

HIGHER TECHNICAL INSTITUTE

**ELECTRICAL ENGINEERING
DEPARTMENT**

DIPLOMA PROJECT

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

E.1433

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ABSTRACT:

The purpose of this project is to design all the possible electrical services of a luxury house. It's very important to bare in mind that the design is directly involved with the safety of the people, livestock and property.

The project work includes specifications and drawings as well as typical accordance to IEE wiring regulations 16th edition.

The design is explained in detail in the main body of the report. At the end of this report there are placed appendices, tables, drawings and other information giving specifications and help with the comprehensice of the design.

supply cables to the distribution boards
Emergency
Wiring diagrams
Wiring and cabling
Telephone and T.V. distribution
Lighting protection systems

On design is completed materials and labour costing must be

to be considered:
Supply is 3-phase 415V
System of supply T.T
200A
100kVA at power factor 0,85

Dimensions shown on the schematic diagram include:

- 1. Height of distribution board = 1,6m
- 2. Height of cooker unit switch = 1,5m
- 3. Height of water heater switch = 1,6m
- 4. Height of socket outlet = 0,3m
- 5. Height of switches = 1,6m

INTRODUCTION:

This project deals with the design of the electrical and telecommunication services of a luxury house.

The report consisted by the following designs:

- Illumination
- Lighting circuits
- Socket outlet circuits
- Fixed appliances
- Air condition and storage heaters
- Boiler design
- Swimming pool design
- Supply cables to the distribution boards
- Diversity
- Single line diagrams
- Bonding and earthing
- Telephone and T.V. distribution
- Lightning protection system

After design is completed materials and labour costing must be evaluated.

Parameters to be considered:

Supply is 3-phase 415V

System of supply T.T

Z_e is 1Ω

$I_{s/c}$ 5KA at power factor 0,85

Distances shown on the schematic diagram include:

1. Height of distribution board = 1,6m
2. Height of cooker unit switch = 1,5m
3. Height of water heater switch = 1,6m
4. Height of socket outlet = 0.5m
5. Height of switches = 1,6m