HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DESIGN OF THE ELECTRICAL SERVICES OF A LUXURY HOUSE

BY: MARIOS CHRISTOFI

E 1427

ACADEMIC YEAR

2007 / 2008

HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DESIGN OF THE ELECTRICAL SERVICES OF A LUXURY HOUSE

BY: MARIOS CHRISTOFI

E1427
ACADEMIC YEAR
2007/2008

CONTENTS

Socket outlet design

CHAPTER 4:

V.R.V calculation

CHAPTER 5:

Motor and Boiler circuit design

CHAPTER 6:

Swimming pool

CHAPTER 7:

Diversity and main supply cables

CHAPTER 8:

Single line diagrams

CHAPTE 9:

Bonding and Earthing

CHAPTER 10:

Inspection and testing

CHAPTER 11:

Lightning protection system

CHAPTER 12:

Fire alarm system

CHAPTER 13:

PV panel installation

CHAPTER 14:

T.V/Stature cabling for LAN/Telephone

CHAPTER 15:

ACKNOWLEDGEMENT

I would like to express my thanks to my project supervisor Mr. G. Avraam , lecturer of the Electrical Engineering Department of H.T.I., for his guidance and assistance given to me through the project period. Furthermore I would like to express my thanks to my family for their valuable support that they gave me during my studies in H.T.I., especially through the project accomplishment period.

ABSTRACT

The purpose of this project is to provide in detailed steps the way that a proper electrical installation takes place in a luxury house. The objective of the electrical installation is to provide safety of any possible injuries or damages that can take place due to a faulty electrical installation, as well and livestock to the user.

The whole design is based to IEE wiring regulations of 16th Edition, as well and local EAC and CYTA regulations.

In this project that is made up of several chapters so that to simplify it's study, the design of the electrical services of a luxury house is explained in detail.

At the end of this report, appendices providing technical specifications for the devices and equipment used can be found, and eventually architectural drawings are provided showing the detailed locations of the various loads and equipment used.

INTRODUCTION

This project deals with the electrical installations and the specialized electrical services of a luxury house, including specifications, drawings, and typical calculations of the design.
The design of the whole electrical installations of the luxury house is represented in this project report.

Objectives:

1. To design the complete electrical installation of a luxury house that includes the following:

- Illumination design
- Lighting Circuit design
- Fixed Electrical appliances
- Socket outlet design
- V.R.V Calculation
- Motor and Boiler Circuit design
- Swimming Pool
- Diversity and main Supply Cables
- Single Line diagrams
- Bonding and Earthing
- Inspection and testing
- Lightning protection system
- Fire Alarm system
- PV Panel installation
- T.V/ Stature cabling for LAN/ Telephone

2. To provide all necessary diagrams, schedule of materials and costing including labour.