CENTRE OF STUDIES FOR BUILDING SURVEYING
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING
UNIVERSITI TEKNOLOGI MARA

A STUDY ON THE MAINTENANCE FACTORS IN BUILDING DESIGN IN THEIR PROJECT

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This is to confirm that the student has amended his/her academic project as directed and therefore allowed to compiles

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"I hereby declare that this academic project is the result of my own research except for the quotation and summary which have been acknowledged"

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ABSTRACT

The degree to which the design of a building embraces maintenance considerations has a major impact on its performance. In Malaysia for instance, most designers claimed to have knowledge and experience on building maintenance aspects but only few are aware of the importance to consider maintenance factors during design stage. A survey was carried out on 37 designer firms (architectural, civil & structural consultant firms) and 31 maintenance firms located in Shah Alam and Kuala Lumpur. The aim was to find out the building defects and other maintenance problems that are heavily attributed to design deficiencies, inadequate information gathering, material limitations and lack of maintenance knowledge. The data were analyzed using SPSS (Statistical Package of Social Sciences). Findings show that main problems that the maintenance firms are currently facing are caused by building design deficiencies, poor construction quality and poor performance of building which is directly related to functional layout, choice of building material and choice of building equipment. It appears that designer firms consider maintenance factors like ease of cleaning, access to cleaning area and repair and replacement to be the least important when designing buildings. Lack of communication between designer firms and maintenance firms as well as building users or owners resulted in designer firms not fully aware of the maintenance-related problems frequently reported by building owners. Designers seem to be neglecting the benefits of designing for ease of

maintenance that can prolong the building lifespan, reduce defects rate and therefore reduce maintenance costs. Therefore, it is important for project team management to develop awareness and policy from the very early start of project to ensure the concept for ease of maintenance can be understood and implemented successfully in local construction practice.