The major purpose of this facility planning guide is to develop the necessary information for the writing of educational specifications to house medical secretary programs by (1) assisting planners in the formation of creative housing solutions for desired programs, (2) preventing important considerations from being overlooked in the planning process, and (3) encouraging logical and systematic planning. The guide includes four sections. Part I (Introduction) is a discussion of the major purpose, the underlying assumptions, recent instructional trends, and the guiding principles. Part II (The Instructional Program) gives the important information on medical secretary training objectives and the kinds of programs which will be organized to implement them. Part III (Distinctive Types of Instructional Areas to be Provided) describes in detail the actual spaces desired to house the program. Part IV is an annotated bibliography of reference sources which offer a more detailed treatment of the various phases of facility planning. A Guide to Systematic Planning for Vocational and Technical Schools (ED 026 537) is a related document. (CH)

THE CENTER FOR VOCATIONAL
AND TECHNICAL EDUCATION
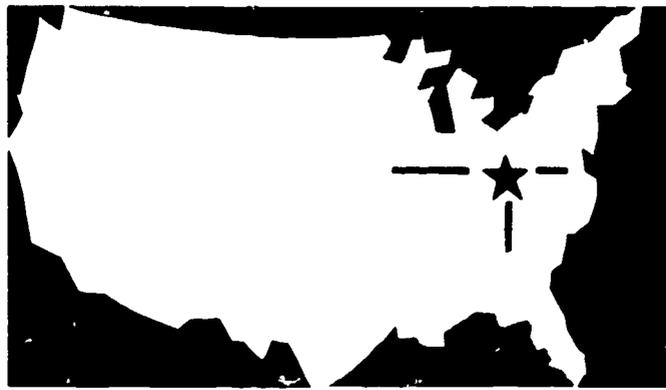
THE OHIO STATE UNIVERSITY
1900 Kenny Rd., Columbus, Ohio, 43210

A GUIDE
FOR PLANNING
FACILITIES FOR
OCCUPATIONAL
PREPARATION
PROGRAMS for MEDICAL SECRETARIES
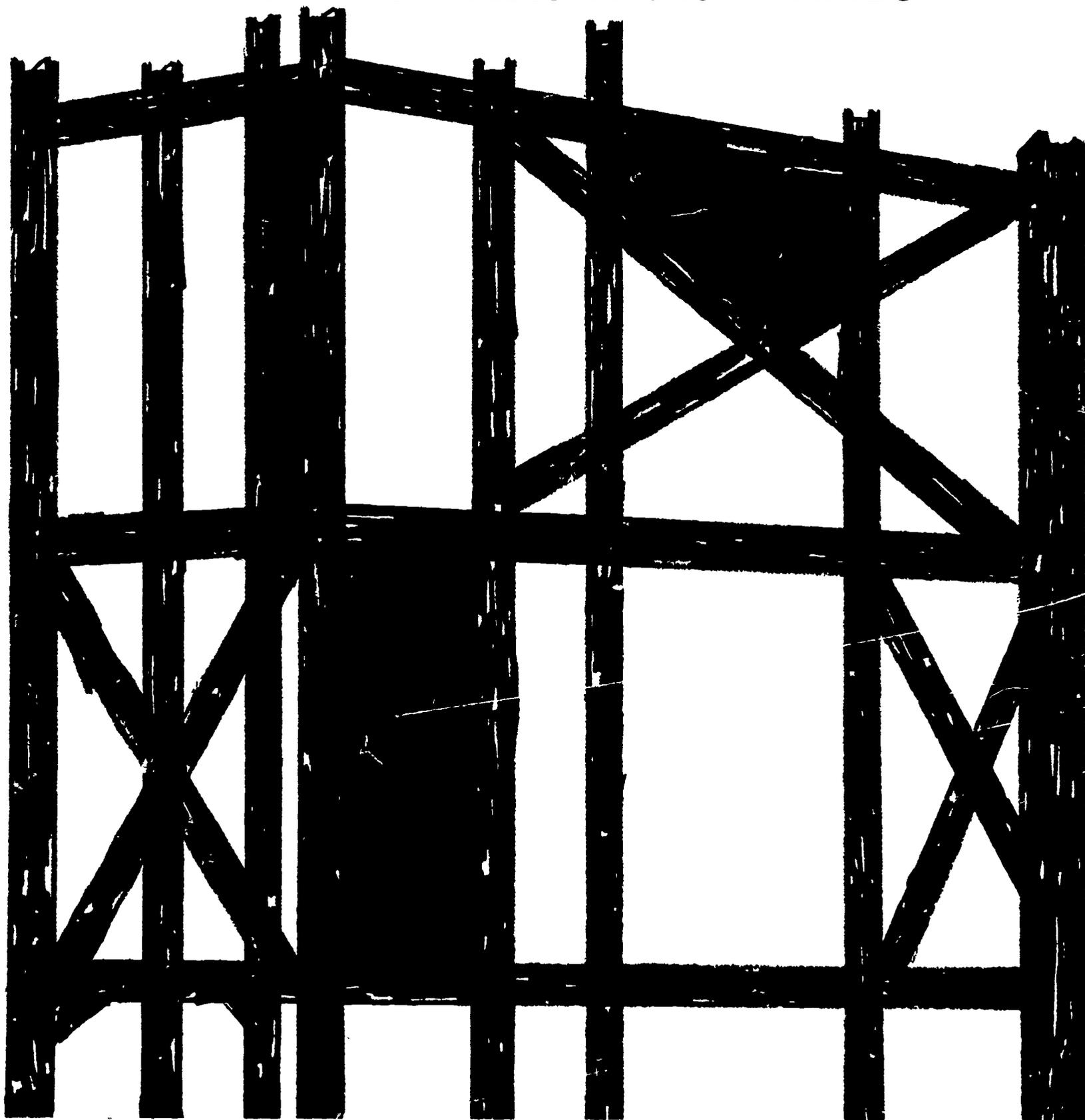
The Center for Vocational and Technical Education has been established as an independent unit on The Ohio State University campus with a grant from the Division of Comprehensive and Vocational Education Research, U. S. Office of Education. It serves a catalytic role in establishing consortia to focus on relevant problems in vocational and technical education. The Center is comprehensive in its commitment and responsibility, multidisciplinary in its approach, and interinstitutional in its program.

The major objectives of The Center follow:

1. To provide continuing reappraisal of the role and function of vocational and technical education in our democratic society;

2. To stimulate and strengthen state, regional, and national programs of applied research and development directed toward the solution of pressing problems in vocational and technical education;

3. To encourage the development of research to improve vocational and technical education in institutions of higher education and other appropriate settings;

4. To conduct research studies directed toward the development of new knowledge and new applications of existing knowledge in vocational and technical education;

5. To upgrade vocational education leadership (state supervisors, teacher educators, research specialists, and others) through an advanced study and inservice education program;

6. To provide a national information retrieval, storage, and dissemination system for vocational and technical education linked with the Educational Resources Information Center located in the U. S. Office of Education.

A GUIDE FOR PLANNING FACILITIES FOR

OCCUPATIONAL PREPARATION PROGRAMS

FOR MEDICAL SECRETARIES

JAMES D. MACCONNELL
FRANK BRUNETTI
JOSEPH HANNON
EDWIN RIOS
CLARKE SCHILLER

FOREWORD

One of the most fundamental concerns in planning for vocational and technical education facilities is that of assuring that educational requirements dictate the nature of the facilities. Other concerns include planning a sufficiently adaptable and flexible structure to permit needed modifications and programmatic changes over the lifetime of the building. Experiences have shown that adequate manuals and guide materials can provide substantial assistance in planning educational facilities. This document is a guide for planning facilities for occupational preparation programs for medical secretaries. The information recorded in the guide is to be used in the preparation of educational specifications.

The guide lists a series of pivotal questions about the educational program to be offered. The answers to these program questions bear directly on the numbers and kinds of instructional areas needed in the contemplated facilities. After program decisions are recorded, the guide provides for the description of instructional areas needed to meet program requirements. Much of the material is presented in a checklist format which allows for consideration of alternatives in facility planning.

The guide was designed for use by any person or groups of persons responsible for planning medical secretary facilities. It is anticipated that knowledgeable persons such as medical secretary instructors, state supervisors, university school plant planners, and local administrators will find the guide a useful planning tool. The guide can also be used for instructional purposes at universities, colleges, seminars, and institutes.

This guide is the eleventh in a series being developed by The Center. Subsequent guides will be published for dental technology. The first ten guides developed were in the fields of home economics, machine trades, data processing, business and office occupations, laboratory animal science, electrical technology, automotive services, metallurgy, medical X-ray technology, and medical assistants. All guides follow the general format developed by The Center project staff and M. J. Conrad, head, Administration and Facilities Unit, College of Education, The Ohio State University. Vocational educators should also refer to *A Guide to Systematic Planning for Vocational and Technical Schools*.

The Center for Vocational and Technical Education, The Ohio State University, worked cooperatively with James D. MacConnell, Frank Brunetti, Joseph Hannon, Edwin Rios, and Clarke Schiller at the School Planning Laboratory, School of Education, Stanford University, in preparing this planning guide. Center project staff members were Richard F. Meckley, Ivan E. Valentine, and Zane McCoy.

The Center is grateful to the many individuals and groups whose assistance and suggestions led to the successful conclusion of the project.

Robert E. Taylor, Director
The Center for Vocational
and Technical Education

CONTENTS

A GUIDE FOR PLANNING FACILITIES FOR OCCUPATIONAL PREPARATION PROGRAMS FOR MEDICAL SECRETARIES

PART I

INTRODUCTION

PURPOSE OF GUIDE

The major purpose of this guide is to develop the necessary information for the writing of educational specifications to house medical secretary programs.

In addition to the major purpose of providing important and comprehensive information to be incorporated in educational specifications, the guide is also designed to:

- Assist planners in the formation of creative housing solutions for desired educational programs.

- Prevent important considerations from being overlooked in the facility planning process.

- Encourage logical and systematic facility planning.

ORGANIZATION OF GUIDE

The facility planning guide is organized under four major headings or parts:

- Part I (Introduction) is a discussion of the major purpose, the underlying assumptions, recent instructional trends, and the guiding principles.

- Part II (The Instructional Program) gives important information on medical secretary training objectives and the kinds of programs which will be organized to implement them.

- Part III (Distinct Types of Instructional Areas to be Provided) describes in detail the actual spaces desired to house the program.

- Part IV is an annotated bibliography of reference sources which offer a more detailed treatment of the various phases of facility planning.

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UNDERLYING ASSUMPTIONS

Important assumptions were made in the preparation of this guide. They were:

- Major educational program decisions have or are being made. Content of instruction has been determined through educational surveys, advisory committees, school board study, etc. Instructional methods have been determined by qualified professors, instructors and other appropriate staff members. To assure adequate educational program planning the guide will ask important questions which may serve as guidelines to such planning.

- A cooperative and collaborative relationship has been established with knowledgeable local agencies who are aware of economic, political, and social conditions which must be taken into account in short- and long-range educational planning.

- Educational, economical, political, and social planning has revealed the approximate numbers and kinds of students (school-age and adult) to be served by the proposed school. Such information has been provided by enrollment projections, census tract data, student interest studies, etc.

- The information recorded in this document will be used in the preparation of educational specifications for use by an architect(s) in facility design.

- Sufficient funds are or can be made available to support both the provision of facilities and the operation of the desired occupational preparation programs.

RECENT INSTRUCTIONAL TRENDS

- Expanded programs to reach not only the average and those who are college bound, but also the unusually gifted, the physically handicapped, the mentally retarded, and the culturally disadvantaged are needed and being provided by occupational preparation programs.

- Cooperation among instructors in developing interdisciplinary units or courses is increasing. Cooperative instruction is encouraged and facilitated by the proximity of instructional and work areas where the teachers can plan together and produce instructional materials.

- Mobile equipment and convenient space for storing it is making the same space available for many purposes and resulting in more effective and efficient use of space.

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- Mechanical and electronic teaching aids are being utilized to a greater degree by instructors in occupational preparation programs. To some extent, the effective use of such devices depends upon the accessibility and convenience of storage.

GUIDING PRINCIPLES

In planning facilities to house occupational preparation programs, it is suggested that educational program and facility decisions be consistent with the following guiding principles.

- The educational program is the basis for planning space and facilities.

- Space and facilities should be planned to accommodate changes in the educational program.

- The program should be planned to serve the needs of a variety of groups in the community.

- Space and facilities for the program can be extended through the use of community resources.

- Safe and healthful housing must be provided for all students.

- Space and facilities for occupational preparation programs should be considered in context with the total educational program of the institution and the community.

PART II

THE INSTRUCTIONAL PROGRAM

In Part II of the guide, important instructional program decisions with respect to basic program features, objectives, and needed information on occupational preparation programs to be housed are recorded.

BASIC PROGRAM FEATURES

Basic features of the educational program are determined greatly by a school or department's educational philosophy. A philosophy of education provides a base from which program objectives and teaching and learning activities designed to meet these objectives can be derived. In the final analysis, it is the kinds of teaching and learning activities to be carried on which should determine facility needs.

In this section, planners have an opportunity to express basic program features which will serve as guidelines for the planned occupational preparation programs for medical secretaries.

Indicate below the relative degree of emphasis to be placed on each of the program features stated by circling the appropriate number. The scale provided for this purpose ranges from 1 for major emphasis, 2 for some emphasis, 3 for slight emphasis, to N for no emphasis. This same scale will be used frequently throughout the planning guide.

> 1 major emphasis
> 2 some emphasis
> 3 slight emphasis
> N no emphasis

1. Purpose of Program

   a. A purpose of the program is to develop skills of working with modern technological equipment in the field of medical technology.   1   2   3   N

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b. A purpose of the program is to prepare
    students for entry into further training
    programs. The nature of this training is:

    _____
    _____
    _____   1   2   3   N
c. Other program purposes:
    1) _____
    2) _____
    3) _____
    4) _____

2. Students

    a. Student admission to the program is on the a
        basis of selective criteria which include:
        1) _____
        2) _____
        3) _____
        4) _____
    b. The program will place emphasis on skill
        acquisition.   1   2   3   N
    c. The program will place emphasis on the
        learning of theory.   1   2   3   N
    d. Students will have freedom of movement
        and access to learning materials.   1   2   3   N
    e. Students will be encouraged to act
        independently.   1   2   3   N
    f. Students will be provided with cooperative
        work experience outside the school.   1   2   3   N
    g. Other basic program features in relation
        to students:
        1) _____
        2) _____
        3) _____
        4) _____

3. Instruction

    a. The instructional approach may be single
        discipline-medical secretary as opposed to
        inter-disciplinary (humanities, science,
        etc.). If not a single discipline approach,
        describe the inter-disciplinary approach and
        the discipline involved.

        _____
        _____
        _____   1   2   3   N

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b. Cooperative or team instruction will be
used. If this mode of instruction is to
be extensively emphasized, describe in
general terms.

_____
_____
_____   Yes   No

c. Community resources will be utilized in
instruction. If a high emphasis is to be
placed on use of community resources,
describe some of these resources.

_____
_____
_____   1   2   3   N

d. Instruction flexibility is required. If a
high emphasis is to be placed on instructional
flexibility please describe the kinds of
flexibility desired.

_____
_____
_____   1   2   3   N

e. Other basic program features important to
the planned instructional program:
1) _____
_____
2) _____
_____
3) _____
_____
4) _____
_____

EDUCATIONAL OBJECTIVES

Educational objectives are often identified as goals or
outcomes of the educational program. An objective should
describe a desired educational outcome that is consistent with
a school's philosophy.

Objectives are important to both the planner and the
architect since they determine the school's program and related
activities. They provide important implications which, when
translated into facilities, can enhance the desired program.
Thus it becomes imperative to clearly establish the program
objectives prior to embarking on educational specifications and
building design.

The purpose of this part of the guide is to bring together elements in a way as to provide direction and understanding for the planner and the architect.

Space is provided to indicate degree of emphasis by circling the appropriate number for each of the objectives. The scale provides a purpose range from 1 for major emphasis, to N for no emphasis.

1 major emphasis
2 some emphasis
3 slight emphasis
N no emphasis

1. To prepare individuals for entry into gainful employment   1 2 3 N

2. To motivate and recruit capable and qualified students to enroll in post-high school programs   1 2 3 N

3. To provide pre-professional educational training for students who plan to enter colleges and universities   1 2 3 N

4. To permit individuals to retrain or return and continue professional training   1 2 3 N

5. *Medical secretary:* The courses or units of instruction in medical secretary training emphasize acquisition of knowledge, the development of understandings, attitudes and skills relevant to the medical field, medical office and hospital services. Learning activities and experience are organized to enable students to develop business and medical competencies relevant to an efficient medical secretary. Subject matter is coordinated with appropriate office, hospital and work experiences. Throughout medical secretary training emphasis is placed on orientation to the medical profession.

    a. *Medical office and hospital procedure:* Instruction concerns office management, bookkeeping, transcription and typing of medical materials, proper reception of patients (hospital or office), taking case histories by interview, completing insurance forms, and making appointments.   1 2 3 N

    b. *Secretarial:* Instruction concerns developing typing speed, use of dicta-phone, correct handling of telephone conversations, filing and billing, and correct forms of letter writing.   1 2 3 N

    c. *Anatomy and physiology:* Instruction includes study of the functioning of the digestive tract, reproduction system

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and the endocrine glands, bones and bone
structure, respiratory system and the
circulatory system.   1 2 3 N

6. Other educational objectives

a. _____

b. _____

c. _____

d. _____

PROGRAM CONTENT AREAS

This guide is designed to assist in the planning of
facilities for an occupational preparation program for medical
secretaries.

In addition to professional training, the courses or units
emphasize acquisition of knowledge and the development of
understandings, attitudes, and skills relevant to personal,
home, and family life.

In occupational preparation, the courses or units emphasize
the student's acquisition of knowledge and the development of
understanding, attitudes, and skills relevant to occupational
preparation. Learning activities and experiences are organized
to enable students to develop competencies essential for entry
into occupations, to further training, or to acquire new or
additional competencies for upgrading their job entry level.

Instruction is usually given in discrete subject areas or
courses. Subject matter is coordinated with appropriate field,
laboratory, and work experience. Programs of occupational
preparation for the most part, can be classified under the four
headings: 1) Scientific; 2) General; 3) Laboratory and 4)
Clinical.

These four content areas relate directly to the professional
field of service and can be used to categorize most occupational
preparation programs. However, students in these programs often
elect or are required to take courses in subjects such as
English, mathematics, and physical education. For example,
a student in training to become a medical secretary might take
the following courses or units:

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	Courses	Content Areas

Courses	Content Areas
American History	Academic
Biology	Science
English	Academic
Physical Education I	Physical Education

The concept of content areas is used because different disciplines require specific types of instructional facilities and equipment.

- Scientific
- General:
  - Science (e.g., physics, chemistry, biology)
  - English, mathematics, and social studies
  - Music (e.g., band, chorus, and choir)
  - Physical Education
  - Other (this category is used in the event that a course or unit to be offered will not fit into any of the above content areas)
- Laboratory (e.g., typing laboratory)
- Clinical (e.g., patient interviews)

PLANNING INSTRUCTIONAL AREAS BY MODES OF LEARNING

The planning of intructional areas for occupational preparation facilities can be substantially aided through utilization of the concept of modes of learning. Learning can be divided into three distinct modes--reaction learning, interaction learning, and action learning.

Reaction learning usually occurs in an instructional area designed for lecture and demonstration and is characterized by activities which tend to be largely teacher-centered with the central focus on lecturing. Student activities include listening, observing, and the taking of notes. Group size may vary from one to a hundred. The number of students has little effect on the learning experience if proper technological aids such as television, microphones, projectors and the like are used. Student activities are relatively passive in reaction learning.

Lecture/demonstration areas can be used commonly for reaction learning in all subject areas. For example, in planning facilities for diverse occupational preparation programs: e.g., medical secretary and medical assistant training, the planner should bear in mind that reaction learning for students in both programs can occur in the same kind of space. This means that facility planning should be done in terms of the total program rather than its fractional parts. In many instances, lecture/demonstration areas can be shared. Where a great deal of facility sharing is expected the planner shcould consider the relative merits of optimum location within the building and the advisability of clustering various instructional areas.

Interaction learning usually occurs in a seminar instructional area and is characterized by both teacher and learner participating as both listener and speaker. This mode of learning, of course, must occur in groups; however, sociological research suggests these

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groups should not exceed 18 persons for optimal effectiveness. Active interaction of all students generally requires a longer time span than reaction learning.

Seminar areas, like lecture/demonstration areas, are usually designed for common use by all vocational service areas. The same considerations which were outlined for lecture/demonstration areas also apply to seminar areas.

Action learning which usually occurs in a laboratory instructional area allows the individual student to learn by doing. Students learn on an individual basis but may function in a group setting. In more flexible types of educational programs, students are scheduled for laboratory work on an individual basis. Since action learning involves overt action by individual students, the teacher's role is largely that of a consultant to the learner.

Laboratory areas are more specialized than lecture/demonstration areas used for reaction learning and seminar areas used for interaction learning. Since laboratory areas are designed to facilitate the learning of specific skills, there is less likelihood of sharing such areas by students in various vocational training programs. Wherever common elements of skill instruction are found among training programs, the possibility of sharing and clustering laboratory spaces can be both expedient and economical.

SPECIALIZED AND MULTI-USE OF INSTRUCTIONAL AREAS

The relative amounts of time to be spent by students in a given vocational program in reaction, interaction, and action learning has definite implications for the number and kind of spaces to be provided. These time considerations combined with decisions on the degree of specialization versus multi-use help determine the nature of facilities required. Since most occupational programs have concentrated on action learning experiences, facilities designed for a particular vocational program have seldom provided adequate reaction and interaction facilities because of the limited utilization of such spaces. However, if the learning activities in any vocational program are broken down into the modes of learning, it will be noted that reaction and interaction spaces are the same regardless of the vocational area. Therefore, by providing common reaction and interaction spaces for all vocational programs, the most modern technological aids can be justified which, in most cases, will permit lectures, demonstrations and other group reaction learning experiences for groups larger than typically used in vocational education programs. Not only will group reaction learning be improved but more time will become available for the professional staff to work with individuals and small groups in interaction and action learning activities.

Scheduling group reaction and interaction learning experiences into specialized facilities permits complete flexibility in the use of action learning laboratories on an open individualized basis since students would no longer need to be scheduled into the action learning laboratories on a specific class basis. This will

permit 100 percent room utilization of the action learning laboratories and also permit the introduction of differentiated staff assignments into vocational education.

The open laboratory concept also permits the planned sharing of certain specialized equipment which may be required by two or more vocational programs.

> NOTE: THE FOLLOWING SECTIONS OF THE GUIDE (PAGES 15-35) WILL ASSIST THE PLANNER IN MAKING MATHEMATICAL DETERMINATIONS OF THE <u>NUMBERS</u> OF INSTRUCTIONAL AREAS NEEDED TO HOUSE THE DESIRED PROGRAM. IF THE NUMBERS OF INSTRUCTIONAL AREAS REQUIRED ARE ALREADY KNOWN, THE PLANNER MAY NOW PROCEED TO FORM E, PAGE 36. IF, HOWEVER, MATHEMATICAL DETERMINATIONS ARE TO BE MADE, ALL FORMS SHOULD BE COMPLETED AS ACCURATELY AS POSSIBLE.

OCCUPATIONAL PREPARATION PROGRAMS TO BE OFFERED

Information on the medical secretary program is entered on a separate Form A, page 18. Directions for completing this form appear on pages 15 and 16.

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INSTRUCTIONS FOR COMPLETING FORM A

BASIC PROGRAM INFORMATION

Item 1
Occupational Preparation Program--Enter here the name of the occupational program to be offered.

Item 2
Yearly Enrollment--Enter here the projected maximum number of students to be enrolled yearly in the program.

Item 3
Nature of Students--Underline all categories which apply to the students to be enrolled in the program.

Item 4
Weeks of Instruction per Year--Enter here the number of weeks per year the school will be open for instruction, e.g., 38 weeks.

Item 5
Total Weekly Periods or Modules--Enter here the total number of periods or modules (if modular scheduling is to be used) per week available for instructional purposes for each student. Do not count periods or modules scheduled for lunch and other non-instructional purposes.

Column 6
Courses of Instruction--List the courses or units of instruction to be offered either on a required or elective basis for the occupational preparation program.

Column 7
Content Area--Opposite each course of instruction, enter the appropriate content area as presented on page 11.

Column 8
Total Course Enrollment--Opposite each course of instruction, enter the projected maximum student enrollment.

Column 9
Maximum Group Size for Reaction Learning--Opposite each course or unit of instruction, enter the maximum group size in number of students for reaction (lecture/demonstration) type learning.

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Column 10

Estimated Weekly Periods or Modules of Reaction Level Learning--Opposite each course or unit of instruction, enter the estimated number of periods or modules per week to be devoted to reaction learning per student.

Column 11

Weekly Group-Periods or Modules (Lecture/Demonstration)--To compute weekly group-periods or modules, divide the entry in Column 8 by the entry in Column 9 and round up to the nearest whole number. Then multiply the whole number by the entry in Column 10.

Column 12

Maximum Group Size for Interaction Learning--Opposite each course or unit of instruction, enter the maximum group size in number of students for interaction (seminar) type learning.

Column 13

Estimated Weekly Periods or Modules of Interaction Level Learning--Opposite each course or unit of instruction, enter the estimated number of periods or modules per week to be devoted to interaction learning per student.

Column 14

Weekly Group-Periods or Modules (Seminar)--To compute weekly group-periods or modules, divide the entry in Column 8 by the entry in Column 12 and round up to the nearest whole number. Then multiply the whole number by the entry in Column 13.

Column 15

Maximum Group Size for Action Learning--Opposite each course or unit of instruction, enter the maximum group size in number of students for action (laboratory) type learning.

Column 16

Estimated Weekly Periods or Modules of Action Level Learning--Opposite each course or unit of instruction, enter the estimated number of periods or modules per week to be devoted to action learning per student.

Column 17

Weekly Group-Periods or Modules (Laboratory)--To compute weekly group-periods or modules, divide the entry in Column 8 by the entry in Column 15 and round up to the nearest whole number. Then multiply the whole number by the entry in Column 16.

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SAMPLE FORM A

BASIC PROGRAM INFORMATION

1. Occupational Preparation Program _Medical Secretary/2 Year Sequence_
2. Yearly Enrollment _50_
3. Nature of Students (underline appropriate categories): a. day school[1]; b. night school[1]; c. school age; d. adults; e. males; f. females; other (specify) ___
4. Weeks of Instruction per Year _38_
5. Total Weekly Periods or Modules _40_

Courses of Instruction[2]	Content Areas	Total Course Enroll-ment	Maximum Group Sizes, Estimated Weekly Periods or Modules and Calculated Group-Modules or Period-Modules by Levels of Learning								
			REACTION*			INTERACTION**			ACTION***		
			Maximum Group Size	Weekly Periods or Modules	Weekly Group-Periods or Modules	Maximum Group Size	Weekly Periods or Modules	Weekly Group-Periods or Modules	Maximum Group Size	Weekly Periods or Modules	Weekly Group-Periods or Modules
(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Medical Termin.	Gen.	25	25	4	4						
Med.Transcript.	Gen.	25	25	7	7						
Med.Health Sci.	Gen.	25	25	6	6						
Med.Office Proc.	Gen.	25	25	6	6						
Med.Secy./Intern.	Clin.	25	25	9	9	Local	Hospitals				
Typing I	Gen.	25	25	4	4						
Typing II	Gen.	25	25	4	4						
Shorthand I	Gen.	25	25	3	3						
Shorthand II	Gen.	25	25	3	3						
Others (specify)											

[1]If both day and night schools are offered, fill out separate forms for each.
[2]The above identifies a sample of professional course requirements only. Other academic requirements for the associate science or similar degrees must be added.
*(LECTURE/DEMONSTRATION); **(SEMINAR); ***(LABORATORY)

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FORM A

BASIC PROGRAM INFORMATION

1. Occupational Preparation Program _____
2. Yearly Enrollment _____
3. Nature of Students (underline appropriate categories): a. day school; b. night school; c. school age; d. adults; e. males; f. females; other (specify) _____
4. Weeks of Instruction per Year _____
5. Total Weekly Periods or Modules _____

FORM A

Courses of Instruction[2]	Content Areas	Total Course Enroll-ment	Maximum Group Sizes, Estimated Weekly Periods or Modules and Calculated Group-Modules or Period-Modules by Levels of Learning								
			REACTION*			INTERACTION**			ACTION***		
			Maximum Group Size	Weekly Periods or Modules	Weekly Group-Periods or Modules	Maximum Group Size	Weekly Periods or Modules	Weekly Group-Periods or Modules	Maximum Group Size	Weekly Periods or Modules	Weekly Group-Periods or Modules
(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)

[1] If both day and night schools are offered, fill out separate forms for each.
[2] The above identifies a sample of professional course requirements only. Other academic requirements for the associate science or similar degrees must be added.
*(LECTURE/DEMONSTRATION); **(SEMINAR); ***(LABORATORY)

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FORM A

BASIC PROGRAM INFORMATION

1. Occupational Preparation Program _____

2. Yearly Enrollment _____

3. Nature of Students (underline appropriate categories): a. day school[1]; b. night school[1]; c. school age; d. adults; e. males; f. females; other (specify) _____

4. Weeks of Instruction per Year _____

5. Total Weekly Periods or Modules _____

Courses of Instruction[2]	Content Areas	Total Course Enroll-ment	Maximum Group Sizes, Estimated Weekly Periods or Modules and Calculated Group-Modules or Period-Modules by Levels of Learning								
			REACTION*			INTERACTION**			ACTION***		
			Maximum Group Size	Weekly Periods or Modules	Weekly Group-Periods or Modules	Maximum Group Size	Weekly Periods or Modules	Weekly Group-Periods or Modules	Maximum Group Size	Weekly Periods or Modules	Weekly Group-Periods or Modules
(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)

[1]If both day and night schools are offered, fill out separate forms for each.
[2]The above identifies a sample of professional course requirements only. Other academic requirements for the associate science or similar degrees must be added.
*(LECTURE/DEMONSTRATION); **(SEMINAR); ***(LABORATORY)

BASIC PROGRAM INFORMATION

1. Occupational Preparation Program _____

2. Yearly Enrollment _____

3. Nature of Students (underline appropriate categories): a. day school[1]; b. night school[1]; c. school age; d. adults; e. males; f. females; other (specify) _____

4. Weeks of Instruction per Year _____

5. Total Weekly Periods or Modules _____

FORM A

Maximum Group Sizes, Estimated Weekly Periods or Modules and Calculated Group-Modules or Period-Modules by Levels of Learning

Courses of Instruction[2]	Content Areas	Total Course Enrollment	REACTION*			INTERACTION**			ACTION***		
			Maximum Group Size	Weekly Periods or Modules	Weekly Group-Periods or Modules	Maximum Group Size	Weekly Periods or Modules	Weekly Group-Periods or Modules	Maximum Group Size	Weekly Periods or Modules	Weekly Group-Periods or Modules
(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)

[1] If both day and night schools are offered, fill out separate forms for each.
[2] The above identifies a sample of professional course requirements only. Other academic requirements for the associate science or similar degrees must be added.
*(LECTURE/DEMONSTRATION); **(SEMINAR); ***(LABORATORY)

FORM A

BASIC PROGRAM INFORMATION

1. Occupational Preparation Program _____

2. Yearly Enrollment _____

3. Nature of Students (underline appropriate categories): a. day school[1]; b. night school[1]; c. school age; d. adults; e. males; f. females; other (specify) _____

4. Weeks of Instruction per Year _____

5. Total Weekly Periods or Modules _____

Courses of Instruction[2]	Content Areas	Total Course Enroll-ment	Maximum Group Sizes, Estimated Weekly Periods or Modules and Calculated Group-Modules or Period-Modules by Levels of Learning								
			REACTION*			INTERACTION**			ACTION***		
			Maximum Group Size	Weekly Periods or Modules	Weekly Group-Periods or Modules	Maximum Group Size	Weekly Periods or Modules	Weekly Group-Periods or Modules	Maximum Group Size	Weekly Periods or Modules	Weekly Group-Periods or Modules
(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)

[1] If both day and night schools are offered, fill out separate forms for each.

[2] The above identifies a sample of professional course requirements only. Other academic requirements for the associate science or similar degrees must be added.

*(LECTURE/DEMONSTRATION); **(SEMINAR); ***(LABORATORY)

PART III

DISTINCT TYPES OF INSTRUCTIONAL AREAS TO BE PROVIDED

QUANTITATIVE FACILITY NEEDS

The number of instructional areas to house the programs described in Part II (The Instructional Program) are recorded in this section of the guide.

As indicated in Part II, there are three principal types of instructional areas used to accommodate educational programs. They are:

Lecture/demonstration areas--used principally for group reaction learning.

Seminar areas--used principally for group interaction learning.

Laboratory areas--used principally for group or individual action learning.

In addition to these instructional areas, there are, of course, other school-wide auxiliary areas such as instructional materials centers, language laboratories, gymnasiums, and auditoriums which are part of the overall school plan. Requirements for such facilities are calculated as a part of total school planning and are not made in this guide.

Forms B, C, and D can be used to compute the number of lecture/demonstration, seminar, and laboratory areas required for the medical secretary program.

Results of the computations on Forms B, C, and D are entered on Form E which is a summary of total instructional area requirements for the medical secretary program.

In the event that instructional area requirements are already determined (e.g., it has been decided that one combination laboratory and lecture/demonstration area will be provided) the information can be recorded directly on Form E without making the computations on Forms B, C, and D.

After the number of instructional areas are determined on Form E, information can then be recorded in the following section of the guide concerning the nature of these spaces.

INSTRUCTIONS FOR COMPLETING FORM B

LECTURE/DEMONSTRATION AREA REQUIREMENTS BY CONTENT AREAS

Column 1
  Content Area--Content areas are listed in Column 1.

Column 2
  Total Enrollment--To obtain total enrollment for content areas, find the total enrollment for each content area as indicated in Columns 7 and 8 of Form A(s) for all occupational preparation programs.

Column 3
  Maximum Group Size--Opposite each content area, enter the maximum group size desired for a lecture/demonstration area to serve the content area (Form A, Column 9).

Column 4
  Total Weekly Periods or Modules--Opposite each content area, enter the total periods or modules per week the school will be open for day school instruction. This entry will be identical for all content areas and identical to the number recorded for Item 5, Form A.

Column 5
  Total Weekly Reaction Group Periods or Modules--Opposite each content area, enter the total group periods or modules per week to be devoted to reaction learning as indicated in Column 11 of Form A(s) for all occupational preparation programs.

Column 6
  Lecture/Demonstration Areas Required--Opposite each content area, enter the quotient of Item 5 divided by Item 4. Round up to the nearest hundredth.

Column 7
  Adjusted Lecture/Demonstration Areas Required--To adjust for scheduling difficulties which result in areas being less than 100 percent utilized, multiply the entry in Column 6 by 1.3 and enter the result, rounded up to the nearest hundredth, in Column 7 for each content area.

Column 8
  Totals--Since lecture/demonstration areas, unlike laboratory areas, can be utilized by nearly all content areas, the entries in Column 7 can be added for all lecture/demonstration areas with identical maximum group sizes as entered in Column 3. For example, 8a might read 2 lecture/demonstration areas with a student capacity of 25 each.

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SAMPLE FORM B

LECTURE/DEMONSTRATION AREA REQUIREMENTS BY CONTENT AREAS

Content Area (1)	Total Enrollment (2)	Maximum Group Size (3)	Total Weekly Periods or Modules (4)	Total Weekly Reaction Group Periods or Modules (5)	Lecture/Demon- stration Areas Required (5) ÷ (4) (6)	Adjusted Lecture/Demon- stration Areas Required (6) X 1.3 (7)
1. Scientific	0					
2. General	200	25	40	37	.93	1.21
3. Laboratory	0					
4. Clinical	25	25	40	9	.23	.30
Others (specify)						

(8) Totals (Figures in Column 7 can be added together for areas with same student capacity as entered
in Column 3.) Round off total to next higher whole number.
a. ___2___ lecture/demonstration areas with a student capacity of ___25___
b. _____ lecture/demonstration areas with a student capacity of _____
c. _____ lecture/demonstration areas with a student capacity of _____
d. _____ lecture/demonstration areas with a student capacity of _____

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FORM B

LECTURE/DEMONSTRATION AREA REQUIREMENTS BY CONTENT AREAS

Content Area (1)	Total Enrollment (2)	Maximum Group Size (3)	Total Weekly Periods or Modules (4)	Total Weekly Reaction Group Periods or Modules (5)	Lecture/Demonstration Areas Required (5) ÷ (4) (6)	Adjusted Lecture/Demonstration Areas Required (6) x 1.3 (7)
1. Scientific						
2. General						
3. Laboratory						
4. Clinical						
Others (specify)						

(8) Totals (figures in Column 7 can be added together for areas with same student capacity as entered in Column 3.) Round off total to next higher whole number.

a. _____ lecture/demonstration areas with a student capacity of _____
b. _____ lecture/demonstration areas with a student capacity of _____
c. _____ lecture/demonstration areas with a student capacity of _____
d. _____ lecture/demonstration areas with a student capacity of _____

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INSTRUCTIONS FOR COMPLETING FORM C

SEMINAR AREA REQUIREMENTS BY CONTENT AREAS

Column 1
    Content Area--Content areas are listed in Column 1.

Column 2
    Total Enrollment--To obtain total enrollment for content areas, find the total enrollment for each content area indicated in Columns 7 and 8 of Form A(s) for all occupational preparation programs.

Column 3
    Maximum Group Size--Opposite each content area, enter the maximum group size desired for a seminar area to serve the content area (Form A, Column 12).

Column 4
    Total Weekly Periods or Modules--Opposite each content area, enter the total periods or modules per week the school will be open for day school instruction. This entry will be identical for all content areas and identical to the number recorded for Item 5, Form A.

Column 5
    Total Weekly Interaction Group Periods or Modules--Opposite each content area, enter the total group periods or modules per week to be devoted to interaction learning as indicated in Column 14 of Form A(s) for all occupational preparation programs.

Column 6
    Seminar Areas Required--Opposite each content area, enter the quotient of Item 5 divided by Item 4. Round up to the nearest hundredth.

Column 7
    Adjusted Seminar Areas Required--To adjust for scheduling difficulties which result in areas being less than 100 percent utilized, multiply the entry in Column 6 by 1.3 and enter the result, rounded up to the nearest hundredth, in Column 7 for each content area.

Column 8
    Totals--Since seminar areas, unlike laboratory areas, can be commonly utilized by nearly all content areas, the entries in Column 8 can be added for all seminar areas with identical maximum group sizes or entered in Column 3. For example, 8a might read 0 identical maximum group sizes or entered in Column 3. For example, 8a might read 0 seminar areas with a student capacity of _ each.

SAMPLE FORM C

SEMINAR AREA REQUIREMENTS BY CONTENT AREAS

Content Area (1)	Total Enrollment (2)	Maximum Group Size (3)	Total Weekly Periods or Modules (4)	Total Weekly Interaction Group-Periods or Modules (5)	Seminar Areas Required (5) + (4) (6)	Adjusted Seminar Areas Required (6) X 1.3 (7)
1. Scientific	0					
2. General	0					
3. Laboratory	0					
4. Clinical	0					
Others (specify)						

(8) Totals (Figures in Column 7 can be added together for areas with same student capacity as entered in Column 3.) Round up total to next higher whole number.

a. _____ seminar areas with a student capacity of _____
b. _____ seminar areas with a student capacity of _____
c. _____ seminar areas with a student capacity of _____
d. _____ seminar areas with a student capacity of _____

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FORM C

SEMINAR AREA REQUIREMENTS BY CONTENT AREAS

Content Area (1)	Total Enrollment (2)	Maximum Group Size (3)	Total Weekly Periods or Modules (4)	Total Weekly Interaction Group-Periods or Modules (5)	Seminar Areas Required (5) ÷ (4) (6)	Adjusted Seminar Areas Required (6) X 1.3 (7)
1. Scientific						
2. General						
3. Laboratory						
4. Clinical						
Others (specify)						

(8) Totals (Figures in Column 7 can be added together for areas with same student capacity as entered in Column 3.) Round up total to next higher whole number.

a. _____ seminar areas with a student capacity of _____

b. _____ seminar areas with a student capacity of _____

c. _____ seminar areas with a student capacity of _____

d. _____ seminar areas with a student capacity of _____

INSTRUCTIONS FOR COMPLETING FORM D

LABORATORY AREA REQUIREMENTS BY CONTENT AREAS

Column 1
Content Area--Content areas are listed in Column 1.

Column 2
Total Enrollment--To obtain total enrollment for content areas, find the total enrollment for each area as indicated in Columns 7 and 8 of Form A for all occupational preparation programs.

Column 3
Maximum Group Size--Opposite each content area, enter the maximum group size desired for a laboratory area to serve the content area (Form A, Column 15).

Column 4
Total Weekly Periods or Modules--Opposite each content area, enter the total periods or modules per week the school will be open for day school instruction. This entry will be identical for all content areas and identical to the number recorded for Item 5, Form A.

Column 5
Total Weekly Action Group Periods or Modules--Opposite each content area, enter the total group periods or modules per week to be devoted to action learning as indicated in Column 17 of Form A(s) for all occupational preparation programs.

Column 6
Laboratory Areas Required--Opposite each content area, enter the quotient of Item 5 divided by Item 4. Round up to the nearest hundredth.

Column 7
Adjusted Laboratory Areas Required--To adjust for scheduling difficulties which result in areas being less than 100 percent utilized, multiply the entry in Column 6 by 1.3 and enter the result, rounded up to the nearest hundredth, in Column 7 for each content area.

SAMPLE FORM D

LABORATORY AREA REQUIREMENTS BY CONTENT AREAS

Content Area (1)	Total Enrollment (2)	Maximum Group Size (3)	Total Weekly Periods or Modules (4)	Total Weekly Action Group-Periods or Modules (5)	Lab Areas Required (5) ÷ (4) (6)	Adjusted Lab Areas Required (6) X 1.3 (7)
1. Scientific	0					
2. General	0					
3. Laboratory	0					
4. Clinical	0					
Others (specify)						

FORM D

LABORATORY AREA REQUIREMENTS BY CONTENT AREAS

Content Area	Total Enrollment	Maximum Group Size	Total Weekly Periods or Modules	Total Weekly Action Group- Periods or Modules	Lab Areas Required (5) ÷ (4)	Adjusted Lab Areas Required (6) X 1.3
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Scientific						
2. General						
3. Laboratory						
4. Clinical						
Others (specify)						

FORM E

SUMMARY OF FACILITY REQUIREMENTS FOR MEDICAL SECRETARY OCCUPATIONAL PREPARATION PROGRAMS

1. Lecture/demonstration areas for reaction (see Form B) e.g., ____ areas with a student capacity of ____ each.

   a. _____ area(s) with a student capacity of _____.
   b. _____ area(s) with a student capacity of _____.
   c. _____ area(s) with a student capacity of _____.
   d. _____ area(s) with a student capacity of _____.

2. Seminar areas for interaction learning (see Form C)

   a. _____ area(s) with a student capacity of _____.
   b. _____ area(s) with a student capacity of _____.

3. Laboratory areas for action learning (see Form D)

   _____ medical secretary laboratory area(s) with a student capacity of _____.

4. Multi-purpose areas

   If any of the specialized areas above are to be combined as multi-purpose spaces, indicate the combinations desired.

   a. _____
   b. _____
   c. _____
   d. _____

QUALITATIVE FACILITY NEEDS

This section records information concerning the required instructional areas. Special forms are provided for describing the nature of lecture/demonstration areas, seminar areas, laboratory areas, and auxiliary areas. For each type of instructional area, information in the following categories should be considered.

1. The relationship of the area to other instructional areas (specialized versus multi-purpose utilization of space.)

2. The number of areas needed.

3. The activities of students and teachers in the instructional area.

4. The spatial relationships within the area and its relationships to other instructional areas.

5. The furniture and equipment required for the area.

6. The environmental factors required for the area.

7. The special utility services required for the area.

8. The minimal space requirements for the area.

FORM F

DESCRIPTION OF LECTURE/DEMONSTRATION AREA(S)
TO BE USED PRINCIPALLY FOR GROUP REACTION LEARNING

1 major emphasis
2 some emphasis
3 slight emphasis
N no emphasis

1. The lecture/demonstration area(s) should be planned:

    a. As independent unit(s)   Yes   No
    b. In combination with _____
        laboratory area(s)   *specify*   Yes   No
    c. In combination with seminar area(s)   Yes   No
    d. As an area within a single multi-use space   Yes   No

2. Number of lecture/demonstration areas required
    for the desired program (see Form E)   _____

3. Student and instructor activities in this
    space. Indicate the extent to which each
    of the activities listed below will occur.

    a. Listening to lectures   1   2   3   N
    b. Observing demonstrations   1   2   3   N
    c. Taking notes   1   2   3   N
    d. Viewing films, slides, overhead projections,
        etc.   1   2   3   N
    e. _____   1   2   3   N
    f. _____   1   2   3   N

4. Spatial relationships. Indicate the extent
    to which the lecture/demonstration area(s)
    should be accessible to the:

    a. Instructional materials center   1   2   3   N
    b. Building entrance   1   2   3   N
    c. Delivery area   1   2   3   N
    d. Other instructional areas
        1. _____   1   2   3   N
        2. _____   1   2   3   N
        3. _____   1   2   3   N
    e. Other building areas
        1. _____   1   2   3   N
        2. _____   1   2   3   N
        3. _____   1   2   3   N

5. Furniture and equipment
    a. Student seating
        1) Individual desks and chairs   P   A   NA*

---

*Code: P = Preferred; A = Acceptable; NA = Not Acceptable. This
scale is used frequently on the following pages.

a) Number of desks and chairs
   required
b) Provision for storage   Yes   No
2) Permanent-type desk   P   A   NA
   a) Number required
   b) Provision for storage   Yes   No
3) Desk and chair combination   P   A   NA
   a) Number required
   b) Provision for storage   Yes   No
4) Tables and chairs   P   A   NA
   a) Number of tables required
   b) Number of chairs required _____
   c) Provision for storage   Yes   No
5) Auditorium-type seating   P   A   NA
      Number of seats required

b. Stage   Yes   No
    1) Permanent type   P   A   NA
    2) Portable type   P   A   NA
          The approximate area in
          square feet desired
c. Sound amplifying system   P   A   NA
d. Controls for regulating light
    intensity   P   A   NA
e. Lectern
    1) Permanent type   P   A   NA
    2) Portable type   P   A   NA
    3) Provision for storage   Yes   No
f. Projection screen
    1) Built-in type   P   A   NA
    2) Portable type   P   A   NA
    3) Approximate dimensions
    4) Provision for storage   Yes   No
g. Other equipment required for lecture/
    demonstration area(s) are:
    1) _____
    2) _____
    3) _____
    4) _____

6. Environmental factors

   a. *Aesthetic.* Factors to be considered in the aesthetic
       domain are colors, light, style of architecture, design
       and the like. Indicate any special aesthetic considera-
       tions important to the planning of the lecture/demon-
       stration area(s).

       _____
       _____
       _____
       _____

b. *Aerial*. Factors to be considered in this category include air temperature, radiant temperature, relative humidity, and ventilation. Indicate any special considerations important to the planning of the lecture/demonstration area(s).

_____

_____

_____

c. *Visual*. A properly controlled and balanced visual environment is important. The visual environment affects such things as accuracy in perception, attention to tasks, and speed of performance. Indicate any special factors which should be taken into account in planning the visual environment of the lecture/demonstration area(s).

_____

_____

_____

d. *Sonic*. Factors to be considered in this category include such things as acoustical requirements and sound systems. Indicate any special considerations important to the planning of the lecture/demonstration area(s).

_____

_____

_____

e. *Safety*. In planning a school building, safety for students and instructors is of prime concern. Indicate any special safety considerations which have implications for design of the lecture/demonstration area(s).

_____

_____

_____

_____

7. Vertical instructional surfaces

	Yes	No
a. Chalkboard		
1) Wall-mounted	P A	NA
Number of lineal feet		
2) Portable	P A	NA
Provision for storage	Yes	No
b. Tack board	Yes	No
Number of lineal feet		
c. Pegboard	Yes	No
Number of lineal feet	___	___

8. Special utility services required

	Yes	No
a. Electricity		
1) Projection equipment	Yes	No
2) Sound amplifying equipment	Yes	No
3) Electrical needs for other equipment *specify*		

40

a. _____
b. _____
c. _____
d. _____

b. Other utility needs for the lecture/demonstration area
1) _____
2) _____
3) _____
4) _____

9. The minimum space requirement in square feet for each lecture/demonstration area _____. (The planner should be aware of any state or local regulation or recommendations concerning floor space requirements.)

10. Other important factors to be considered in the planning of the lecture/demonstration area(s) are:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

FORM G

DESCRIPTION OF SEMINAR AREA(S) TO BE USED PRINCIPALLY FOR
GROUP INTERACTION LEARNING

1. The seminar area(s) should be planned:

    a. As independent unit(s)   Yes   No
    b. In combination with _____
        laboratory area(s)   *specify*   Yes   No
    c. In combination with lecture/demonstration
        area(s)   Yes   No
    d. As an area within a single multi-use space   Yes   No

2. The number of seminar area(s) required for the
    desired program (see Form E)

3. Student and instructor activities in this
    space. Indicate the extent to which each
    of the activities listed below will occur.

    a. Small group discussions   1 2 3 N
    b. Viewing films, slides, overhead projections,
        etc.   1 2 3 N
    c. Demonstrating   1 2 3 N
    d. Reporting   1 2 3 N
    e. Working on projects   1 2 3 N
    f. _____   1 2 3 N
    g. _____   1 2 3 N

4. Spatial relationships. Indicate the extent
    to which the seminar area(s) should be
    accessible to the:

    a. Instructional materials center   1 2 3 N
    b. Building entrance   1 2 3 N
    c. Delivery area   1 2 3 N
    d. Other instructional areas
        1) _____   1 2 3 N
        2) _____   1 2 3 N
        3) _____   1 2 3 N
        4) _____   1 2 3 N
    e. Other building areas
        1) _____   1 2 3 N
        2) _____   1 2 3 N
        3) _____   1 2 3 N

5. Furniture and equipment

                                                             Yes   No
    a. Seminar table   _____
        1) Number required
        2) Seating for how many persons   _____
        3) Permanent type   P   A   NA
        4) Portable type   P   A   NA
        5) Provision for storage.   Yes   No
    b. Chairs
        1) Number required   _____

		P	A	NA
2) Straight-back type		P	A	NA
3) Folding type		P	A	NA
4) Provision for storage		Yes		No

c. Other equipment required for seminar area(s)

1) _____
2) _____
3) _____
4) _____

6. Environmental factors

a. *Aesthetic.* Factors to be considered in the aesthetic domain are colors, light, style of architecture, design, and the like. Indicate any special aesthetic considerations important to the planning of seminar area(s).

_____
_____
_____

b. *Aerial.* Factors to be considered in this category include air temperature, radiant temperature, relative humidity, and ventilation. Indicate any special considerations important to the planning of the seminar area(s).

_____
_____
_____

c. *Visual.* A properly controlled and balanced visual environment is important. The visual environment affects such things as accuracy in perception, attention to tasks, and speed of performance. Indicate any special factors which should be taken into account in planning the visual environment of the seminar area(s).

_____
_____
_____

d. *Sonic.* Factors to be considered in this category include such things as acoustical requirements and sound system. Indicate any special considerations important to the planning of the seminar area(s).

_____
_____
_____

e. *Safety.* In planning a school building, safety for students and instructors is of prime concern. Indicate any special considerations which have implications for design of the seminar area(s).

_____
_____
_____
_____

7. Vertical instructional surfaces

    a. Chalkboard   Yes   No
        1) Wall-mounted   P   A   NA
            Number of lineal feet
        2) Portable   P   A   NA
            Provision for storage   Yes   No
    b. Tack board   Yes   No
        Number of lineal feet
    c. Pegboard   Yes   No
        Number of lineal feet

8. Special utility services required

    a. Electricity
        1) Projection equipment   Yes   No
        2) Sound amplifying equipment   Yes   No
        3) Electrical needs for other equipment
           (specify)
             a) _____
             b) _____
             c) _____
             d) _____
    b. Other utility needs for the seminar area(s)
        1) _____
        2) _____
        3) _____
        4) _____

9. Minimum space requirement in square feet for
    each seminar area _____ . (The planner
    should be aware of any state or local
    regulations or recommendations concerning
    floor space requirements.)

10. Other important factors to be considered in the planning of
     the seminar area(s) are:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

DESCRIPTION OF MEDICAL SECRETARY LABORATORY AREA(S)
TO BE USED PRINCIPALLY FOR ACTION LEARNING

1 major emphasis
2 some emphasis
3 slight emphasis
N no emphasis

1. The medical secretary laboratory area(s) should
    be planned:

		Yes	No
a.	As independent unit(s)	Yes	No
b.	In combination with _____ laboratory area(s) *specify*	Yes	No
c.	In combination with seminar area(s)	Yes	No
d.	In combination with lecture/demonstration area(s)	Yes	No
e.	As an area within a single multi-use space	Yes	No

2. Student capacity required for scheduled
    activities (see Form E)   _____

3. Student and instructor activities in various
    space divisions within the medical secretary
    laboratory area(s). Indicate the extent to
    which each activity will occur.

Laboratory area

1)	Becomes acquainted with medical specialities	1	2	3	N
2)	Develops skills in correct pronunciation, spelling, and definition of medical terms	1	2	3	N
3)	Develops typing skills and proficiency	1	2	3	N
4)	Learns correct letter forms and composition	1	2	3	N
5)	Develops skills in shorthand dictation and transcription	1	2	3	N
6)	Develops skills in transcription of medical dictation	1	2	3	N
7)	Learns to transcribe medical case histories	1	2	3	N
8)	Learns machine transcription	1	2	3	N
9)	Training in technique of making appointments	1	2	3	N
10)	Learns admission and discharge procedures	1	2	3	N
11)	Learns billing and collection procedures	1	2	3	N
12)	Acquaints student with hospital records and forms	1	2	3	N
13)	Acquaints student with record room procedures, patient's records and filing procedures	1	2	3	N
14)	Studies medical insurance forms, reports, and filing procedures	1	2	3	N

1 major emphasis
2 some emphasis
3 slight emphasis
N no emphasis

15) Emphasizes public relations through
    receptionist and telephone techniques   1 2 3 N
16) Develops human relation skills   1 2 3 N
17) Learns ethics of medical profession   1 2 3 N

4. Snatial relationships. Indicate the extent
   to which spaces should be accessible within
   the medical secretary laboratory area(s).

a. Laboratory to:
   1) Instructional area   1 2 3 N
   2) Instructional aids   1 2 3 N
      a) TV/closed, open, circuit   1 2 3 N
      b) Overhead projector   1 2 3 N
      c) Movie projection   1 2 3 N
      d) Chalkboards, models, charts, etc.   1 2 3 N
   3) Stand-up work area   1 2 3 N
   4) Supply storage area   1 2 3 N
   5) Independent study area   1 2 3 N
   6) Individual student storage area   1 2 3 N
      a) Supplies and materials   1 2 3 N
      b) Instruments and equipment   1 2 3 N
      c) Projects   1 2 3 N
   7) Instructor's area   1 2 3 N
   8) Utility areas
      a) Water   1 2 3 N
      b) Electrical   1 2 3 N
b. Other important spatial relationships
   within the medical secretary laboratory
   area(s):
                                               1 2 3 N
   _____   1 2 3 N
   _____   1 2 3 N
   _____   1 2 3 N
   _____   1 2 3 N

c. Medical secretary laboratory area(s) to:
   1) Instructional materials center   1 2 3 N
   2) Instructors' offices   1 2 3 N
   3) Centralized storage   1 2 3 N
   4) Administration complex   1 2 3 N
   5) Classrooms   1 2 3 N
   6) Other related labs/machine room   1 2 3 N
   7) Delivery area   1 2 3 N
   8) Teacher preparation area   1 2 3 N
   9) Student research area/references/
      library material   1 2 3 N
   10) Lavatory facilities   1 2 3 N

5. Furniture and equipment related to the
    medical secretary laboratory:

    a. Instructor's desk(s)   Yes   No
    1) Number required
    2) Provision for storage   Yes   No
    3) Further description

    b. Instructor's chair   Yes   No
    1) Number required
    2) Further description

    c. File cabinets   Yes   No
    1) Number required
    2) Legal size   Yes   No
    3) Letter size   Yes   No
    4) Further description

    d. Work counter   Yes   No
    1) Height/depth/length
    2) Storage   Yes   No
    3) Utilities
        a) Electricity   Yes   No
        b) High level illumination   Yes   No
        c) Water (hot/cold)   Yes   No
        d) Drain/sink   Yes   No
    4) Further description

    e. Student/secretary desk   Yes   No
    1) Number required
    2) Further description

    f. Student/typing chair   Yes   No
    1) Number required
    2) Further description

    g. Tote tray storage cabinet   Yes   No
    1) Number required
    2) Size
    3) Further description

    h. Typewriters (electric)   Yes   No
    1) Number required
    2) Further description

    i. Typewriters (manual)   Yes   No
    1) Number required
    2) Further description

FORM H

j. Dictaphone machine   Yes   No
    1) Number required
    2) Further description   _____

    _____
    _____
k. Tape recorder   Yes   No
    1) Number required
    2) Further description   _____

    _____
    _____
l. Key punch machine   Yes   No
    1) Number required
    2) Further description   _____

    _____
    _____
m. Adding machine   Yes   No
    1) Number required
    2) Further description   _____

    _____
    _____
n. Calculator   Yes   No
    1) Number required
    2) Further description   _____

    _____
    _____
o. Photocopy equipment   Yes   No
    1) Number required
    2) Further description   _____

    _____
    _____
p. Duplicator machine   Yes   No
    1) Number required
    2) Further description   _____

    _____
    _____
q. Mimeograph machine   Yes   No
    1) Number required
    2) Further description   _____

    _____
    _____
r. Microfilm/microfiche readers   Yes   No
    1) Number required   _____
    2) Type   _____
    3) Further description

    _____
    _____
s. Charts   Yes   No
    1) Number required
    2) Further description   _____

    _____
    _____

6. Other important factors to be considered in the
    medical secretary laboratory are:

    48

a. *Rear screen projection* _____

b. *Rheostat lighting* _____

c. *Blackout provisions* _____

d. *TV reception/transmission* _____

e. *Machine repair/storage* _____

f. *Electrical power to all stations* _____

g. *Model reception/office area* _____

h. _____

i. _____

j. _____

k. _____

l. _____

m. _____

n. _____

o. _____

p. _____

q. _____

r. _____

s. _____

t. _____

u. _____

v. _____

w. _____

x. _____

y. _____

z. _____

FORM I

ADDITIONAL PLANNING CONSIDERATIONS

Other important factors to be considered in the overall planning
and design of instructional areas for the medical secretary
occupational preparation program(s) are:

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PART IV

ANNOTATED BIBLIOGRAPHY

GENERAL FACILITY PLANNING

American Association of School Administrators. *Planning America's School Buildings*. Washington, D. C.: The Association, 1960.

Contributors to this publication were teachers, supervisors, administrators, architects, engineers, school board members, and school plant planning specialists. In addition to background material on school house construction, the book deals with specific topics including school surveys, analy.·is and computation of space and facility needs, enrollment projections, building designs, site selection, finance, and building maintenance and operation. Many pictures and illustrations are found, along with sample forms and outlines, which can be used in the facility planning process. No special consideration is given to unique problems faced in the planning for vocational and technical education facilities.

Boles, H. W. *Step by Step to Better School Facilities*. New York: Holt, Rinehart, and Winston, 1965.

A textbook on overall planning procedures for new and improved school facilities. The typical topics (school surveys, building planning, site selection and acquisition, architectural planning, contracting for construction, and the equipping and furnishing of buildings) are covered. The only mention of vocational schools is on page 270 where the author quotes from another source:

> Vocational training should be de-emphasized in the school since this training often becomes obsolete before it can be used; also, special "trade" and "vocational" schools should be discontinued, unless the vocational curriculum is liberal in approach and broad in character. Such schools are often used as dumping grounds for students who are not wanted elsewhere and often no more than custodial care is provided for them. When more is provided, the skills taught are frequently too partial in nature.

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Conrad, M. J. *Four Steps to New Schools*. Columbus, Ohio: Educational Administration and Facilities Division of the Bureau of Educational Research and Service. The Ohio State University.

A book prepared for the inexperienced school planner. The author emphasizes that a school building is an educational tool and should be designed to do the job it is intended to do. The four steps discussed are: 1) district-wide building survey; 2) educational planning; 3) architectural planning and construction; and 4) moving in and settling down. A glossary of important terms used in plant planning is located in the back of the book.

Conrad, M. J.; Wohlers, E. E.; and Griggs, N. *School Plant Planning: An Annotated Bibliography*. Columbus, Ohio: The Administration and Facilities Unit, School of Education, The Ohio State University, 1968.

A compilation of references in the following categories: general references; periodicals; overview of school plant field; district wide building survey; educational planning; the architect and his work; moving in and settling down; and related topics.

Finchum, R. N. *Extended Use of School Facilities*. Washington, D. C., U. S. Department of Health, Education, and Welfare, 1967.

This manual is intended to assist officials of school districts who are planning programs for maximum use of school properties and who to develop policies and regulations for efficient management of such programs. Various schedules of facility use are illustrated for nine different school systems.

Green, A. C. *Educational Facilities with New Media*. Washington, D. C.: Department of Audiovisual Instruction, National Education Association, 1966.

This work is designed to meet the needs of three distinct groups interested in providing educational facilities. Report A: "A Guide for Policy Makers" is directed to boards, administrators, planning committees, and institutional planners. Report B: "A Guide for the Design of Professions" is designed for architects, planners, and design specialists and planning committees; and Report C: "A Technical Guide" is intended for design-architects, engineers, equipment and furniture suppliers, and media specialists.

National Council on School House Construction. *NCSC Guide for Planning Plants*. East Lansing, Michigan: The Council, 1964.

A basic reference on school plant planning and construction for use by superintendents, school board members, school plant planners, state department of education personnel, local school system officials, collegiate institutions,

architects, lay advisory groups, and graduate students. Major topics covered are: planning and programing educational plants; spaces and equipment for learning; non-instructional systems; space organization and economy and resources   Much attention is given to plant planning through a description of a survey technique used to determine and satisfy school plant needs for a community. Site selection, kinds of instructional spaces, sonic, termal and visual enviromments, and best use of natural and plant resources are also treated.

North Carolina. Department of Public Instruction. *A Digest of Educational Planning*. Raleigh, North Carolina: The Department.

The contents of this book include a description of what educational planning is, when it is done, who does it, and how it is done. The three steps of planning are identified as: 1) identification and analysis of educational and facility needs; 2) adapting and implementing plant improvement programs; and 3) completing and evaluating a process of the educational planning.

North Carolina. Department of Public Instruction. The Division of School Planning. *School Design*. Raleigh.

Basic principles of school design is the thrust of this publication. It focuses on the interrelationship of patterns of school activities, organization of activities on the site, design potentials for various sites, and the building design data necessary for communicating the school's needs to the architect.

School Planning Laboratory. *Spectrum of Electronic Teaching Aids in Education*. Stanford, California: Stanford University, 1965.

This publication seeks to suggest which learning functions can be served electronically, to symbolize the nature and progressive complextiy of each electronic system, and finally to estimate budgets which will provide for adequate systems in relation to engineering and warranty costs.

Strevell, W.H., and Burke, A.J. *Administration of the School Building Program*. New York: McGraw-Hill Book Co., Inc., 1959.

A comprehensive textbook on the administration of the school plant program. The book is organized into three major parts: Part I, "Policy Decisions." deals with school building needs studies and long-range planning; Part 2, "Program Recommendations," deals with local study of plant needs, evaluation of existing plant, determination of additional plant needs, site selection and development, and the preparation of educational specifications; Part 3, "Project Administration," is concerned with the financial aspects of a building program and with public relations. There is a brief mention of the objectives of vocational education as contrasted with the objectives of general education on page 12.

The Cost of a Schoolhouse. New York: Educational Facilities
Laboratories, 1960.

This book deals with the cost of a schoolhouse and the
process of planning and financing it. It provides median
costs for various building elements, designates individual
responsibilities in process of building, and discusses
arrangement of space and environmental factors.

VOCATIONAL-TECHNICAL FACILITY PLANNING

American Vocational Association. *Developing Educational Specifica-
tions for Vocational and Practical Arts Facilities.* Washington,
D. C.: The Association.

The purpose of this publication is to reduce the broad
principles and processes of school plant planning to those
most applicable to vocational and practical arts education.
Effective techniques for developing educational specifications
are suggested. The committee provides a sequential treatment
of program and administrative considerations, desired space
and educational program, special site arrangement features,
special physical aspects of building, and the financial
requirements for the project.

Calder, C. R. *Modern Media for Vocational-Technical Education.*
Connecticut: State Department of Education, 1967.

A study of related literature on programed instruction,
instructional films, instructional television, and learning
from various instructional media. It analyzes new
instructional media approaches used at North Carolina's
Fundamental Learning Laboratories System, and the integrated
experience approach at Oakland Community College.

Chase, W. W.; Browne, J. W.; and Russo, M. *Basic Planning Guide
for Vocational and Technical Education Facilities.*
Washington, D. C.: Department of Health, Education, and
Welfare, U. S. Government Printing Office, 1965.

A general guide that describes important steps to be
followed in the planning for and construction of vocational
and technical education facilities. Important topics
covered are: the impact of the Vocational Education Act
of 1963; surveys of area educational needs; use of consultant
services; basic planning considerations; educational specifi-
cations; general planning and school construction cost and
outlay. Sample floor plans and picture illustrations of
vocational schools are included.

McKee, R. L., and Ripley, K. J. *The Documentation of Steps to
Establish a Technical College and the Evaluation of PERT as
a Planning Tool for Educators.* Bailey's Crossroads, Virginia:
Unpublished report, 1966.

An account of the procedures followed in the establishment
of a technical college within a period of less than 90 days.
The entire planning process and implementation is described

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along with the PERT technique which was applied. The author concluded the PERT (Program Evaluation and Review Technique) was effective in assisting the planners in reaching their objectives within a short period of time.

Stanford University. *Trends in Facility Design-Vocational-Technical Continuing Information Program.* Stanford, California: School of Education, 1966.

The pamphlet emphasizes the need for a total flexibility concept in school building. Consideration is given to the use of building components to provide flexibility in space, lighting, air-conditioning, sewage system, and the like.

U. S. Department of Health, Education and Welfare. *New Ideas and Construction for Vocational Education.* Washington, D. C.: Unpublished, 1967.

A report on new trends in the construction of vocational educational facilities. Among topics covered are occupational clusters, teaching techniques such as micro-teaching and educational parks, and unique problems faced by large city school systems. Special consideration is given to maximum utilization of vocational education facilities on an around-the-clock basis.

Valentine, I.E., and Conrad, M. J. *Progress Report: Vocational-Technical Facilities Project.* Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University, 1967.

A report which relates the thinking of six outstanding consultants on various topics relating current trends in vocational-technical education and facility planning. Review the work of a local consortium consisting of three Center vocational specialists, three school plant planners, three representatives from the State Department of Education, three local school officials, and three practicing architects in defining problems, clarifying issues, suggesting approaches to organizing planning guides, and establishing guidelines for a series of facility planning guides in selected vocational and technical subject areas.

Wohlers, A. E. *A Manual for Planning a Secondary School Building (Vocational Education).* Columbus, Ohio: The Administration and Facilities Unit, School of Education, The Ohio State University, Pamphlet C-14.

A general facility planning guide for programs of vocational education. Principal topics covered include: 1) number of teaching stations; 2) types of teaching stations; 3) equipment needs; and 4) floor areas required. The planning manual also deals with spatial relationships of teaching facilities and the utilization of auxiliary areas such as libraries, cafeterias, and administrative suites. Planners using the guide are directed to complete checklists and fill-in blank with the necessary information pertinent to vocational facility planning.

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George Washington University--School of Medicine. *Design for Medical Education.* Washington, D. C., 1965.

This report describes the steps taken by the University to translate its educational objectives, philosophy, and techniques into laboratory, classroom, and clinic. In addition to an existing hospital this University identifies five functional groupings of supporting facilities which include: 1) Commons; 2) Medical Sciences Unit; 3) Resources Unit; 4) University Clinics Unit; and 5) Doctor's Office Building. The reports present basic considerations in the planning of the first four of these units. The design studies accompanying each unit have application to general learning environments.

Harrell, G. T.; Hamilton, J. M.; and Butt, A. "A Multidiscipline Student Teaching Laboratory: Incorporation in a Single Building Design," *Journal of Medical Education,* 39:828-837, 1964.

The authors discuss advantages of multidiscipline of laboratories for conventional or integrated curricula. Included are recommended space requirements for students and faculty. The separation of basic student activities places emphasis on individual student progress and multi-use of laboratory space. Floor plans and photographs are included.

Library Study Committee of the Association of American Medical Colleges. *The Health Services Library,* a report to the National Library of Medicine, January 1967. Reprinted in *Journal of Medical Education,* August 1967.

A comprehensive report concerned with the most effective role the library can play in health education, the policy and situational decisions to be considered in planning new or renovated library facilities, the kinds of spaces the health services library of the future will need, and where the library planner can turn for help. Also included are sections on external and internal space relationships, general seating requirements, special rooms, and staff spaces. The appendices include structural and physical guidelines for planning an extensive annotated bibliography.

National Health Council and American Association of Junior Colleges. *A Guide for Health Technology Program Planning,* New York, N. Y. 1967.

The first section contains analysis of program development, development of curriculum essentials, and requisite resources for a selected health area. The second section of the guide presents general information, background for health facility administrators and the health practitioner association. This section concludes with two checklists,

one for health facilities and another for the health
practitioner association. There is brief mention in the
appendices of the associations concerned with program
development, referral lists of source agencies, and
statements of needs, role and responsibilities of
collaborative institutions.

Planning of Radiotherapy Facilities, World Health Organization
Technical Report Series, No. 328, Geneva: World Health
Organization, 1966.

This publication contains a detailed description of staff
requirements and functions in X-ray technology and
radio-therapy, equipment needs and specifications, space
requirements and relationships, and protection materials and
design. Also included is a complete listing of the types of
required spaces and recommended square footage per person.

Snow, D. L. *Space Planning Principles for Biomedical Research
Laboratories,* U. S. Public Health Service, Publication No.
1025, Washington, D. C., United States Government Printing
Office, 1963.

A step-by-step outline that describes the stages in
planning biomedical research laboratories. Programing
methods, space and utility requirements, laboratory
furniture lay-out, and size and shape are discussed. Date
from a National Institutes of Health Survey of randomly
selected research laboratories is presented and analyzed
in terms of planning research facilities. Laboratory
lay-outs are included.

U. S. Department of Health, Education and Welfare--Public
Health Service. *Procedures for Areawide Health Facility
Planning.* No. 930, 1963.

Presents procedures and techniques for areawide planning
of hospitals and related health facilities. This
publication amplifies the recommendations made by the joint
committee of the American Hospital Association and the
Public Health Service in "Areawide Planning for Hospitals
and Related Health Facilities." Intended as a guide for
areawide planning councils, it describes procedures for
organizing a planning council, the initial stages of
operation, and data collection.

U. S. Department of Health, Education and Welfare--Public Health
Service. *Medical Education Facilities,* Washington, D. C.,
1964.

Outlines the role and responsibilities of the medical school
complex. This manual discusses planning considerations and
provides an architectural guide. In addition to material
presented in previous editions this manual incorporates
information on the teaching hospital which has application
to school environments.

U. S. Department of Health, Education, and Welfare--Public Health
Service. *Publications of the Division of Hospitals and
Medical Facilities,* Washington, D. C., 1966.

A bibliography which lists and describes the publications
available under the Hospital and Medical Facilities Series
programs of the Public Health Service.

U. S. Department of Health, Education, and Welfare--Public Health
Service. *Hospital and Nursing Home Equipment Planning Guide.*
Washington, D. C., 1967.

This manual is the 17th edition of an equipment list to be
used as a guide by those who determine equipment needs for
hospitals of various sizes. Included are suggestions for
the procedures to be followed by planners in determining
the specific equipment requirements for a given facility.

PUBLICATIONS OF
THE CENTER FOR VOCATIONAL AND TECHNICAL EDUCATION

RESEARCH SERIES

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1	A National Survey of Vocational Education Programs for Students with Special Needs. April 1967. 89+ ¢14,p. ED011041	$2.00
2	The Demand for and Selected Sources of Teachers in Vocational and Technical Education, State Directory. January 1967. 31+¢5½ p. ED012331	o
3	Research and Development Priorities in Technical Education. May 1967. 34 p. ED013888	o
4	Review and Synthesis of Research in Agricultural Education. August 1966. 140 p. ED011562	1.50
5	Review and Synthesis of Research in Business and Office Occupations Education. August 1966. 128 p. ED011566	o
6	Review and Synthesis of Research in Distributive Education. August 1966. 212 p. ED011565	o
7	Review and Synthesis of Research in Home Economics Education. August 1966. 104 p. ED011563	o
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9	Review and Synthesis of Research in Technical Education. August 1966. 69 p. ED011559	1.50
10	Review and Synthesis of Research in Trade and Industrial Education. August 1966. 76 p. ED011560	o
	Set of Seven Research Reviews (nos. 4-10)	10.00
11	The Emerging Role of State Education Departments with Specific Implications for Divisions of Vocational-Technical Education. 1967. ED016870	4.50
12	A Taxonomy of Office Activities for Business and Office Education. July 1968. 163 p. VT005935 RIE	2.75
13	Enlisted Men Separating from the Military Service as a Potential Source of Teachers for Vocational and Technical Schools. October 1967. 53 p. ED016131	*
14	Boost: Business and Office Education Student Training; Preliminary Report. 1967. 251 p. VT005131 RIE	3.00
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19	Implications of Women's Work Patterns for Vocational and Technical Education. October 1967. 70 p. ED016815	2.00
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4	National Vocational-Technical Education Seminar on the Development and Coordination of Research by State Research Coordinating Units. 1966. 72 p. ED011042	o
5	A Report of the Business and Office Education Research Planning Conference. 1966. 116 p. ED013304	o
6	Program Development for Occupational Education. A Report of a National Seminar for Leaders in Home Economics Education, March 28-31, 1966. 118 p. ED011040	o
7	Report of a National Invitational Research Planning Conference on Trade and Industrial Teacher Education, May 23-27, 1966. 1966. 197 p. ED011043	2.00

no.	name of publication	cost
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11	Systems Under Development for Vocational Guidance. 1966. 60 p. ED011039	o
12	Compilation of Technical Education Instructional Materials-- Supplement I. April 1967. 203 p. ED012340	3.00
13	Compilation of Technical Education Instructional Materials-- Supplement II. April 1967. 242 p. ED011933	3.50
14	Educational Media in Vocational and Technical Education: Report of a National Seminar. 1967. 240 p. ED017730	o
15	Vocational-Technical Education: National Seminar Proceedings. 1968. 283 p. VT005627 RIE	3.25
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2	Worker Adjustment: Youth in Transition from School to Work: An Annotated Bibliography. 1968. 135 p. VT005631 RIE	3.25

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