

ELECTRICAL DOMESTIC DESIGN FOR MULTI STOREY DWELLING

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ABSTRACT

This paper presents the electrical domestic design for multi storey dwelling and street lighting. In this project, the scope of work is the design for low voltage electrical power system, lighting system, power supply, telephone system, MATV(Master Antenna TV), Pas (public Address system), street lighting and computer networking. The size of cable and the point of the lamp using are calculated. The design has been taken consideration and manufactured so it will be safety for the user.

The main performing of the project is the calculation and the determination of the cable size. The cable calculation is measured from the substation to the final outlets of the load in the buildings. The outlets of electrical system in a building are lighting points, socket outlets and fixed equipment. The wiring from each of these comes from a fuse in a distribution board. The wiring from one fuse is known as the final sub-circuit, and all the outlets fed from the same fuse are on the same sub-circuit.

Beside of that, the calculation of illumination and the design of lighting layout are considered. The design also includes the layout of the schematic diagram using the popular program (AutoCAD). In this project, the AutoCAD programming was choose to make the electrical designing. AutoCAD is a CAD software application for 2D and 3D design and drafting. AutoCAD can be used to make rough idea drawing

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CHAPTER 1

INTRODUCTION

1.1 Background of Research

Nowadays, the electrical design is the importance thing to guide the people before the real electrical installation is carries out. The electrical drawings and diagrams convey information to the people who construct, assemble, install, and maintain electrical equipment. It is necessary to study the design in order to develop a thorough understanding of domestic electrical supply.

Domestic supply is obtain from substation at 415V 3 phase. The standard electric supply in Malaysia is 415V, 50Hz. The electric in this country is supply by Tenaga Nasional Berhad (TNB) and the regularly body in the Jabatan Tenaga Elektrik.

The supply is provided by a cable brought from outside into a suitable point in the building, which is referred to as the mane intake, and from this the electricity has to be distributed to all outlet which use it. The cable using and the current flowing along it must be divided between the numbers of smaller cables to be taken to the various final destinations throughout the building. This division is the function of the distributing system.

The cable from the main intake to a distribution board is known as a sub-main, and it must be rated to carry the maximum simultaneous current taken by all the final sub-circuits on the board. Once this current is known, the size of the cable can be determined by current carrying capacity and voltage drop.