

REPORT
Of The
CAPITAL OUTLAY COORDINATING COMMISSION
For
HIGHER EDUCATION

COMMONWEALTH OF VIRGINIA

Department of Purchases and Supply

Richmond

1971

MEMBERS

EDWARD E. LANE, *Chairman*

MATT G. ANDERSON

EDWARD E. WILLEY

GRELLET C. SIMPSON

DANA B. HAMEL

ROY E. MCTARNAGHAN

H. DOUGLAS HAMNER, JR.

L. M. KUHN

INDEX

	PAGE
I. INTRODUCTION	1
II. PROBLEM	1
III. RECOMMENDATIONS	2
APPENDIX I, 1972-73 ENROLLMENT PROJECTIONS	4
APPENDIX II, RECOMMENDED GUIDELINES	5
A. RECOMMENDED GENERAL GUIDELINES	5
B. OUTLINE OF SPACE PLANNING GUIDES	6
C. DEFINITIONS OF ABBREVIATED SYMBOLS	6
D. SPECIFIC GUIDES	
1. CLASSROOM AND CLASSROOM SERVICE	7
2. TEACHING LABORATORIES AND SERVICE SPACE	8
3. TEACHING FACULTY OFFICE AND RELATED SECRETARIAL SPACE	9
4. LIBRARY, STACK READER AND SERVICE SPACE ..	9
5. PHYSICAL EDUCATION FACILITIES SPACE	10
6. SELF-STUDY AND TEACHING CLINIC SPACE	10
7. GENERAL USE AND SERVICE SPACE	11
8. RESEARCH FACULTY OFFICES AND SERVICE SPACE	11
9. OTHER RESEARCH SPACE	11
10. EXTENSION AND PUBLIC SERVICE ADMINISTRA- TIVE AND FACULTY OFFICE SPACE	12
11. ADMINISTRATIVE AND GENERAL OFFICE SPACE	12
12. PHYSICAL PLANT SERVICE SPACE	13
APPENDIX III, FUNCTIONAL USE CODES	13

CAPITAL OUTLAY COORDINATING COMMISSION FOR HIGHER EDUCATION

Richmond, Virginia
February 15, 1971

To: HONORABLE W. ROY SMITH, *Chairman*
HOUSE APPROPRIATIONS COMMITTEE

I. INTRODUCTION

The Capital Outlay Coordinating Commission for Higher Education was created by the House Appropriations Committee on November 16, 1970, subsequent to a subcommittee report on capital outlay allocations submitted to the Appropriations Committee on October 12, 1970. The Appropriations Committee directed the Commission to conduct specific studies in all areas related to the allocation of capital funds for the construction of facilities at the State's institutions for higher education.

The initial study of the need for a Coordinating Commission on Capital Outlays was conducted by a subcommittee composed of five members of the Appropriations Committee—Edward E. Lane (Chairman), Matt G. Anderson, George B. Anderson, Junie L. Bradshaw, and Arthur R. Giesen, Jr.; and L. M. Kuhn, Legislative Fiscal Officer, provided staff services for the subcommittee.

The scope of the investigation by the subcommittee in compiling data for the review involved questionnaires to the fifty states, the Council of Higher Education, and numerous college presidents. From the replies received, the subcommittee's report was based on procedures of capital outlay planning now practiced in eighteen states.

II. PROBLEM

In the past it has not been the general practice to project the actual area of the physical facility needs of higher education for a long period into the future. Instead the focus has been on planning specific buildings considered needed at a given point in time. More recently, an increasing number of agencies and institutions in a number of states have developed so-called space planning standards or space factors to use in projecting physical facility needs. The purpose of this report is to present to the House Appropriations Committee the recommendations of the Commission charged with the responsibility to review the present method of allocating capital outlay funds in Virginia versus the use of planning standards currently in use in several states.

Prior to the \$81 million bond issue, capital outlay was funded by the balance of available revenue after allocating funds necessary to operate our institutions. The available funds from this residue of revenue when compared to actual needs of our colleges at that time was not large enough to overbuild at any institution.

However, with the issue of \$81 million in general obligation bonds and the total available for capital outlay increasing from \$35.6 million in 1964-66 to \$104.7 million in 1966-68, the situation changed drastically. Keep in mind the allocation of higher education capital outlay projects from this fund was based on individual institutional enrollment estimates rather than through estimates of enrollment by a coordinating commission. As an example of the lack of an effective program, the

Revenue Resources and Economic Study Commission requested projected capital outlay *needs* for the next ten years, but due to the fact that a long-range program is impossible to prepare under our present system, the figure furnished this Commission was based on how much *could be constructed* in each two-year period. The Commission was aware of this.

It appears from this that now the Constitution amendments have been ratified it is imperative that some means be devised to control the construction of facilities at our institutions through capital outlay appropriations based on mutually approved enrollments, at least for a six-year period, using a formula type system through the use of space planning standards to allocate funds.

The premise upon which the determination of space requirements through the use of space planning standards is that physical facilities of an institution of higher education can be grouped into categories. These categories can be referred to as the "building blocks" of a college's or university's space requirements. For each of the major "building blocks" there can be established an index for determining the amount of space needed. The purpose of such a method would be to present a logical system for the calculation of space requirements incorporating and building upon standards which should be attainable for most institutions.

The attractiveness of using space planning standards in projecting physical facility needs, and in guiding the initial planning to provide those needs, is that it is not necessary actually to plan structures at the time of projection. It should be stressed that the application of space planning standards results in a general definition of an institution's space needs. They do not relate to such matters as the number of buildings needed to be constructed or the size of individual structures. Planning standards have been found, however, to be of significant value in projecting physical facility needs on a state-wide basis.

III. RECOMMENDATIONS

The Capital Outlay Coordinating Commission for Higher Education recommends a formula type budget for capital outlay allocations for the Commonwealth.

A formula system for allocation of capital outlay funds makes use of four main types of information:

1. Coordinated enrollment projects for ten years hence, for each institution—The Commission in consultation with college presidents has established the estimated projected 1972-74 enrollment of students at each institution compiled on contemplated population for each category offered subject to later review and approval by the General Assembly in regular session for the full ten-year period.
2. A set of use and size standards for each type of space—The Commission has prepared a set of use and size standards for *each type* of space to be used by all institutions of higher education in the preparation of its capital outlay budget. In other words, the Commission for each type of space would recommend that these standards applied to projected enrollments equals total need minus inventory equals space that needs to be constructed.

3. The existing inventory of each type of space at each institution—The Council of Higher Education through a Federal grant conducted a study of higher education facilities designed to provide information relating to existing facilities as of Fall, 1968. An analysis of the utilization of existing space is a basic factor in determination of long-range physical facilities needs. A study of this nature is essential to the review of space utilization standards established as guides for determining future construction needs to meet anticipated increases in enrollment in higher education. The 1968 inventory of each type of space reviewed by the Council of Higher Education is being updated to furnish this information.
4. The cost of construction for each type of construction—At the planning stage, the resulting area multiplied by cost per square foot for each space determines the cost of the total project.

The space planning standards use as criteria to project the future space needs of institutions are twelve in number:

1. Classroom and Classroom Service
2. Teaching Laboratories and Service Space
3. Teaching Faculty Office and Related Secretarial Space
4. Library Stack, Reader and Service Space
5. Physical Education Facilities Space
6. Self-Study and Teaching Clinic Space
7. General Use and Service Space
8. Research Faculty Offices and Service Space
9. Other Research Space
10. Extension and Public Service Administrative and Faculty Office Space
11. Administrative and General Office Space
12. Physical Plant Service Space

During the study of capital outlay procedures, it was established that Virginia is very close to operating under the proposed system; however, the basic difference being that although we presently have most of the required information available we do not have a coordinating system whereby all institutions will be required to prepare their capital budgets in a similar manner with each using the approved enrollment projections and space planning standards. The creation of the Coordinating Commission makes this possible.

The Coordinating Commission recommends that the guidelines established be reviewed each biennium based on experience, preferably at the annual session of the General Assembly meeting for thirty days in the odd number year. The adopted guides are to be applied in conjunction with projected enrollment and other institutional needs for a period of ten years beyond the date of application.

If the recommendations of the Capital Outlay Coordinating Commission are approved by the House Appropriations Committee, the data will be forwarded to the Governor of Virginia with the request that it

be forwarded to the Division of the Budget in time to allow the use of the material in the preparation of the 1972-74 capital outlay budget.

The Governor's recommendations to the General Assembly for capital outlay projects for the 1972-74 biennium based on a formula system to establish space utilization standards will allow for a detailed and meaningful review by the legislature.

The program we are suggesting includes beneficial and needed changes to update the procedures of allocating capital outlay funds so necessary now that the sale of general obligation bonds has been ratified.

APPENDIX I

FALL 1972 AND 1973 ENROLLMENT PROJECTIONS AS REPORTED TO THE STATE COUNCIL OF HIGHER EDUCATION FOR VIRGINIA BY INSTITUTIONS

	1972		1973	
	<i>Fall Head Count</i>	<i>Fall FTE</i>	<i>Fall Head Count</i>	<i>Fall FTE</i>
Christopher Newport College	3,075	2,025	4,000	2,835
Clinch Valley College	900	814	930	844
George Mason College	3,625	3,026	4,335	3,575
Longwood College	2,380	2,379	2,410	2,390
Madison College	4,770	4,685	5,020	4,910
Mary Washington College	2,249	2,291	2,264	2,306
Norfolk State College	7,322	5,248	7,742	5,568
Old Dominion University	10,634	7,920	11,117	8,242
Radford College	4,456	4,145	4,675	4,354
University of Virginia	12,887	12,629	13,955	13,676
Virginia Commonwealth University	16,500	12,639	18,500	14,054
Virginia Military Institute	1,175	1,328	1,200	1,356
Virginia Polytechnic Institute and State University	13,450	13,988	14,350	15,390
Virginia State College	3,333	3,064	3,500	3,217
The College of William and Mary	5,838	5,151	5,883	5,186
Total Four-Year Institutions	92,594	81,332	99,881	87,903
Eastern Shore College	135	81	150	90
Patrick Henry College	435	287	470	310
Richard Bland College	1,112	840	1,275	966
Total Two-Year Colleges	1,682	1,208	1,895	1,366
Virginia Community College System	46,316	33,083	51,702	36,410
TOTAL ALL INSTITUTIONS	140,592	115,623	153,478	125,679

January 14, 1971

APPENDIX II

MEMORANDUM

TO: Members, Capital Outlay Coordinating Commission
FROM: H. Douglas Hamner, Jr., and Roy E. McTarnaghan
DATE: February 5, 1971
SUBJECT: *Facility Planning Guidelines*

We were charged to present to the full committee recommendations on twelve separate categories of space. In carrying out this responsibility, a subcommittee was selected whose membership included the Division of Engineering and Buildings, State Council of Higher Education, and State colleges and universities.

This has been a formidable task. In the space of a few weeks, decisions have been made which normally take months and even years of research. Fortunately, a significant amount of background work had been done. Even so, we believe that the guidelines presented herein should be *flexible* and should be reviewed *each biennium* according to a background of experience, for there are still differences of opinion on several of the categories. Our colleagues in the colleges and universities have been most cooperative in reviewing a variety of proposed guidelines, and they will undoubtedly be prepared to offer constructive criticism on what is presented. Additionally, they may wish to offer modifications of the guidelines listed.

Our subcommittee has had differences of opinion in this study process. We, ourselves have had serious discussions and debate and found some differences of opinion. This suggests rather clearly that any such document *needs further study and modifications over time* as experience is reflected in the planning process.

RECOMMENDED GENERAL GUIDELINES

1. Adopted guides are to be applied in conjunction with projected enrollment and other institutional needs ten years beyond the date of application.
2. Space which is constructed as a result of gifts to an institution may be excluded from that institution's inventory of space. A determination must be made on the merits of the individual case.
3. Space needs of an institution are to be assessed without regard to space that is designated and approved for temporary use only. A qualitative review of space is needed in the inventory as well as a quantitative review in order to pinpoint the chronology involving phasing out or phasing over of existing space.
4. These guides are not to be regarded as guides rigidly defining space needs. They are to be applied with due allowance "for those legitimate differences which exist between institutions and which result in differing facilities requirements."
5. An accurate and mutually understood inventory of existing space must be maintained for each institution.

6. Space planning guidelines must be reviewed each biennium in light of experience gained from the use and evaluation of existing guidelines.
7. The application of any guidelines must be done in a flexible manner, considering the unique characteristics of a given institution.

SPACE PLANNING GUIDES

1. Classroom and Classroom Service
2. Teaching Laboratories and Service Space
3. Teaching Faculty Office and Related Secretarial Space
4. Library, Stack Reader and Service Space
5. Physical Education Facilities Space
6. Self-Study and Teaching Clinic Space
7. General Use and Service Space
8. Research Faculty Offices and Service Space
9. Other Research Space
10. Extension and Public Service Administrative and Faculty Office Space
11. Administrative and General Office Space
12. Physical Plant Service Space

DEFINITIONS OF ABBREVIATED SYMBOLS USED IN RECOMMENDED GENERAL GUIDELINES

Full-Time-Equivalent (FTE) Student

Full-time-equivalent student enrollment is a convenient statistic derived from the student-credit-hour productivity of an institution. It is not a head-count of the individuals attending an institution. FTE enrollment is derived, with exceptions for certain health professions fields, by dividing the total annual number of undergraduate and first professional semester credit-hours by 30 and by dividing the total annual number of graduate semester credit-hours by 24.

(NASF/SS) Net Assignable Square Feet Per Student Station

(HPW) Hours Per Week Rooms Are Scheduled For Use

(% Occupancy) Per Cent of Occupancy

(SSPO) ASF Per Student-Station-Period Occupied

APPENDIX III

Each room is classified according to its primary use through the use of three codes. These are a "functional use" code, a "room type" code, and a "subject field" code, such as:

Classroom and Classroom Service
 Room codes
 1—110
 1—115

1. CLASSROOM AND CLASSROOM SERVICE

Definition: General classrooms, seminar rooms, teaching auditoriums equipped to accommodate lectures, discussions, seminars and meetings with related service space and storage areas
 Room codes
 1—110
 1—115

Classroom Space Needs $\text{Space factor} \times \text{Enrollment} \times \text{Use rate}$

*Space Factor:** Summary standard resulting from interaction of combining three related classroom standards

Net assignable square feet per student station (NASF/SS) 16 ASF (16 ASF)

Hours per week the rooms are scheduled for use (HPW) 25 HPW (30 HPW)

Per cent of occupancy (% occupancy) 67% occupancy (67%)

*The above values are for four-year institutions. The parenthetical values are for the two-year institutions.

Space Factor: (The guide)

Four-year institutions:

 16 NASF 0.955 ASF per student-station-period occupied (SSPO)
 25 HPW \times .67 Occupancy

Two-year institutions:

 16 NASF 0.796 ASF per student-station-period occupied (SSPO)
 30 HPW \times .67 Occupancy

Example:

What are classroom space needs for institution "A" with a projected enrollment of 5,000 FTE students by 1980?

Classroom needs = $0.955 \text{ ASF} \times 5,000 \text{ (FTE students)} \times 11.4$
 SSPO/W/FTE = 54,435 ASF

Explanation:

- A. The 0.955 ASF is the space factor multiplier for the classroom guide. It is the guide.
- B. The 5,000 FTE enrollment is the projection for Fall, 1980 term.
- C. The 11.4 figure represents the student-station-periods occupied per week per FTE student (SSPO/S/FTE). This is an historical factor unique to each institution and in this example represents

the average FTE student demand for classroom facilities space in institution "A." This element of the guide is a reflection of the program demands of the institution for space.

2. TEACHING LABORATORIES AND SERVICE SPACE

Definition: Laboratories organized and equipped for special types of instruction and not readily adaptable for general use.
Room Codes 1—210 Includes related storage and service space.
 1—215

Laboratory
 Space
 Needs

$$\text{Space factor} \times \text{Enrollment} \times \text{Use rate}$$

*Space Factor:**

Net assignable square feet per student station—45 ASF (45 ASF)

*The parenthetical values are for the two-year institutions.

100 ASF for doctoral
 120 ASF for engineering and technical

Hours per week rooms are scheduled for use—15 HPW (20 HPW)

Per cent of occupancy—80% occupancy (80%)

Space Factor: (The guide)

Four-year institutions:

45 NASF

15 HPW \times .80 occupancy

3.75 ASF per SSPO

Two-year institutions:

45 NASF

20 HPW \times .80 occupancy

2.813 ASF per SSPO

What are laboratory space needs for institution "A" with a projected enrollment of 5,000 FTE students by 1980?

$$3.75 \text{ NASF} \times 5,000 \text{ (FTE Students)} \times 1.5 \text{ SSPO/W/FTE} = 28,125 \text{ ASF}$$

Modified by doctoral level work and engineering laboratory and technical shop

Explanation:

- A. The 3.75 ASF is the space factor for laboratory space.
- B. The 5,000 enrollment is the projection for Fall, 1980 term.
- C. The 1.5 figure represents the student-station-periods occupied per week per FTE student (SSPO/W/FTE). This is an historical factor unique to each institution and in this example represents the average FTE student demand for laboratory facilities in institution "A." This element of the guide is a reflection of the program demands of the institution for space.

3. TEACHING FACULTY OFFICE AND RELATED SECRETARIAL SPACE

Definition: Office space for:
Room codes Teaching faculty
 1—310 Deans
 1—311 Department heads
 1—312 Related clerical personnel
 1—315
 1—350 Office service space for:
 1—355 Reception rooms
 Conference rooms
 File rooms

Teaching Faculty Needs FTE Staff Requiring Space × ASF per FTE Staff

The Guide: 162 ASF per FTE faculty and administrative staff

Needs by 1980?
 $162 \text{ ASF} \times 300 \text{ FTE faculty} = 48,600 \text{ ASF}$

4. LIBRARY STACK, READER AND SERVICE SPACE

Room codes 2—410 2—440
 2—420 2—455
 2—430

Stack Space: That space necessary to house the bound volume collections of the library

The Guide: .0833 ASF per volume

This would provide 1 ASF for every 12 volumes. It is understood that manuscripts and archival material should be converted to appropriate volume equivalents.

Reader Space: Seating and study space for users

The Guide: 6.25 ASF per day full-time-equivalent undergraduate student

8.75 ASF per FTE graduate student and faculty

This standard provides 25 ASF per student for 25% of the FTE undergraduate students and 35 ASF per student and faculty for 25% of the FTE graduate students and faculty.

Service Space: Office and related service space for library staff together with necessary receiving rooms, processing rooms and circulation areas

The Guide: 25% of library stack space and library reader space

Example:

Sq. Ft. Stack	+	Sq. Ft. Reader	+	Sq. Ft. Service	=	Library Space Needs
10,000	+	13,900	+	5,975	=	29,875 Sq. Ft.

The above assumes the institution would have 120,000 volumes (12 volumes per square foot) and 2,000 undergraduate students (6.25 ASF per FTE student), 50 graduate students and 110 faculty (8.75 ASF per FTE graduate student and faculty).

5. PHYSICAL EDUCATION FACILITIES SPACE

Definition: Includes gym playing floors, swimming pools, handball courts and other similar indoor physical education facilities. Also includes related service or ancillary space such as equipment rooms, shower rooms, locker rooms, etc.

$$\text{Physical education space needs} = \text{Space factor} \times \text{Enrollment}$$

The Guide:

Four-year institutions: 10 ASF per FTE day student

Two-year institutions: 8 ASF per FTE day student

It is recognized that from a practical standpoint, the guide cannot be strictly applied when the enrollment of a particular institution is less than that required to produce a physical education facility of usable size. Accordingly the minimum ASF in such cases shall be based on standard design values incorporating the approved program demands of the institution.

What are physical education space needs for institution "A" with a projected enrollment of 5,000 FTE day students by 1980?

$$10 \text{ ASF} \times 5,000 \text{ (FTE)} = 50,000 \text{ ASF}$$

6. SELF-STUDY AND TEACHING CLINIC SPACE

Definition: Includes such facilities as music practice rooms, individual study laboratories, language laboratories, and rooms designed and equipped for the use of special audio-visual or other programmed instructional media *all on an individual basis for self-instructing purposes.* Included would be related service space such as instructional equipment, storage rooms, control rooms, etc.

Room codes
1-220
1-225
1-230
1-235

The Guide: 1.84 assignable square feet per FTE day student

This standard assumes self-study and teaching clinic space will be used 49 hours per week (HPW) and filled to 100% of occupancy during hours in use with 45 NASF per station. It will provide students enrolled in these related programs with the use of these facilities two periods per week.

Space Factor

$$45 \text{ ASF per Student Station} \\ 49 \text{ HPW} \times 100\% \text{ of Occupancy} = .92 \times 2 = 1.84 \text{ ASF}$$

Needs by 1980?

$$1.84 \text{ ASF} \times 5,000 \text{ FTE} = 9,200 \text{ ASF}$$

7. GENERAL USE AND SERVICE SPACE

Definition: Included in this category is space other than that provided under the specific instructional categories of teaching faculty offices, physical education, teaching laboratory, general classroom, and self-study and teaching clinic space. Examples of general use and service space, sometimes called other instructional space, are museums, galleries, auditoriums, and theaters related to instruction and the like funded under state appropriations.

The Guide: 5 assignable square feet per FTE student

Needs by 1980?

$$5 \text{ ASF} \times 5,000 \text{ FTE day students} = 25,000 \text{ ASF}$$

8. RESEARCH FACULTY OFFICES AND SERVICE SPACE

Definition: Offices for research faculty, research administrative staff, related clerical and service

Room codes
3—310
3—311
3—312
3—315
3—350
3—355

The Guide: 180 assignable square feet per FTE research faculty and administrative staff members

This guide includes a factor of 120 ASF per FTE research faculty and administrative staff plus a 50% increment for related clerical and service space.

Needs by 1980?

$$180 \text{ ASF} \times 35 \text{ FTE research faculty} = 6,300 \text{ ASF}$$

9. OTHER RESEARCH SPACE*

Definition: Research laboratories and related facilities and service space

Room code
All other
Function 3

Other Research Space Needs: A given amount of space per FTE faculty member and graduate student expected to be engaged in active research

Amount of ASF determined by type of research or program area

Area of Study	ASF Per FTE Faculty Member Expected to Be Engaged in Active Research	ASF Per FTE Graduate Student
1. Social Sciences, English and Journalism, Law, Mathematics, Business Administration, Trade and Industrial, Religion, Foreign Language, Philosophy, Library Science, General Curricula -----	100	50
2. Computer and Systems Analysis, Education, Sociology, Psychology, Geography, Home Economics, Nursing, and Fine and Applied Arts -----	160	75
3. Pharmacy, Other Health Professions, Biological Sciences, Physical Sciences, Agriculture, Forestry, Architecture, Engineering, and City Planning -----	250	175

*The above guide does not include research space for medical and dental programs. While all faculty members are expected to undertake some research, the following factors are used to derive this planning guide:

1. 100% of the FTE faculty associated with departments where the highest degree is the Doctorate
2. 35% of the FTE faculty associated with departments where highest degree is the Master's
3. 10% of the faculty associated with departments where highest degree is the Bachelor's

Considerable additional research is needed, and we would recommend a complete review of this planning guide and other values related thereto prior to the start of the next biennium.

10. EXTENSION AND PUBLIC SERVICE ADMINISTRATIVE AND FACULTY OFFICE SPACE

Definition: Space necessary to house the on-campus extension and public service administrative and faculty personnel together with the related office service space

Room code
6—310
6—312
6—315
6—350
6—355

The Guide: 180 ASF per professional FTE extension administrative faculty

This guide includes a factor of 120 ASF per FTE professional extension faculty and administrator plus a 50% increment for related clerical and service space.

Needs by 1980?

$$180 \text{ ASF} \times 40 \text{ FTE extension professional} = 7,200 \text{ ASF}$$

11. ADMINISTRATIVE AND GENERAL OFFICE SPACE

Definition: Space for general executive, administrative, administrative clerical, student services, admission, registration, business offices, public relations

Room codes
4—310

4-311
 4-312
 4-315
 4-350
 4-355

The Guide: ASF per FTE student based on enrollment and type institution

Example:

	<i>University</i>	<i>Other</i>
First 2,000 students	6.0 ASF	5.0 ASF
Next 3,000 students	4.0 ASF	3.0 ASF
Next 5,000 students	3.0 ASF	2.5 ASF
Next 5,000 students	2.5 ASF	2.0 ASF
All over 15,000 students	2.0 ASF	1.5 ASF

At the university level this guide may be increased on a documented basis for such programs not directly related to student population.

12. PHYSICAL PLANT SERVICE SPACE

Definition: Includes space for motor pools, central garages, central storage, heating, air conditioning, and fire protection
 Room code
 All other
 Function 7

The Guide: There is general agreement that this space should have no specific recommendation at this time. Significant additional study is needed, and we believe each project can be reviewed on its own merits for the upcoming biennium.

APPENDIX III

Each room in owned facilities at Virginia's colleges and universities has been inventoried in accordance with procedures established by the U. S. Office of Education and the National Center for Educational Statistics. Each room is classified according to its primary use through the use of three codes. These are a "functional use" code, a "room type" code, and a "subject field" code.

The functional use code identifies the broad area of institutional operation served by the room; i.e., instruction, library, research, auxiliary enterprise, and the like.

The room type code indicates the specific kind of room from the standpoint of the activity it is designed to accommodate; i.e., classroom, laboratory, office, dormitory bedroom, and the like.

The subject field code designates the general area of study to which a room's use is devoted. Since identification as to subject field is only pertinent to rooms used for certain purposes, this identification is assigned only to rooms in the functional categories of instruction, research, organized activities related to instruction, and extension and public service.

Codes, and accompanying definitions, used to inventory space are as follows:

FUNCTIONAL USE CODES

Instruction.—Classrooms, teaching laboratories and shops, other teaching facilities, teaching service rooms, faculty offices, offices for clerical and teaching assistants for faculty, offices for academic deans and heads of departments, and other rooms used in the resident instructional program of the institution.

- 2 *Libraries.*—Rooms used for the collection, storage, and circulation of books, periodicals, manuscripts, and other reading and reference materials as well as offices and office service rooms used by librarians.
- 3 *Research.*—Rooms used by research bureaus, experiment stations, and other departments of the institution in which research activities are carried on, whether funded from institutional funds or outside sources.
- 4 *Administration and General.*—General executive and administrative offices, secretarial and clerical space of administrative personnel, student services, admissions and registration, placement, public relations, institutional publications, business offices, etc.
- 5 *Organized Activities Related to Instruction.*—Laboratory schools, farms, creameries, and other facilities designed to provide professional training opportunities for students.
- 6 *Extension and Public Service.*—Extension division, radio and television stations and museums (if designed to serve the general public), and other similar facilities.
- 7 *Physical Plant Operation and Maintenance.*—Maintenance shops; machine shops; motor pools; garages; heating plants; police, fire protection, and security offices; and the like.
- 8 *Auxiliary Enterprises.*—Housing facilities, student unions, bookstores, post offices, dining halls and cafeterias, and other similar facilities designed to be self-supporting.
- 9 *Non-Institutional Agencies.*—State, regional, and federal offices; offices used by professional organizations and agencies; and other rooms owned by the institution but used by non-institutional agencies or groups.
- 10 *Unassigned and Non-Assignable Areas.*—Areas which are unassigned at the time of the inventory because of present condition (inactive, unfinished, or undergoing alteration or conversion) or are non-assignable due to their particular type (custodial, mechanical, public toilets).

ROOM TYPE CODES

- 110 *Classroom.*—A room used by classes which do not require special purpose equipment for student use. Included in this category are rooms generally referred to as lecture rooms, seminar rooms, lecture-demonstration rooms, and general purpose classrooms.
- 115 *Classroom Service.*—A room which directly serves a classroom as an extension of the activities of the classroom. In this category are such rooms as projection rooms, cloak rooms, closets, and storage if they serve a classroom.
- 210 *Laboratory.*—A room used by regularly scheduled classes, which require special-purpose equipment for student participation, experimentation, observation, or practice in a field of study. Also includes rooms equipped with laboratory-type equipment and used for research purposes.
- 215 *Laboratory Service.*—A room which directly serves a laboratory as an extension of the activities of the laboratory.
- 220 *Special Class Laboratory.*—A room used by informally (or irregularly) scheduled classes which require special-purpose equipment for student participation, experimentation, observation, or practice in a field of study. Typically this category includes such rooms as language laboratories, group music practice rooms, group studios, etc.
- 225 *Special Class Laboratory Service.*—A room which directly serves a special class laboratory as an extension of the activities in such a facility.
- 230 *Individual Study Laboratory.*—A room especially equipped and/or designed for individual student experimentation, observation, or practice in a particular field of study. Included are music practice rooms, individual study laboratories, and the like.
- 235 *Individual Study Laboratory Service.*—A room which directly serves an individual study laboratory as an extension of the activities in such a facility.
- 250 *Non-Class Laboratory.*—A room used for laboratory applications, research, and/or training in research methodology which requires special-purpose equipment for staff and/or student experimentation or observation. Included in this category are rooms generally referred to as research laboratories and research laboratory-office.

- 255 *Non-Class Laboratory Service.*—A room which directly serves a non-class laboratory as an extension of the activities of the non-class laboratory. Included in this category are balance rooms, cold rooms, stock rooms, dark rooms, animal rooms, greenhouses, etc., which serve a non-class laboratory.
- 310 *Staff Office.*—A room with office-type equipment which is designed or intended for use by a professional staff member regardless of the functional area to which he belongs.
- 311 *Staff Assistant Office.*—A room with office-type equipment designed for use by a semi-professional staff member such as a teaching assistant, graduate assitant, administrative assistant, research assistant, and the like.
- 312 *Secretarial and Clerical Office.*—A room designed or intended for use by secretarial or clerical personnel.
- 315 *Office Service.*—A room used in conjunction with an office, such as a waiting room, office file and supply room, interconnecting corridor within a suite of offices, private toilet, clothes closet, and the like.
- 350 *Conference Room.*—A room used by non-class groups for meetings.
- 355 *Conference Room Service.*—A room which directly serves a conference room as an extension of the activities of the conference room.
- 410 *Study Room (Non-Dormitory).*—A room used to study books or audio-visual materials on an individual basis. Included in this category are library reading rooms, carrels, study rooms, individual study stations, study booths, and similar rooms intended for general study purposes. Does not include special class laboratories, offices, combined sleeping-study rooms in residence halls, waiting rooms, or lounges.
- 420 *Stack.*—A room used to provide shelving for books or audio-visual materials used by staff and/or students on an individual basis. Included are rooms generally referred to as library stacks.
- 430 *Open-Stack Reading Room.*—A room which is a combination of study room and stack, generally without physical boundaries between the stack area and the study area.
- 440 *Library Processing Room.*—A room which serves a study room, stack, or open-stack reading room as a supporting service to such rooms. Included in this category are rooms used to house the card catalog, circulation desk, bookbinding, microfilm processing, and audio-visual record-playback equipment for distribution to individual study stations.
- 455 *Study Facilities Service.*—A room which directly serves a study room, stack, open-stack reading room, or library processing room as a direct extension of the activities in such rooms. Included would be closets, locker space, coatrooms, etc.
- 510 *Armory Facilities.*—A room (or area) used by ROTC units as an indoor drill area, rifle range, or special-purpose military science room. This does not include rooms designated as classrooms, class laboratories, or offices.
- 515 *Armory Facilities Service.*—A room which directly serves an armory facility as an extension of the activities of such a facility.
- 520 *Athletic-Physical Education Facilities.*—A room (or area) used by students, staff, or the public for athletic activities. Included in this category are gymnasiums, basketball courts, handball courts, squash courts, wrestling rooms, swimming pools, ice rinks, indoor tracks, etc.
- 523 *Athletic Facilities Spectator Seating.*—The seating area used by students, staff, or the public to watch athletic events.
- 525 *Athletic-Physical Education Facilities Service.*—A room which directly serves an athletic-physical education facility as an extension of the activities in such a facility.
- 530 *Audio-Visual, Radio, TV Facilities.* A room or group of rooms used in the production and distribution of instructional media. This category includes TV studios, radio studios, sound studios, and graphic studios.
- 535 *Audio-Visual, Radio, TV Facilities Service.*—A room which directly serves as an extension of the activities in an audio-visual, radio, or TV facility.

- 540 *Clinic Facilities (Non-Medical).*—A room used for the diagnosis and/or treatment of patients in a program other than medicine, dentistry, and student health care. Included in this category are examination rooms, testing rooms, and consultation rooms which are typically associated with such areas as psychology, speech and hearing, remedial reading, and remedial writing.
- 545 *Clinic Facilities Service (Non-Medical).*—A room which directly serves a clinic as an extension of its activities.
- 550 *Demonstration Facilities.*—A room used to practice the principles of certain subject-matter areas, particularly teaching and home management. This category includes demonstration schools, laboratory schools, pre-school nurseries, home management houses, etc.
- 555 *Demonstration Facilities Service.*—A room which directly serves as an extension of the activities of a demonstration facility.
- 560 *Field Service Facilities.*—A barn or similar structure for animal shelter or the handling, storage, and/or protection of farm products, supplies, and tools.
- 590 *Other Special-Use Facilities.*—A category for special-use facilities which are not classifiable in one of the defined categories.
- 595 *Other Special-Use Facilities Service.*—A room which directly serves as an extension of the activities of a facility which falls in the preceding category.
- 610 *Assembly Facilities.*—A room designed and equipped for dramatic, musical, devotional, or livestock judging activities. This category includes theatres, auditoriums, concert halls, arenas, chapels and judging pavilions.
- 615 *Assembly Facilities Service.*—A room which directly serves an assembly facility as an extension of its activities.
- 620 *Exhibition Facilities.*—A room used for exhibits. This category includes museums, art galleries, and similar exhibition areas.
- 625 *Exhibition Facilities Service.*—A room which directly serves an exhibition facility as an extension of its activities.
- 630 *Food Facilities.*—A room used for eating food. This category includes dining halls, cafeterias, snack bars, restaurants, and similar eating places which are open to the student body and/or public at large. Dining halls in residence halls should be classified under “residential facilities.”
- 635 *Food Facilities Service.*—A room which directly serves a food facility as an extension of its activities, including such areas as kitchens, refrigeration rooms, freezers, dishwashing rooms, cafeteria serving areas, and other non-dining areas.
- 640 *Health Facilities (Student).*—A room used for the medical examination or treatment of students. This category includes examination rooms, bedrooms, surgery rooms, clinics, etc.
- 645 *Health Facilities Service (Student).*—A room which directly serves a health facility, such as a dispensary, record room, waiting room, clinical laboratory, scrub-up rooms, linen closet, etc.
- 650 *Lounge Facilities (Non-Dormitory).*—A room used for rest and relaxation except in a dormitory.
- 655 *Lounge Facilities Service (Non-Dormitory).*—A room which directly serves a lounge, such as a kitchenette.
- 660 *Merchandising Facilities.*—A room (or group of rooms) used to sell products or services. This category includes bookstores, barber shops, post offices, dairy stores, student union “desks,” and motel-hotel rooms.
- 665 *Merchandising Facilities Service.*—A room which directly serves as an extension of the activities of a merchandising facility.
- 670 *Recreation Facilities (Non-Dormitory).*—A room used for recreation purposes such as a bowling alley, pool and billiard room, ping pong room, ballroom, game room, and

hobby room; not including, however, athletic-physical education facilities used for purposes of instruction or intercollegiate athletics.

- 675 *Recreation Facilities Service (Non-Dormitory).*—A room which directly serves a recreation facility as an extension of its activities. This category includes storage closets, equipment issue rooms, cashier's desks, and similar areas.
- 690 *Other General-Use Facilities.*—A category for general-use facilities which do not fall into one of the defined categories.
- 695 *Other General-Use Facilities Service.*—A room which directly serves as an extension of the activities of a facility which falls in the preceding category.
- 710 *Data Processing-Computer Facilities.*—A room (or group of rooms) for institution-wide processing of data by machines or computers. A facility used for a combination of purposes including instruction, research, and administrative data processing should be included in this category. A facility used *primarily* for teaching should be classified as a laboratory.
- 715 *Data Processing-Computer Facilities Service.*—A room which directly serves a data processing computer facility as an extension of its activities. This category includes storage areas, wiring rooms, equipment repair rooms, observation rooms, etc.
- 720 *Shop Facilities.*—A room used for the manufacture or maintenance of products and equipment. This category includes such rooms as carpenter shops, plumbing shops, electrical shops, painting shops, and similar physical plant maintenance facilities. It also includes central printing and duplicating shops.
- 725 *Shop Facilities Service.*—A room which directly serves a shop as an extension of the activities in such a room. This category includes such facilities as tool storage rooms, materials storage rooms, and the like.
- 730 *Storage Facilities.*—A room used to store materials. This category is limited by definition to a central storage facility and inactive departmental storage. Storage related to other types of space would follow classification of that type of space with a "service" designation.
- 735 *Storage Facilities Service.*—A room which directly serves a storage facility.
- 740 *Vehicle Storage.*—A room (or structure) used to store vehicles. "Vehicles" is broadly defined to include boats and aircraft.
- 745 *Vehicle Storage Service.*—A room (or structure) used to service vehicles.
- 750 *Other Supporting Facilities.*—A category for supporting facilities which do not fall into one of the defined categories.
- 795 *Other Supporting Facilities Service.*—A room which serves directly as an extension of the activities of a facility which falls in the preceding category.
- 910 *Dormitory Bedrooms.*—Self-explanatory.
- 911 *Dormitory Bathrooms.*—Self-explanatory.
- 912 *Dormitory Study Area.*—A room used for study purposes in a dormitory. This category does not include a study area in a dormitory bedroom.
- 913 *Dormitory Lounge.*—A room used for rest and relaxation in a dormitory.
- 914 *Dormitory Recreation Area.*—A dormitory room used for recreation purposes such as a game room, hobby room, etc.
- 915 *Dormitory Kitchenette.*—A kitchen facility in a dormitory used by students to prepare food.
- 916 *Dormitory Counselor Quarters.*—A room in a dormitory occupied or used exclusively by counselor personnel such as a housemother.
- 917 *Dormitory Laundry.*—A laundry facility in a dormitory.
- 918 *Dormitory Service Area.*—A room which directly serves a dormitory facility as an extension of the activities in such a facility. Included in this category would be closets, storage areas, etc.

- 919 *Dormitory Food Service.*—Dining halls in dormitory facility used for student feeding, dining room service areas, food preparation rooms, etc.
- 920 *One-Family Dwelling.*—A house provided for one family.
- 930 *Multiple-Family Dwelling.*—A duplex house or apartment building for more than one family.
- 940 *Central Food Store.*—A central facility for the processing and storage of foods in residence facilities and food facilities.
- 950 *Central Laundry.*—A central facility for washing, drying, and ironing of linens, uniforms, and other institutional material.
- 010 *Inactive Area.*—A room which is not in present use.
- 020 *Alteration or Conversion Area.*—A room which is undergoing alteration or a conversion process.
- 030 *Unfinished Area.*—A room which is in the process of being constructed.
- 081 *Custodial Area.*—Rooms commonly referred to as “janitor closets,” and the like.
- 082 *Mechanical Area.*—An area designed to house mechanical equipment and utility services. This category includes boiler rooms, fixed mechanical and electrical equipment rooms, fuel rooms, meter and communications closets, and service chutes.
- 083 *Public Toilets.*—A non-private toilet for either custodial or public use.
- 084 *Circulation Area.*—An area which is required for physical access to some subdivisions of space. This category includes corridors, elevator shafts, escalators, fire towers or stairs, stairs and stair halls, lobbies, and tunnels.

SUBJECT FIELD CODES

- 00 *General.*—Identifiable but broader than any one category; i.e., office of the dean of arts and sciences. This category should include all classrooms available for general use within the institution. Classrooms assigned to a particular department should be identified by subject field.
- 01 *Unclassified.*—Not identifiable. A room or area associated with general curricula, with students with no declared major, or with no subject field area.
- 10 *Biological Science.*—This category includes the following subject matter areas:

<ul style="list-style-type: none"> Pre-medical Pre-dental Pre-veterinary Biology Zoology Antatomy Histology Bacteriology Microbiology Biochemistry Biophysics 	<ul style="list-style-type: none"> Cytology Ecology Embryology Entomology Nutrition Pathology Pharmacology Physiology Plant Pathology Plant Physiology Other Biological Sciences
--	---
- 11 *Agriculture.*—This category includes the following subject matter areas:

<ul style="list-style-type: none"> General Agriculture Field Agronomy Agricultural Business Animal Science Dairy Science Farm Management Wildlife Management 	<ul style="list-style-type: none"> Food Science Horticulture International Agriculture Ornamental Horticulture Poultry Science Soil Science Other Agriculture
---	--
- 12 *Forestry.*—Self-explanatory.
- 20 *Medicine.*—Self-explanatory.

- 21 *Dentistry*.—Self-explanatory.
- 22 *Nursing*.—Self-explanatory.
- 23 *Pharmacy*.—Self-explanatory.
- 24 *Other Health Professions*.—This category includes the following subject matter areas:
- | | |
|----------------------|------------------------------------|
| Chiroprody—Podiatry | Public Health |
| Dental Hygiene | Radiologic Technology |
| Medical Technology | Veterinary Medicine |
| Occupational Therapy | Clinical Dental Sciences |
| Optometry | Clinical Medical Sciences |
| Osteopathy | Clinic Veterinary Medical Sciences |
| Physical Therapy | Other Health Professions |
- 30 *Mathematical Sciences*.—This category includes the subject matter areas of mathematics and statistics.
- 31 *Computer Science and Systems Analysis*.—This category includes the subject matter areas of data processing, computer science, system analysis, and other subjects associated with this general field.
- 32 *Physical Science*.—This category includes the following subject matter areas:
- | | |
|---------------------------|-------------------------|
| General Physical Sciences | Physics |
| Astronomy | Geology |
| Chemistry | Geophysics |
| Metallurgy | Oceanography |
| Meteorology | Other Earth Sciences |
| Pharmaceutical Chemistry | Other Physical Sciences |
- 33 *Engineering*.—This category includes the following engineering subject matter areas:
- | | |
|----------------------|-----------------------------------|
| Aerospace | Sanitary and Environmental Health |
| Agriculture | General |
| Architectural | Geological |
| Biomedical | Industrial |
| Chemical | Mechanical |
| Civil | Metals and Ceramic |
| Electrical | Mining |
| Nuclear | Naval Architecture and Marine |
| Thermal | Petroleum |
| Engineering Sciences | Other Engineering |
- 40 *Psychology*.—This category includes the following subject matter areas:
- | | |
|---------------------|-----------------------------------|
| General Psychology | Rehabilitation Counselor Training |
| Clinical Psychology | Education Psychology |
| Counseling | Other Psychology |
| Social Psychology | |
- 41 *Geography*.—Self-explanatory.
- 42 *Social Science*.—This category includes the following subject matter areas:
- | | |
|-------------------------|-------------------------------|
| General Sociology | Basic Social Science |
| American Civilization | Agricultural Economics |
| Anthropology | Foreign Service |
| Area Studies | Industrial Relations |
| Economics | Public Administration |
| History | Social Work |
| International Relations | Other Applied Social Sciences |
| Political Science | Other Social Science |
| Sociology | |
- 50 *Fine and Applied Arts*.—This category includes general art, music, speech and dramatic arts, and fine and applied arts.

- 51 *English and Journalism.*—This category includes the subject matter areas of English (including English literature) and journalism which are commonly associated with the liberal arts.
- 52 *Foreign Languages and Literature.*—This category includes linguistics and foreign languages and literature.
- 53 *Philosophy.*—Self-explanatory.
- 54 *Religion.*—This category includes bible education and other religious subject matter areas commonly included in general education programs of colleges and universities.
- 60 *Business Administration.*—This category includes the subject matter areas of general business, accounting, hotel and restaurant administration, secretarial, and other business subjects.
- 61 *Hospital Administration.*—Self-explanatory.
- 62 *Education.*—This category includes the following subject matter areas:
- | | |
|--------------------------------|--------------------------------------|
| Exceptional Children | Music Education |
| Partially Sighted | Industrial Education |
| Blind | Nursery and Kindergarten |
| Mentally Retarded | Early Childhood |
| Emotionally Disturbed | Elementary |
| Deaf | Secondary |
| Speech and Hearing | Combined Elementary and Secondary |
| Crippled | Adult Education |
| Agricultural Education | Administration, Supervision, Finance |
| Art Education | Counseling and Guidance |
| Business Education | History, Philosophy, Comparative |
| Distributive Education | Curriculum and Instruction |
| Home Economics Education | General Education |
| Non-Vocational Industrial Arts | Other Education |
- 63 *Architecture.*—Self-explanatory.
- 64 *Urban and Regional Planning.*—Self-explanatory.
- 65 *Home Economics.*—This category includes the following subject matter areas:
- | | |
|------------------------|--------------------------|
| General Home Economics | Foods-Nutrition |
| Child Development | Institutional Management |
| Family Relations | Other Home Economics |
| Clothing and Textiles | |
- 66 *Law.*—Self-explanatory.
- 67 *Social Work.*—Self-explanatory.
- 68 *Theology.*—Self-explanatory.
- 69 *Professional Journalism.*—This category includes the subject matter area of journalism at the professional or occupational level and commonly associated with a department or school of journalism.
- 70 *Library Science.*—Self-explanatory.
- 79 *Other Professions.*—Self-explanatory.
- 80-89 *Technical-Vocational Fields.*—These subject fields are associated with a program, or course within a program, designed to prepare students for immediate employment in an occupation or cluster of occupations, and not as the equivalent of the first two or three years of a baccalaureate degree program.
- 90 *Physical Training.*—This category includes health and recreation education, physical education, and intramural athletic programs administered by the physical-education department.
- 91 *Military Service.*—This category includes Air and Aerospace ROTC, Army ROTC, Navy ROTC, and equivalent.