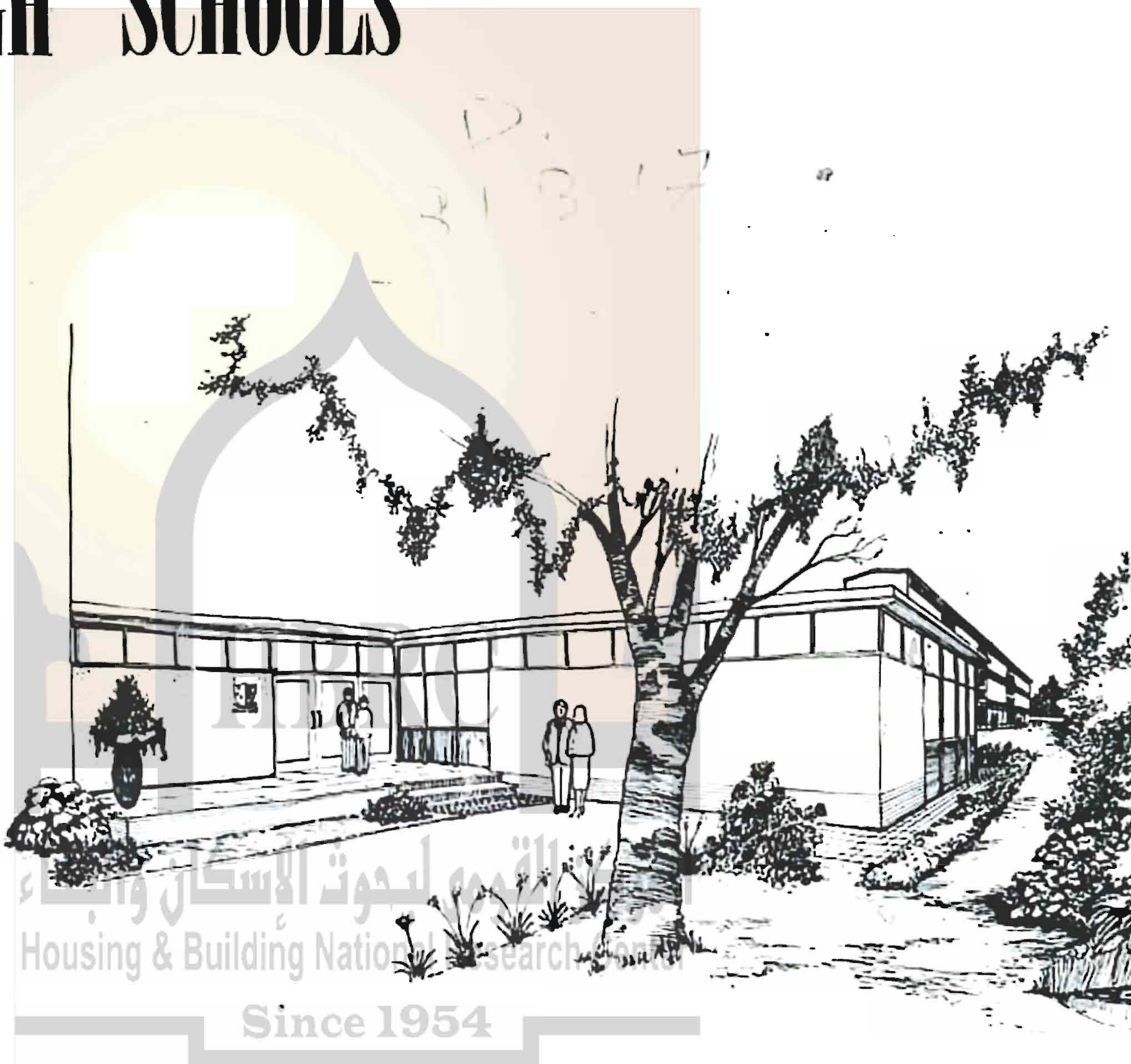


٨ ديسمبر ١٩٦٥

المركز القومي
للبحوث الإسكانية والبناء

١١٩٩٧

TECHNICAL HIGH SCHOOLS



المركز القومي للبحوث الإسكانية والبناء
Housing & Building National Research Center

Since 1954

RECOMMENDATIONS OF THE
VOCATIONAL SCHOOL BUILDINGS
COMMITTEE
SCHOOL BUILDINGS SERIES REPORT
CSIR Research Report 207

21

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South African
Council for Scientific and Industrial Research
Pretoria 1964

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CSIR RESEARCH REPORT 207

UDC 727.4:62

**This is a report by the Vocational School
Buildings Committee
(Report no 21 in the school buildings series)**

**Published 1964 by the South African
Council for Scientific and Industrial Research
P.O. Box 395, Pretoria**



**Printed in the
Republic of South Africa
by Hortors, Printers, Johannesburg**

FOREWORD

In order to convert the natural resources of a country into a variety of goods and services it is necessary to have the will or determination to do so and then, having decided to undertake such a task, to have the necessary knowledge and manpower to carry it out. Once industrial development is started, the increased standard of living provided spurs the inhabitants on to greater efforts and it is then that their expanding economy begins to face the competition of international trade. When this state of affairs is reached it is realized that every effort must be made to increase productivity, produce goods and services of the highest quality at competitive prices and be ahead of other competitors in future development.

South Africa is already well developed in industrial potential and seeking her share of the international market. She demands of her industries the highest level of productivity, efficient business management and technical and scientific development. Beneath each of these aspects is the foundation which can be laid by education, not only of the young but also of the adult population, since changes in industry are so rapid today that an adult may find his earlier training and education require to be enlarged or changed in emphasis if he is to produce of his best.

Responsibility for the vocational education programme belongs to my Department and, considered in terms of the national economy and the future of the country, this is indeed a great responsibility. The conclusions of the Committee entrusted with drawing up this report have been reached with the help of many educationalists and research workers. They have naturally been restricted by their inability to foretell the future but they emphasize that, because of this limitation, flexibility in planning is the only means of meeting future demands on school buildings.

J. J. P. Op't Hof
Secretary for Education, Arts and Science

Pretoria
June 1964

Since 1954

PREFACE

The work recorded in this report commenced with the framing of a questionnaire, which was sent to every South African technical high school and school of industries for boys. After studying the replies the Committee visited a number of schools and discussed the difficulties reported. These discussions in many cases laid the foundations for the proposals and recommendations made in the report.

Once the problems had been defined, the research workers of the National Building Research Institute were approached to ascertain whether they could offer any solutions. In some cases this meant undertaking special studies in order to find solutions that would be satisfactory under South African conditions. In other cases the studies are not completed, because in research work there is a continual process of study and experimentation in order to solve problems or improve conditions for man generally.

The Committee would like to record its appreciation of the willing co-operation and assistance given by officials of the Department of Education, Arts and Science and the Public Works Department and also its thanks to the staff of the National Building Research Institute both for the research information provided and for processing the report.

In this report mention is made of a few points which may assist in obtaining a fuller insight into the planning of technical high schools. Much of the information regarding the planning of technical high schools applies equally to commercial high schools and, in order to avoid duplication and to limit the length of this report, it should be read in conjunction with Report no 20, *Planning commercial high schools*. Reference should also be made to other reports in the schools series, particularly nos 1, 4, 4B, 9, 10 and 13; a list of these publications is provided inside the back cover.

The Committee has endeavoured to state the demands of education as it affects the planning of a technical high school so that the architect has a full brief in respect of the proposed building. The Committee has also endeavoured to look into the future so that the recommendations may not become dated but the architect is encouraged to produce the best result by allowing for internal flexibility and the possibility of extending the structure in the future.

The Committee has endeavoured to provide all the educational space demanded without increasing the cost of the school. This has meant reducing waste space to a minimum and introducing a control or guiding area per pupil to be accommodated. This control has not in any way deprived the architect of his freedom as can be judged from the sketch plan shown in Figures 19, 20 and 21.

The work has been sponsored by the Department of Education, Arts and Science so that the pupils attending technical high schools will be provided with the very best buildings that South Africa can produce. This then is the challenge to the architects who are called upon to design future school buildings.

VOCATIONAL SCHOOL BUILDINGS COMMITTEE

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