

TRAFFIC ANALYSIS

7

BY

MITSINGAS LEFTERIS

PROJECT REPORT

BY

The department of civil Engineering
Of the higher technical institute
NICOSIA CYPRUS

For the requirements of the diploma of

TECHNICIAN ENGINEER

In

CIVIL ENGINEERING

JUNE 2000

HIGHER TECHNICAL INSTITUTE	PROJECT NO. <i>3084</i>
----------------------------------	----------------------------

Acknowledgements:

I would like to thank the following people for their valuable help in the completion of my project report:

Mr. Nicos Kathijotes- my supervisor,

Mr. Yiannakis Hatjiosif-of the public works department.

LIST OF CONTENTS

Acknowledgements.....	Page.2
Summary.....	Page.4
Introduction.....	Page.5
PART I.....	Page.7
1.1 The importance of transportation	Page.8
1.2 History of roads.....	Page.9
1.3 Problems caused by traffic.....	Page.11
1.4 Safety.....	Page.14
1.5 Accidents	Page.15
PART II.....	Page.23
2.1 Vehicle flow surveys	Page.24
2.2 Vehicle weight surveys.....	Page.28
2.3 Speed surveys.....	Page.29
2.4 Parking use surveys.....	Page.31
Figures.....	Page.33
PART III	Page.34
3.1 Study and analyse of the assigned case.....	Page.35
3.2 Appreciation of the problem.....	Page.36
3.3 Design Parameters.....	Page.37
3.4 Modelling.....	Page.37
3.5 Numeric assessment of the existing problem.....	Page.38
Measurements	Page.39
Solutions for the problem.....	Page.43
Conclusions	Page.48
Figures	Page.49
Pictures	Page.56

Summary

The objective of this project was to perform a general study on traffic engineering and traffic analysis. On the theoretical part, a research was performed on road traffic problems in urban areas (Part I) and methods of traffic analysis were stated (Part II). The main problems analysed were those of emission, safety, accidents etc.

As far it concerns the traffic analysis, different methods of traffic surveys were explained.

On the practical part (Part III), an assigned case, that of the Agrotis traffic lights up to the presidential roundabout had to be studied. At that particular area the main problem is that of too much traffic. The purpose was to find out some reasonable and workable solutions in order to eliminate the traffic problem. Two of the solutions and the drawings were obtained from the Public Works Department.

INTRODUCTION

‘Traffic engineering is that part of Engineering which deals with the traffic planning and design of roads of frontage development and of parking facilities and with the control of traffic to provide safe, convenient and economic movements of vehicles and pedestrians.’ This is the definition adopted by the Institution of Civil Engineers.

TRAFFIC ENGINEERING is very important and has arisen in time from civilization. The first vehicle was invented and therefore the need for designing roads was a must, as it is needed in everyday life.

The increase of vehicles over the past few decades has caused some problems in areas such as the volume of traffic and also pollution. Solutions must be made and these problems demands more than just designing, as accidents must be reduced and congestion on roads have to be relieved. This is my aim i.e. engineer.

To help this situation important criteria should be considered to help and fulfill the purpose of road design i.e. the present and future capacity. Roads should not be designed for the future as the increase in vehicles and roads are continually enlarging in everyday circumstances.

The economic criteria should also keep to a budget and should not exceed the limit, as it should work on the advantage of the economy.

Information and data should be collected to find out where the drivers wish to go i.e. direction. Also the size of the vehicle

Should be considered to make urban roads safer. This is why traffic studies should be made.