UNIVERSITI TEKNOLOGI MARA

FACILITY CONDITION ASSESSMENT IN MALAYSIAN MULTI-UNIT RESIDENTIAL BUILDING USING AUDIT TECHNIQUE

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Thesis submitted in fulfillment of the requirements for the degree of

Masters in Engineering Management

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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This topic has not been submitted to any other academic institution or non- academic institution for any degree or qualification.

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ABSTARCT

The purpose of this study is to develop the facility condition assessment technique to assess the condition of the facilities equipped in Malaysian multi-unit residential building. The facility condition assessment consists of three stages which are individual facility rating, level of priority and overall facility condition. The assessment rubrics of individual facility rating are categorized into three categories and each criterion illustrates different characteristics on the condition of facility. The equations of individual and overall facility rating processes are formulated by adapting the statistical approach. The assessment rubric of priority level is designed based on ratings in individual facility rating process. The result of overall facility rating is evaluated through the assessment rubric of overall facility condition. Comparison with other facility evaluation method by conducting a case study on residential buildings within Klang Valley which is concentrating on mechanical and electrical facility systems has been made. In this case study, the results generated from facility condition assessment technique outcomes are more accurate and clearer. By categorizing and evaluating the individual facility rating into functionality, fitness for use and cleanliness, optimizing priority level assessment rubric and evaluating the effectiveness of assessment rubric for overall facility condition, this auditing technique is practical to be used in multi-unit residential buildings.

Keywords: Facility Condition Assessment, Multi-unit Residential Building, Mechanical and Electrical Systems

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