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DESIGN OF A SWIMMING POOL

By

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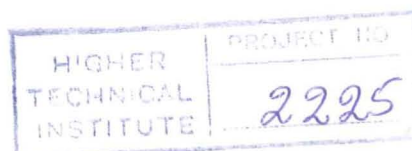
PROJECT REPORT

Submitted to the department of civil Engineering of  
the Higher Technical Institute Nicosia - Cyprus  
in partial fulfilment of the requirements for the  
diploma of Technician Engineer

in

Civil Engineering

June 1994



## ACKNOWLEDGEMENTS

I would like to express my sincere appreciation and thanks to my Supervisor, Mr M. Poullaides for his valuable help and guidance during the preparation of this project.

Furthermore, I would like to express my thanks and appreciation for the help given to me by Mr Ttofi George who kindly helped me in the preparation of the Architectural drawing.

Finally my thanks goes to those who helped me in any way to complete this project.

PROJECT SUPERVISOR: Mr M. Poullaides.

KIND OF PROJECT: Individual

## ABSTRACT

This section sets out of fill in the details referred by means of practice notes made during the planning and construction of the project listed below.

These are augmented by record notes of visits to centres in Paphos, Ayia Napa.

Additional information from other sources is included where acknowledged in the project.

Record notes were made of regular visits to the following:

1. Alexander Beach Hotel: Paphos
2. Annabelle Beach Hotel: Ayia Napa
3. Laura Beach Hotel : Paphos

## NOTATION

Notation is generally in accordance with BS8110 and the principal Symbols are listed below:

- fcu: Characteristic strength of Concrete
- fy: Characteristic strength of reinforcement
- As: Area of tension reinforcement
- b: Width of section
- d: Effective depth of tension reinforcement
- Z: Lever arm
- e: Eccentricity
- h: Overall depth of Section
- la: Lever-arm factor =  $\frac{Z}{d}$
- M: Bending Moment
- N: Axial load
- V: Shear force
- V: Shear stress
- Vc: Ultimate shear stress in concrete
- f: Partial Safety factor for load
- $\Phi$ : Bar size

acr: distance from the point considered to the point of the near longitudinal bar

Cmin: Minimum cover to the tension steel = 40mm

Wmax: Crack width

Ms : Service moment

x : Depth of neutral axis

Em : Average strain at the level where the cracking is being considered

E1 : Strain at the level considered

E2 : Strain due to the stiffening effect of concrete between Cracks