

HIGHER TECHNICAL INSTITUTE

CIVIL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DESIGN OF A TWO STOREY HOUSE
ACCORDING TO BS8110

BY
MARIOS MYLORDOS

C/870

JUNE 1999

HIGHER TECHNICAL INSTITUTE	PROJECT NO. 2935
----------------------------------	---------------------

Summary

The objective of this project was, to analyse, design and detail, a two-storey building with provision for one future extra storey, and to achieve acceptable probabilities that the structure will not become unfit for its intended use that is, that it will not reach a limit state.

Analytically in the project all floor slabs, four beams, four columns and four foundations were analysed and designed. Checks were also made to ensure that all other relevant limit states are satisfied by the results produced. (Check for deflection and shear).

Finally the detailing drawings of the floor slabs, one column and one foundation were made and also the detailing drawing of one beam with the bending schedule.

The design of an engineering structure must ensure that (1) under the worst loading the structure is safe, and (2) during normal working conditions the deformation of the members does not detract from the appearance, durability or performance of the structure.

CONTENTS

1. Acknowledgements	i
2. Notation	ii
3. Introduction	iii
4. Summary	v
5. Analysis and design of Slabs	1
6. Analysis and design of Beams	23
7. Analysis and design of Columns	101
8. Analysis and design of Foundations	118
9. Detailing	
10. Architectural drawings	