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ABSTRACT

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Trinidad, as most other developing Third World countries, suffers from an acute housing shortage. Estimates of the present housing need vary from as little as 8,000 units to as many as 14,400 units per annum. These figures include the replacement of existing stock. However, the supply has only been approximately 3,000 units per annum, with 2,000 of these units being provided by Government's mass housing projects. The remainder is provided by private firms and individuals and cannot generally be considered as low cost.

The local construction industry at present is faced with very many problems. Some of the major problems can be listed as:

- (i) Severe shortage of basic building materials.
- (ii) Shortages of skilled tradesmen.
- (iii) An acute shortage of competent managers.
- (iv) Steep escalation in the prices of building materials.

All of the above problems are as a direct result of the construction boom which resulted from the Arab oil embargo of 1974. The cumulative result has been that the current cost of house construction locally is approximately \$1,200.00 per square metre and is among the highest in the world.

It is also very apparent that the existing mass housing developments in Trinidad have not been designed to suit the local climatic conditions. This has led to numerous habitational problems. This situation can only be improved by adopting innovative and appropriate design and construction techniques to suit the local materials and availability of skills.

There exists at present a considerable lack of information pertinent to the local construction industry. This is especially true of the local mass housing industry where very little written information is available as to:

- (i) the different methods of construction utilised;
- (ii) the suitability and adaptability of the various designs to the local environment;
- (iii) habitational problems arising directly out of the use of particular "systems";
- (iv) cost, material and cycle time requirements for each of the different methods.

This lack of information has resulted in several different methods of construction being adopted, some of which have led to numerous problems. This report makes a start towards providing some feedback information by an analysis of the four largest existing mass housing projects (utilising three very different

methods of construction). It is only after such an analysis that the selection of the most "appropriate system" can be made.

This report also examines some of the more critical parameters that affect the planning and implementation of any low cost mass housing project in Trinidad and Tobago. An analysis of a proposed project illustrates the sequencing and time scales for the various activities involved in the overall works programme, together with staff and plant programmes. A review of the local climate, social customs and living habits also enables a set of Desirable Design Parameters for bungalow type construction to be established. Suggestive recommendations to the many problems encountered are also presented in this report.

The information generated in this report can be of use, not only to the specific projects analysed but indeed to all existing and future mass housing projects.