

# HIGHER TECHNICAL INSTITUTE

CIVIL ENGINEERING COURSE

DIPLOMA PROJECT

DESIGN OF A SWIMMING POOL

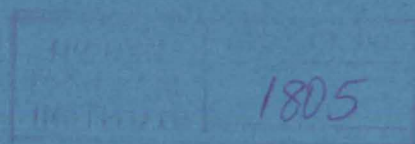
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Design by

PAPASTYLIANOU STELIOS

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JUNE 1991



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by

STELIOS PAPASTYLIANOU

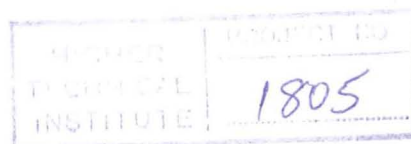
Project Report submitted to

the Department of Civil Engineering  
of the Higher Technical Institute  
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in partial fulfilment of the requirements  
for the diploma of TECHNICIAN ENGINEER

in CIVIL ENGINEERING

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TITLE: Design of a Swimming Pool

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### SUMMARY

The main function of this project is to carry out the design of a swimming pool with dimensions 20 x 9 m, height of water 0.9 m at the shallow end and 3.20 m at the deep end.

#### Objectives:-

1. To decide on the geometry of the swimming pool.
2. To design the various members of the pool.
3. To draw general arrangement drawings and reinforcement details.
4. To indicate the details of any water bars, and expansion joints.

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- 1.1 Water retaining structures
- 1.2 Different types of swimming pools and their characteristics

CHAPTER II            General recommendations for the design of the swimming pool

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- 2.2 Loads
- 2.3 Causes and control of cracking
- 2.4 Joints
- 2.5 Concrete quality

CHAPTER III           Structural design

- 3.1 Introduction to structural design
- 3.2 Structural design
- 3.3 Calculations of minimum reinforcement according to BS 8007: 1987
- 3.4 Analysis of a cracked section using a triangular stress block

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CHAPTER V            (a) General arrangement drawings  
(b) Reinforcement drawings