

HIGHER TECHNICAL INSTITUTE
ELECTRICAL ENGINEERING COURSE

DIPLOMA PROJECT

**DESIGN OF THE ELECTRICAL SERVICES
OF AN OFFICE BLOCK WHICH INCLUDES SHOPS**

E/903

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JUNE 1994

**DESIGN OF THE ELECTRICAL SERVICES
OF AN OFFICE BLOCK
WHICH INCLUDES SHOPS**

by

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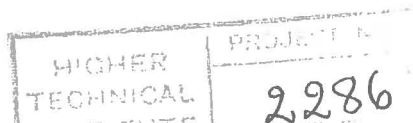
PROJECT REPORT

**SUBMITTED TO
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for the diploma of**

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To my best teachers:

Avraam and Eleni Maouri

Also

Dedicated to the persons that I love!!!

and my friend Athena Hadjicostardi

Famagusta 14/06/94

CONTENTS

	Page
ACKNOWLEDGEMENTS	
INTRODUCTION	
CHAPTER ONE: ILLUMINATION	
1.1. Introduction	1
1.2. Definitions	2
1.3. Illumination Calculation Procedure	5
1.4. Design Calculations	5
1.5. Illumination Design Results	9
CHAPTER TWO: PROTECTION FOR SAFETY	
SECTION A: PROTECTION FOR SAFETY	
2.A.1. General	12
2.A.2. Overcurrent	12
2.A.3. Protection against s/c current	14
2.A.4. Protection against both overload and short circuit	15
2.A.5. Discrimination	15
SECTION B: MAIN SWITCHGEAR	
2.B.1. Introduction	18
2.B.2. Isolation and switching	19
2.B.3. Distribution	19
CHAPTER THREE: ELECTRICAL INSTALLATION DESIGN	
SECTION A: EQUIPMENT DESCRIPTION	
3.A.1. General	21
3.A.2. Requirements of an electrical Installation	22
3.A.3. Load Characteristics	22

3.A.4.	Socket Outlets	23
3.A.5.	Switches	23
3.A.6.	Protective Devices	23
3.A.7.	Distribution Board	23
3.A.8.	Earth Leacage Protection	24

SECTION B: FINAL CIRCUITS

3.B.1.	General	24
3.B.2.	Overload	24
3.B.3.	Cable Selection	24
3.B.4.	Explanation of Correction Factors	26

SECTION C: INSTALLATION OF LIGHTING POINTS

3.C.1.	General	29
3.C.2.	Lighting Design	30

SECTION D: INSTALLATION OF SOCKET OUTLETS

3.D.1.	General	36
3.D.2.	Design Calculations of a typical ring circuit	37
3.D.3.	Design Calculations of a typical radial circuit	41

SECTION E: INSTALLATION OF INSTANTANEOUS HOT WATER

3.E.1.	General	45
3.E.2.	Design Calculations	46
3.E.3.	Final Results	49

SECTION F: SUPPLY FOR SLIT AIR CONDITIONERS

3.F.1.	Design Calculation	50
3.F.2.	Design Calculation	53

CHAPTER FOUR: DESTRIIBUTION OF ELECTRICITY IN THE BUILDING

4.1.	General	59
------	-------------------	----

4.2.	Supply Cables and Calculations	60
4.3.	E.L.C.B.	69
4.4.	Short Circuit Protection-Fault Level Calculations	71
4.5.	Short Circuit Protection Fault Level Calculations	74

CHAPTER FIVE: "COMMON USE AREAS" INSTALLATION

SECTION A: SUPPLY TO LIFT MOTOR

5.A.1.	General	75
5.A.2.	Motor in the lift room	75
5.A.3.	Socket Outlet and Lighting in the Lift room	81
5.A.4.	Typical Calculations of the MCB positioned in the E.A.C. meters place on the ground floor	84
5.A.5.	Isolator used	84
5.A.6.	S/L Protection-Fault Level Calculations	84

SECTION B: SUPPLY TO STORE ROOM

5.B.1.	General	86
5.B.2.	Typical Calculations	87

SECTION C: STAIRCASE LIGHTING 90

CHAPTER SIX: DATA DISTRIBUTION 93

CHAPTER SEVEN: CENTRAL ANTENNA SYSTEM 95

SECTION A:

7.A.1.	General	96
--------	-------------------	----

SECTION B: EQUIPMENT AND ACCESSORIES WHICH

ARE USED IN THE ANTENNA SYSTEM 97

7.B.1.	Aerial	97
--------	------------------	----

7.B.2.	Amplifier	98
7.B.3.	Tap of Units	98
7.B.4.	Socket Outlets	98
7.B.5.	Cable Feeders	98

SECTION C: INSTALL ACTION INSTRUCTIONS 99

SECTION D: DESIGN PROCEDURE 100

SECTION E: ACTUAL DESIGN 100

7.E.1.	General	100
7.E.2.	Selection of Amplifier Unit	102
7.E.3.	Calculation of the attenuation	103
7.E.4.	Design of attenuator	103
7.E.5.	Use of TT attenuator	104
7.E.6.	Checking Calculations	104
7.E.7.	Calculation of signal required to be fed to the amplifier by the antenna	106
7.E.8.	Selection of antennas	106
7.E.9.	Calculation of the gain of each antenna	107

CHAPTER EIGHT: DOOR ENTRY TELEPHONE SYSTEM

8.1.	General	108
8.2.	Operation	108

CHAPTER NINE: LINGTNING PROTECTION SYSTEMS

9.1.	General	110
9.2.	Need of lightning protection	110
9.3.	Lightning Protection Methods	111
9.4.	Main Componets	111

CHAPTER TEN: EARTHING

10.1.	Introduction	113
10.2.	What is Earthing	113

10.3.	Method of Earthing	113
10.4.	Protective Conductors	114
10.5.	Earth Electrodes	118
10.6.	Earth Fault Loop Impedance	119
10.7.	Earthing Results	120

CHAPTER ELEVEN: TELEPHONE INSTALLATION

11.1.	General	121
11.2.	Main Distribution Case	121
11.3.	Conduit Frame Work	121
11.4.	Wiring	122
11.5.	Actual design	122

CHAPTER TWELVE: INSPECTION AND TESTING

12.1.	Introduction	133
12.2.	Testing Sequence	134
12.3.	Insulation Tests	140
12.4.	Supporting Paper work	144

CHAPTER THIRTEEN: INSPECTION AND TESTING

13.1.	Introduction	147
13.2.	Materials and Labour Cost	149
13.3.	General Costs	154
13.4.	Total Costs	155

COMMENTS - CONCLUSIONS	156
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REFERENCES	157
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DRAWINGS

SINGLE LINE DIAGRAMS

APPENDICES

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INTRODUCTION

The project deals with the electrical installation services of an office block which includes shops.

The office block which includes shops consists of the Ground Floor, the Mezanine, five floors and the roof.

Each floor consists of two offices except the 5th floor which consist of one office.

The two offices of third floor (office 5 and 6) were made one office.

PART A

CHAPTER ONE

It deals with the illumination design work. Various definitions and the Lumen method of design are explained. the necessary calculations are presented in a Table.

CHAPTER TWO

It deals with the protections for safety (general).

CHAPTER THREE

It deals with the power and lighting installation with power I mean the socket outlets, the instantaneous hot water heaters, the split air conditioners. Designs are carried out to determine the rating and type of circuit breakers, cable and conduit size. The whole design has been carried out in accordance to the 16th edition of I.E.E. Wiring Regulations and the E.A.C. conditions of supply.

CHAPTER FOUR

It deals with the Distribution fo electricity in the building (offices and shops).

CHAPTER FIVE

It deals with the common use areas installation. In this installation there are some services for all the residents. From the electrician room (E.A.C.) a common use

distribution Board will give supply to the areas and equipment of the building associated with all the residents i.e. staircases and lift room.

CHAPTER SIX

It deals with the data distribution in the offices.

CHAPTER SEVEN

It deals with the central antenna system of the building so that all the officers have a common antenna system which make the installation cheaper and with better results.

CHAPTER EIGHT

It deals with the door entry telephone system which is very convenient for all the residents. With this system the owners could leave "only" the persons (clients) that they want to enter the main door of the building.

CHAPTER NINE

It deals with the lightning protection. After certain calculations, it was found out the lightning protection is needed.

CHAPTER TEN

Earthing is the most important factor of an installation. In this chapter the type of earthing systems and the particular definitions were discussed.

CHAPTER ELEVEN

It deals with the telephone installation.

CHAPTER TWELVE

It deals with the inspection and testing of the installation in order to ensure that the I.E.E. Wiring Regulations and the E.A.C. conditions of supply were met. It describes the sequence and the procedure of the various tests.

CHAPTER THIRTEEN

It deals with the material and labour costing. The analytical method of costing was used. The estimation of the cost is based on the running cost of the materials used and the labour rates used by electricians. All the materials used exist in the Cyprus market.