstances of each project.*

Keywords : toll road, highway, pile slab, bridge, cost, design, construction method, suggest factor, project.