

THE FINAL YEAR PROJECT REPORT
ADVANCED DIPLOMA IN CIVIL ENGINEERING
SCHOOL OF ENGINEERING
MARA INSTITUTE OF TECHNOLOGY

DEVELOPMENT OF A COMPUTER PROGRAM
FOR PRESTRESSED FOOTBRIDGE BEAMS

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JUNE 1989

ACKNOWLEDGEMENT

This project titled 'Development of Computer Program for Prestressed Footbridge Beam' is under the supervision of a dedicated supervisor, Ir. Dr. Wan Mahmood Wan Abd. Majid, Senior Lecturer, School Of Engineering, ITM.

The writer would like to express his sincere thanks to him, for his guidance, support, advice and encouragement in carrying out this project.

To all the Engineering Computer Laboratory Staff, my sincere thanks for their assistance.

ABSTRACT

This computer aided design will compute the prestressed Footbridge beams using ultimate limit state and serviceability limit state analysis. The program was developed on the Mini Computer HP9000/840 using the Fortran 77 language.

The output (i.e results) of the computer program are verified by manual calculation as in Appendix 3.

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CHAPTER 1

1.0 INTRODUCTION

Before discussing specific element of footbridge design using computer program, it may be worthwhile to briefly discuss some uses of computer in civil engineering.

Computers are used in many phases of our daily life. They are used by most companies in payroll and building operations.

Computers are also used extensively in all phases of the civil engineering profession. Computer programs exist that can be used to aid the design of bridges and other engineering structures.

It should be emphasized that computers are used to perform operations that the programmer has instructed to perform. The computer does not design the bridge, it just aids in the calculations required by the designer. But since it performs computations much more rapidly than a human, it is used extensively in civil engineering schools and offices; computers are also said to be less error prone than their human counterparts.