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DESIGN OF OVERHEAD ELECTRICAL DISTRIBUTION
SYSTEM OF CAVITE STATE UNIVERSITY
MAIN CAMPUS

Design Project

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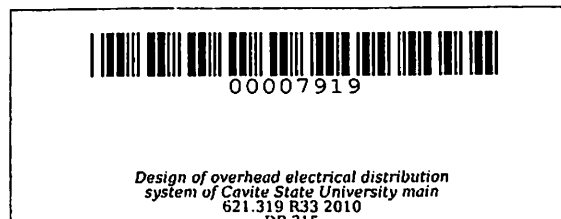
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**DESIGN OF OVERHEAD ELECTRICAL DISTRIBUTION
SYSTEM OF CAVITE STATE UNIVERSITY
MAIN CAMPUS**

An Undergraduate Design Project
Submitted to the Faculty of the
Cavite State University
Indang, Cavite

In Partial fulfillment
of the requirements for the degree of
Bachelor of Science in Electrical Engineering



YVAN M. REY
GIDEON V. RICAFRANCA

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ABSTRACT

REY, YVAN M. and RICAFRANCA, GIDEON V. Design of Overhead Electrical Distribution System of Cavite State University Main Campus. Undergraduate Thesis. Cavite State University Indang, Cavite. Bachelor of Science in Electrical Engineering. March 2010. Adviser: Engr. Edison E. Mojica.

The study was conducted to Design an Overhead Electrical Distribution System for Cavite State University Main Campus. The design was composed of a design layout with complete legend to be easily interpret, a comprehensive data of computation and figures for supporting details.

The design was made through series of researches and interviews. The data collected was subjected to different formulas obtained from the Philippine Electrical Code and other references.

The design was made using CADD program and was plotted in a tracing paper. Included in the design is the computation of actual load using building plans and projection of demand through development plans within the university and cost estimation of materials and other construction cost.

The total demand of the existing system is 3.083 MVA. The projected demand that will be added in the system is 673KVA. The system will use reinforced concrete poles, ACSR bare conductor for primary lines and THHW insulated copper conductors as secondary line. Steel cross arm and braces are used to support the conductors with pin and disk type insulators. Transformer's rating is based on the connected load with proper protective devices. Simple radial system was used to provide proper voltage regulation.

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**DESIGN OF OVERHEAD ELECTRICAL DISTRIBUTION
SYSTEM OF CAVITE STATE UNIVERSITY
MAIN CAMPUS^{1/}**

**YVAN MAGPILI REY
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INTRODUCTION

Electricity is an essential part of our everyday lives. Yet it is so easy for most of us to obtain and use it that we often take it for granted. We take it for granted, especially in electric transmission and distribution. But what is electric distribution system? Electric distribution system is the final stage of delivery of electricity to residential and commercial users delivered by the electric utilities from generating plants.

Electric distribution system is classified into two types, overhead and underground. An overhead distribution system has wires that are attached to utility poles and run overhead, while an underground distribution system has wires installed underground the earth unseen by the eyes. Overhead distribution system can be an Open wire construction where bare wires are installed on pole lines using either armless or