

THE FINAL PROJECT

**THE PROJECT EXECUTION PLANNING
FOR HIGHWAY CONSTRUCTION
IN PAINAN - KAMBANG
(FROM STA 79+300 TO STA 83+181 AND
FROM STA 88+000 TO STA 91+050)**

*This report is intended as eligible to get Diploma III degree
Academic Year 2007/2008*

By :

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2008**

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**The Project Execution Planning for Highway Construction in Painan – Kambang
From Sta 79+300 to Sta 83+181 and From Sta 88+000 to Sta 91+050**

The Final Project for Diploma III Degree by Diyenti Yuliana
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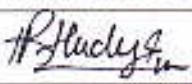
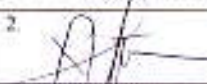


ABSTRACT

Highway is one of land transportation facility that supporting economic of society, so that it needs effective step in executing the highway project construction to achieve a good result, and also can give services and comfortable for any parties that using the highway. Therefore, the highway from Painan – Kambang (West Sumatera) should be up graded and enhanced its function, so that, the first step is a plan for executing the highway project by arranging the final project with the title is:

**The Project Execution Planning for Highway Construction in Painan – Kambang
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The cost estimates for executing the highway with the length 6.931 km is Rp 19.755.840.000 (nineteen billions seven hundred fifty five millions eight hundred forty thousands rupiah) and the duration for executing the highway project by using Precedence Diagram Method is 112 days. Controlling (quality control, time control, and cost control) are needed to help each people on structure to meet the highway specifications. The specific evaluation is flexible pavement design by using "Metoda Analisa Komponen" from Bina Marga. The real project consist of widening and overlay. However, in specific evaluation it is assumed that the project is new and some data are assumptions therefore the result is different that the real project. The design of pavement layer of specific evaluation are Asphalt Concrete Wearing Course (AC-WC) = 4 cm, Asphalt Concrete Binder Course (AC-BC) = 5 cm, Class A Aggregate (Base Layer) = 20 cm, and Class B Aggregate (Sub Base Layer) = 27 cm.

The final project had been presented in the evaluation test and graduate on **August, 29th 2008**. The abstract had beed approved by evaluation team are as follows:

Signature	1. 	2. 	3. 	4. 
Name	Rahmi Hidayati, ST., M.EngSc	Revalin Herdianto, ST., M.Sc	Ir. Syarifullah Aji, MT	Agus Karnar, ST., M.Eng

Approved by:

Head of Civil Engineering Department : **Wisafri, ST., MT**
131 884 448


Signature

The Alumnus had registered to Andalas University with the number of Alumnus:

	Name	
No Faculty Alumnus:	Name:	Sign:
No University Alumnus:	Name:	Sign:

CHAPTER I

INTRODUCTION

1.1. Background of The Final Project

Faster development of technology increases the society needed in good and service aspects. Highway provides land transportation facility that has important role in distributing goods and services. The good highway is very needed to fulfill the society needed and to support the economic growth. Human resources that have suitable skills are needed to design and construct a good highway.

Polytechnic of Andalas University as a Professional Education Institute obliges the students to make the final project as a condition to follow the final examination. The final project shows the ability of students in mastering sciences that have been given during study in Politechnic of Andalas University. The alumni are hoped to have a high performance as a human resource and professional labor especially in Civil Engineering field.

In writing the final project, the students are instructed to know the execution of project in construction site and students are expected to able to make a cost planning of the project. Based on approval from the Head of Civil Construction Program and the Supervisors, therefore the title of this final project is "**The Project Execution Planning For Highway Construction In Painan – Kambang (From Sta 79+300 to Sta 83+181 and Sta 88+000 to Sta 91+050)**".

1.2. Objectives of The Final Project

The objective of this final project is to complete the Diploma III program according to the rule of Polytechnic of Andalas University.

The objectives of this final project are as follows:

a. General Objectives

Implementation of successful of acceptance knowledge and its application during education in Polytechnic of Andalas University.

b. Specific Objectives

1. Cost estimating of highway project execution.
2. Understanding construction methods in project execution.
3. Arranging the organization structure of contractor to control the project execution based on the Time Schedule as planned.
4. Arranging Network Planning by using Precedence Diagram Method (PDM) and Time schedule include S – Curve
5. Designing the flexible pavement thickness based on the conditions of sub grade.

1.3. Methodology

a. Site Investigation

Observe the application of knowledge in real conditions in executing the project at construction site.

b. Literature Review

Review related references as a source of knowledge to solve the problems.

c. Interview

Interview with persons that involve in the project such as owner, consultant, and contractor.

1.4. Scope of Writing

Scope of writing of this final project are as follows:

1. Calculating estimate of the project cost
2. Making Network Planning by using Precedence Diagram Method and Time Schedule include S – Curve of the highway project
3. Explaining structure of the contractor that is needed in project execution
4. Explaining the construction methods
5. Explaining the project control such as quality control, time control, and cost control
6. Designing the flexible pavement thickness by using “Metoda Analisa Komponen” from Bina Marga

CHAPTER VI

CONCLUSIONS AND SUGGESTIONS

1 Conclusions

Conclusions of analyzing the highway construction in Painan – Kambang are as following:

1. Based on the cost estimates that had been calculated, the cost estimates for the Painan - Kambang project is Rp. 19,755,840,000,00 (Nineteen Billions Seven Hundred Fifty Five Millions Eight Hundred Forty Thousands Rupiah). The project comprises of 23 work items and the items are calculated according to unit price of materials, equipment, and labor fees in the construction site.
2. Based on the Time Schedule and Precedence Diagram Method, duration for executing Painan - Kambang project is 112 days.
3. Based on the specific evaluation for the flexible pavement thickness design that used "Metoda Analisa Komponen" from Bina Marga, the thickness of each pavement layer are as follows:
 - Asphalt Concrete Wearing Course = 4 cm
 - Asphalt Concrete Binder Course = 5 cm
 - Base (Class A Aggregate) = 20 cm
 - Sub base (Class B Aggregate) = 27 cm

2 Suggestions

Suggestions after making a plan of the highway construction in Painan – Kambang are as follows:

1. It is better if cost estimates are calculated accurately and carefully according to the latest unit price at the time.
2. In arranging the time schedule, it needs to consider about the problems that can cause delay and how to run the project according to time schedule as planned.

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