

HIGHER TECHNICAL INSTITUTE

**ELECTRICAL ENGINEERING
DEPARTMENT**

**DIPLOMA PROJECT SUBMITTED FOR
THE PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DIPLOMA OF
TECHNICIAN ENGINEER IN
ELECTRICAL ENGINEERING**

**DESIGN OF THE ELECTRICAL
SERVICES OF A LUXURY HOUSE**

E. 1334

ADAMOU ADAMOS

JUNE 2004

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CONTENTS

	Page
Acknowledgements	1
Summary	2
Introduction	3
Chapter 1: Illumination Design	
1.1 Methods of illumination	4
1.2 Definitions and units	4
1.3 Procedure of the Lumen method	5
1.4 Typical calculations	6
Table of results of illumination design	9
Chapter 2: Lighting Circuit Design	
2.1 Circuits design procedure	11
2.2. Typical calculations	13
Table of results of lighting circuits	18
Chapter 3: Socket Outlets Design	
Typical calculations	19
Table of results of socket outlet ring circuits	23
Chapter 4: Fixed electrical Appliances	
4.1 Water heater calculations for basement (DBA)	24
4.2 Cooker unit calculations for basement (A)	27
4.3 Water heater (W/H1) calculations for first floor (DBB)	30
4.4 Water heater (W/H2) calculations for first floor (DBB)	33
4.5 water heater (W/H) for ground floor (DBC)	35
4.6 Washing machine calculations for ground floor (DBC)	38
4.7 Dish washer calculations for ground floor (DBC)	41
4.8 Fridge calculations for ground floor (DBC)	42
4.9 Cooker unit calculations for ground floor (DBC)	46
4.10 Motor (swimming pool) calculations for basement (DBA)	49
Table of results of fixed appliances	52
Chapter 5: Air Condition Design	
Typical calculations	53

Table of results of air condition design	60
Chapter 6: Storage Heaters	
6.1 Storage heater 1 (S/H1) calculations for ground floor (DBC)	61
Table of results of storage heaters	64
Table showing the choice of storage heaters for each room	65
6.2 Calculations of the supply cables of storage heaters	
6.2.1 Calculations of the supply cables from meter to DBC (ground floor)	65
6.2.2 Calculations of the supply cables from DBC (ground floor) to DBB (first floor)	67
6.2.3 Calculations of the supply cables from DBC (ground floor) to DBA (basement)	69
6.3 Single line diagrams of the circuits	
6.3.1 Schematic diagram	72
6.3.2 Single line diagram of the circuits (DBC)	73
6.3.3 Single line diagram of the circuits (DBB)	74
6.3.4 Single line diagram of the circuits (DBA)	74
Chapter 7: Supply cables to the distribution boards	
7.1 Supply cables to the distribution board C (DBC)	76
7.2 Supply cables to the distribution board A (DBA)	78
7.3 Supply cables to the distribution board B (DBB)	81
7.4 Single line diagram of the circuits (DBC)	84
7.5 Single line diagram of the circuits (DBA)	85
7.6 Single line diagram of the circuits (DBB)	86
7.7 Schematic diagram	87
Chapter 8: Costing of the Electrical Instalation	
8.1 Introduction	88
8.2 The analytical method	88
Table of costing of the electrical installation	89
8.3 Evaluation of costing	92
Chapter 9: Intruder Alarm System	
9.1 Introduction	93
9.2 Why it is so valuable	93
9.3 Main parts of the intruder alarm	93
Chapter 10: Telephone Design	
10.1 Introduction	95
10.2 Definitions and terms	95
10.3 Earthing	96

10.4 Access cable installation	97
Chapter 11: Inspection and Testing	
11.1 Introduction	98
11.2 Visual inspection	98
11.3 Testing	98
Conclusions	100
References	101
Appendices	102

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SUMMARY

The principal aim of this project is to study and examine the design of the electrical services of a luxury house. The design has to be undertaken carefully and responsibly for the issues concerning the safety of people, livestock and property.

IEE wiring regulations, sixteenthn edition, and EAC and CYTA regulations should be taken seriously in mind during the whole design of the electrical services.

The main part of the project is devoted to detailed explanation of the design of the electrical services of the luxury house. It is divided into 10 chapters in order to simplify the study of the project.

At the end of the report, there are appendices providing information and specifications about devices and equipments used. Finally, architectural drawings are included displaying where the equipment used is located.

INTRODUCTION

This project aims to examine the design of the electrical services of a luxury house.

The project consists of the following designs:

- (i) Illumination
- (ii) Lighting circuits
- (iii) Socket outlet circuits
- (iv) Fixed electrical appliances
- (v) Air conditions
- (vi) Storage heaters
- (vii) Supply cables to the distribution boards
- (viii) Single line diagrams
- (ix) Inspection and testing
- (x) Intruder alarm
- (xi) Telephone system

Then it follows the costing of the electrical installation. Also labour costs are included.

Throughout the whole project are used the following terms and conditions:

- Supply: 240V
- Z_e : External earth fault loop impedance = 0.5Ω
- The whole design is based on IEE regulations of sixteenth edition, EAC conditions of supply and CYTA requirements.

It is also very important to mention that when the electrical installation is completely finished, inspection and testing must be undertaken in accordance with regulations 712 & 713 of IEE wiring regulations sixteenth edition.