SUMMARY

There is often some discontinuity or a break of linkage between design and maintenance in the building industry. Very often, a building faces several maintenance problems; either defects due to poor workmanship, design features or incorrect detailing. It will be useful to study the relationship between design and maintenance and its influence on the life of a building.

In this study, the amount of building maintenance cost, which could be avoided by better methods of specification, design and construction, is analysed.

The designer must be able to appraise the trade-off between:

(i) extra initial expenditure to make unavoidable maintenance cheaper and easier or to avoid it if possible, and

(ii) the continuing expenditure of keeping the building in a workable state.
The common problems faced include:

(i) numerous number of building components;
(ii) lack of adequate access to information about the components' performance; and
(iii) lack of knowledge on the type of maintenance tasks most frequently required.

This study has been confined to public housing strictly because of its wide data base and the fact that about 87% of the nation's population are living in public housing.

The large number of similar blocks of HDB flats\(^1\) provides sufficient statistical data for analysis and thus facilitates a comparative study. Interviews and discussions are carried out with the architect, engineer, contract officer, property and estate manager and the maintenance officer.

\(^{1}\) See the photographs in Appendix I,
Feedback from some regular HDB contractors are collected and compiled for the study and analysis.

The study concludes that tremendous savings are achieved by better design detailing. There are several cases whereby slight modification to the design can avoid numerous defects which could have save thousands of dollars.