A CASE STUDY ON LIGHTNING PROTECTION SYSTEM IN TERM OF COLLECTION VOLUME METHOD AT UiTM SHAH ALAM CANSELERI BUILDING

MUHAMMAD RAUF BIN ROSLAN

FACULTY OF ELECTRICAL ENGINEERING

UNIVERSITI TEKNOLOGI MARA

MALAYSIA

A CASE STUDY ON LIGHTNING PROTECTION SYSTEM IN TERM OF COLLECTION VOLUME METHOD AT UiTM SHAH ALAM CANSELERI BUILDING

Thesis is presented in partial fulfillment for the award of the Bachelor of Engineering (Hons.) Electrical

UNIVERSITI TEKNOLOGI MARA (UiTM)

MUHAMMAD RAUF B ROSLAN

FACULTY OF ELECTRICAL ENGINEERING

UNIVERSITI TEKNOLOGI MARA

40450 SHAH ALAM

SELANGOR

JULY 2013

ACKNOWLEDGEMENT

In the name of Allah The Most Gracious and Merciful With The Salawat and Salam to Prophet Muhammad S.A.W

First and foremost, I would like to thank Allah, for without His strength and encouragement this degree would have never materialized

I would like to thanks my supervisor, Hj. Ir. Harizan Bin Che Mat Haris, for the guidance, patience, encouragement, and support he has given to me for my final year project.

A special thanks to En Razali bin Abd Hadi and staff of Facility Unit and Kehta for the continuous guidance to complete this project.

In addition, I would like to acknowledge my colleagues for their constructive comments and support. And also to my beloved family for the contribution and the sacrifice they have made.

Thank you.

ABSTRACT

This paper presents about the study on lightning protection system at UiTM Shah Alam Canseleri building. The existing lightning protection are exist at the building since 2006.The air terminals that been used is Dynasphere Controlled Leader Triggering (CLT).The method that been used will determined based on Eritech Lightning Protection Standard. Besides, the risk of the building will be determined based on Malaysia Standard Protection MS 62306. The tolerable risk, to be considered in a structure is risk of human life that is 10^{-5} compared with R_1 (calculated value from equation). If $R_1 > R_T$, the protection should consider suitable protection measures in order to reduce the risk due to lightning.

TABLE OF CONTENT