

**PRODUCTION OF DRAWINGS WITH THE
AID OF A CAD PACKAGE**

by

GEORGE CHRISTODOULOU

Project Report Submitted to
the Department of Civil Engineering of the
Higher Technical Institute
Nicosia, Cyprus

In partial fulfillment of the requirements
for the award of diploma of

TECHNICIAN ENGINEER
in
CIVIL ENGINEERING

JUNE 1998

HIGHER TECHNICAL INSTITUTE	PROJECT NO. 2808
----------------------------------	---------------------

SUMMARY

Preparation of drawings with the aid of a CAD package
by George Christodoulou 3CI
June 98.

The preparation of this project was done in order to fulfill the requirements for the award of diploma of technical engineer in Civil Engineering and its objectives are the mastering of a CAD package, and the preparation of a set of drawings both civil and architectural.

The CAD package that was used is Microstation 95 and was determined by the supervisor of the project. Microstation 95 software and training were obtained from Interlligraph Consultants Limited which is a branch of Bentley Systems incorporated. After the training was completed and Microstation 95 was mastered the set of drawings, which were agreed with the project supervisor were prepared on Microstation 95.

The drafting of the project drawings as well as the plotting procedures were completed with great ease as Microstation 95 was found to be a very easy to learn, user friendly and above all versatile CAD solution.

CONTENTS

PAGES

ACKNOWLEDGMENTS.....	6
SUMMARY.....	7
INTRODUCTION.....	8
HISTORICAL VIEW OF MICROSTATION 95.....	10

CHAPTER I

BASICS OF MICROSTATION

FUNDAMENTALS

- Opening and Creating a design file.....13
- Using drawing tools.....13
- Dealing with mistakes.....15
- Key-in.....15
- On Line Help.....16
- Exiting Microstation 95.....16

VIEWING AIDS

- Arranging View Windows.....17
- Using view Controls.....17
- Setting view Attributes.....19

CHAPTER II

DRAFTING WITH MICROSTATION 95 2D

DRAFTING IN 2D

- Preparing to draw with Microstation 95.....24
- Points Tool Box.....25
- Linear Elements tool Box.....26
- Polygon Tool Box.....28
- Arcs Tool Box.....29
- Ellipses Tool Box.....30

DRAFTING AIDS

- Grid.....32
- Tentative Points.....32
- Accudraw.....35
- Measure Tool Box.....36
- Reference files.....37

CHAPTER III

GENERATING DRAWINGS

MANIPULATING AND MODIFYING ELEMENTS

- Element Selection.....40
- Fence Tool Box.....41
- Drop Tool Box.....42
- Change Element Attributes.....43
- Manipulate Tool Box.....44
- Modify Tool Box.....46

USING CELLS

- Creating Cells.....49
- Placing Cells.....50
- Cells Tool Box.....50
- Hatching and Patterning.....51
- Patterns Tool Box.....51

ADVANCED 2D DRAFTING TECHNIQUES

- Fillets Tool Box.....53
- Groups Tool Box.....54
- Multi-line Joints Tool Box.....55
- Selecting Elements Based on Attributes.....56

DIMENSIONING

- Dimensioning of elements.....58
- Dimension Tool Box.....59
- Text Tool Bar.....60

CONCLUSIONS.....62

REFERENCES.....63