

FINAL PROJECT

PLANNING OF PROJECT REALIZATION  
OF ROAD DEVELOPMENT AT BOUNDARY OF  
PAYAKUMBUH CITY - BOUNDARY OF RIAU  
(KM 162 + 000 – 168 + 000)



This Final Project Is Intended To Complete The Academic Terms  
In The 6<sup>th</sup> Semester Academic Year 2007 / 2008

*By :*

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2008

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|                                                                                                                                                                                                                                                                                                                                               | No of University Alumnus: | ANDI MARTALATA | No of Faculty Alumnus: |
|                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>PERSONAL IDENTITY</b>  |                |                        |
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**Planning of Project Realization of Road Development at Boundary of Payakumbuh City - boundary of Riau (Km 162 + 000 - 168 + 000)**

The Final Project for Diploma III Degree by Andi Martalata and Autika Tria Putri  
Supervisor 1: Fauna Adibroto, ST., MT Supervisor 2: Lus yana, ST., MT

**ABSTRACT**

Road is one of supporter medium for economic of society, so that it needs effective way in executing the road project construction to achieve a good result, and also give the comfortable for any parties that using the road. Therefore, the road from Payakumbuh to Riau (Sumatera) with the road length is 69 Km should be up graded and enhanced its function, so that, the first way is planning for executing the road project by arranging the final project with the title is:

**Planning of Project Realization of Road Development at Boundary of Payakumbuh City - boundary of Riau (Km 162 + 000 - 168 + 000)**

In executing the road with the length is 6 Km, the Cost Estimating is just about Rp. 21.930.287.000,00. The duration for executing the road project is 144 days. The organizational structure and controlling (quality control, time control and cost control) are important things in achieving the successful project execution.

The specific observation planning thick of flexible pavement design for the subbase course of road project in Payakumbuh - Riau by using Bina Marga Method, the result is differ from the real road construction design because of some assumption data in designing the specific observation.

The final project had been presented in the evaluation test and certified on **August, 26<sup>th</sup> 2008**. The abstract had been approved by evaluation team as follows:

|           |                                                                                     |                                                                                        |                                                                                          |                                                                                          |
|-----------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Signature |  | 2.  | 3.  | 4.  |
| Name      | Fauna Adibroto, ST., MT                                                             | Rahmi Hidayati, ST., MFEngSc                                                           | Apwidhal, ST., MT                                                                        | Mofika Natalia, ST                                                                       |

Approved by:

Head of Civil Engineering Department : **Wisvafri, 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 Writing

Remember development of technology in some sector, so it needs enough professional and science to confront. Therefore, government tried improving quality of human resource to professional, intellectual, and ready for use. One of way is improving development in science and technology at university.

Education in polytechnic with study on 3 years which student get some theory educate and practice educate with supported by laboratory and workshop.

Oriented on curriculum in Polytechnic Andalas University, students will study on 3 years, so every student will graduate study obliged to make final duty. A purpose is evaluation general ability in getting understands Theory College from Polytechnic Andalas University.

According to program study civil construction, so in writing of final duty, writer is choosing title **"Planning of Project Realization of Road Development at Boundary of Payakumbuh City and Boundary of Riau (Km 162 + 000 - 168 + 000)"**.

Base of writing with opinion the following :

1. Writer has gotten data to need for final duty.
2. This project has fulfilled terms for final duty solution.
3. Writer has gotten agree from leader of study program and supervisor.

### 1.2 Intention and purposes of writing

#### 1.2.1 Intention Of Writing

Intention from final duty writing to finish study Diploma III in semester IV as term by Polytechnic Andalas University.

#### 1.2.2 Purposes Of Writing

Purposes from final duty writing are :

General purposes :

1. For evaluation by efficacy of acceptance and applying of science, writer gets during following study in Polytechnic Andalas University.
2. For evaluation skilled, education, and mental attitude by writer in confront industries working word in the future.

Specific purposes :

1. Writer can read picture in contract document.
2. Writer can understand bestek (work planning and work terms).
3. Writer can calculate volume from a working and calculate equipment cost analysis per jam in road project.
4. Writer can make Net Work Planning (NWP) and Time Schedule from a project realization.

### **1.3 Data collection technic**

For getting data and complete information and detail as support in writing of final duty, writer collect with method :

#### *1. Interview*

Writer can get data and information with questions and answers to partials in project consist of material, project data, realization technic, and anything for needed.

#### *2. Literature*

This method does to getting data by reading and shop drawing with terms fixed in contract document. Besides, writer also found references in library according to types of problem.

#### *3. Observation*

This method, writer gets data and information with direct observe in place of project realization about cost of material, fee, and field condition.

### **1.4 Limited Discussion of writing**

As for limited solution in writing of final duty :

1. Management of project realization of road development at Boundary of Payakumbuh City - Boundary of Riau (Km 162 +000 s/d 168 + 000).

## CHAPTER VI CONCLUSION

### 6.1 Conclusion

From final duty have been write and explained before, in planning project realization of road development at Boundary Of Payakumbuh City - Boundary of Riau (Km 162 + 000 s/d 168 + 000), writer can conclusion:

1. Base on result of analysis, it gets cost estimate Rp. 21.930.287.000,00 (Twenty one billions, nine hundreds thirty million, two hundred eighty seven thousand rupiahs).
2. Base on analysis of project time realization with diagram of NWP (Net Work Planning) and time schedule can get duration during 144 days of calendar (one hundred fourty four).
3. Something that are required to be aware in calculate the cost estimate of project are calculate the working item, analyzing the equipment capacity and heavy equipment coefficient, finding the unit price of material, and also unit price of salary.
4. From result of planning thick of flexible pavement with component analysis method, its get formation of road pavement course. We choose alternative I because more economic, where sub base 53 cm, base 25 cm, and laston AC 10 cm with cost per  $m^3 = Rp.427.941,93$ . We can conclude that thickness design of pavement is different with the project design before. Its have sub base 30 cm, base 30 cm, and laston AC 10 cm with cost per  $m^3 = Rp.466.896,44$ .

### 6.2 Suggestions

From result in this final duty report, so writer can to give suggestion such as :

1. In to calculate of cost estimate, need complete data and suitable with condition project.

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