STATE UNIVERSITY SYSTEM OF FLORIDA
EXPLANATION OF THE SPACE NEEDS GENERATION FORMULA

The space needs generation formula uses three types of information to determine unmet space needs:

1. Workload measures such as enrollment, positions, and library materials

2. Space standards including station sizes and utilization levels

3. Existing facilities inventory

The formula was designed to recognize space requirements based on academic program offerings, student level, and research programs. Currently, space needs are generated for twenty university sites including main campuses, branches, two health sciences centers, and the Institute of Food and Agricultural Sciences.

FTE Enrollment Projections

Enrollment projections used for budgeting purposes are based on five-year projections of annual FTEs requiring facilities, excluding enrollments housed at non-owned sites. Annual FTE (one undergraduate FTE represents enrollment in 40 credit hours during the academic year; 32 for graduate) enrollment for each site, by discipline, by level is used as the primary variable within the formula. This level of detail allows recognition of differences in space needs based on size of programs, mix of science and non-science programs, variations in station sizes for laboratories, and variations between disciplines in the number of contact or weekly student hours required to be housed in classrooms and teaching laboratories.

Space Standards

Ten space categories are recognized within the formula. The ten categories of assignable space include:

Instructional

Classroom Facilities
Teaching Laboratory Facilities
Research Laboratory Facilities

Academic Support

Study Facilities
Instructional Media Facilities
Auditorium/Exhibition Facilities
Teaching Gymnasium Facilities

Institutional Support

Student Academic Support Facilities
Office/Computer Facilities
Campus Support Facilities

Classroom Facilities

A classroom is defined as a room used for classes and not tied to a specific subject or discipline by equipment in the room or the configuration of the room. Included in this category are rooms generally used for scheduled instruction that require no special, restrictive equipment or configuration. These include lecture rooms, lecture-demonstration rooms, seminar rooms, and general purpose classrooms. Related service areas such as projection rooms, telecommunications control booths, preparation rooms, closets, storage areas, etc. are included in this category if they serve classrooms.

The net assignable square feet (NASF) needed for classrooms is based upon 22 NASF per student station, 40 periods of room use per week, and 60% station occupancy. These standards result in a space factor of 0.92 NASF per FTE enrollment. Using this space factor, NASF requirements are determined by multiplying the FTE enrollment for each discipline by level times the number of weekly student hours per FTE that are scheduled in classrooms.

The effect of applying the formula to all universities by level and by discipline provides an average of 12 NASF per FTE for main campuses. An example for an upper level FTE student in Engineering is:

$$.92 \text{ (Space Factor)} \times 15.0 \text{ (Weekly Student Hours Per FTE)} = 13.8 \text{ NASF Per FTE}$$

$$\text{where Space Factor} = \frac{\text{Station Size}}{\text{Hours Per Week} \times \text{Occupancy Rate}} \quad \text{or} \quad \frac{22}{40 \times .60} = .92 \text{ NASF}$$

Teaching Laboratory Facilities

A teaching laboratory is defined as a room used primarily for scheduled classes that require special purpose equipment or a specific room configuration for student participation, experimentation, observation, or practice in an academic discipline. Included in this category are rooms generally called teaching laboratories, instructional shops, computer laboratories, drafting rooms, band rooms, choral rooms, music practice rooms, language laboratories, studios, theater stage areas used primarily for instruction, instructional health laboratories, and similar specially designed or equipped rooms if they are used primarily for group instruction in formally or regularly scheduled classes. Related service areas are also included in this category.

The NASF need for teaching laboratories is computed by discipline by level and is based on established station sizes, weekly student hours per FTE, and utilization levels for room use and station occupancy. The room use standard is 24 hours for lower level and 20 hours for upper level. The station occupancy rate is 80% for both levels.

The effect of applying the formula to all universities by level and by discipline provides an average of 15 NASF per FTE for main campuses. An example for an upper level student in Engineering is:

$$7.81 \text{ (Space Factor)} \times 5.0 \text{ (Weekly Student Hours Per FTE)} = 39.05 \text{ NASF Per FTE}$$

$$\text{where Space Factor} = \frac{\text{Station Size}}{\text{Hours Per Week} \times \text{Occupancy Rate}} \quad \text{or} \quad \frac{125}{20 \times .80} = 7.81 \text{ NASF}$$

Although most universities in the System currently generate more than 50,000 NASF, a minimum facility need of 50,000 NASF is provided for the development of future campuses.

Research Laboratory Facilities

A research laboratory is defined as a room used primarily for laboratory experimentation, research or training in research methods, professional research and observation, or structured creative activity within a specific program. Included in this category are labs used for experiments, testing or "dry runs" in support of instructional, research or

public service activities. Nonclass public service laboratories which promote new knowledge in academic fields are included in this category (e.g., animal diagnostic laboratories and cooperative extension laboratories). Related service areas that directly serve these laboratories are included in this category.

The NASF need for research laboratories is based on an allotment of space by discipline for each research faculty FTE and graduate student FTE. Space needs are generated separately for research faculty and graduate students.

Research Faculty   Space needs are generated by discipline for Educational and General (E&G) and Contract and Grant (C&G) faculty. The number of E&G research faculty is based upon the E&G FTE faculty to FTE student ratio and the percentage of E&G research faculty FTE for the actual or base year. The number of C&G research faculty FTE is based on a three-year average growth rate for C&G faculty applied to the actual or base year. The allotment of space for each research faculty FTE varies from 75 to 450 NASF depending on discipline.

Graduate Students   Space needs are generated by discipline for beginning and advanced graduate student FTE. Graduate student FTE enrollment is divided between beginning and advanced levels based upon the number of graduate credit hours completed by the student (advanced graduates are those with 36 or more graduate credit hours).

Research laboratory space is generated for selected University Support Personnel System positions having research responsibilities that require laboratory facilities. The Beginning Graduate space factor is used for these positions. Space allotments for advanced graduates are the same as those applied to research faculty (from 75 to 450 NASF). The allotment of space for a beginning graduate FTE considers sharing of research space and varies from 3 to 90 NASF. For example, the space allotment for an advanced graduate student in Engineering is 450 NASF.

Study Facilities

Study facilities include study rooms, stack areas, processing rooms, and study service areas. The NASF needed for study facilities is based on separately determined NASF needs for study rooms, carrel space, stack areas, and study service areas.

Study Rooms (Other than Computer Study Rooms)   The NASF need for study rooms is based on 25 NASF per station for 25% of the undergraduate FTE.

Computer Study Rooms   The NASF need for computer study rooms is one station for every 15 FTE, with a station size of 30 NASF.

Carrels   The NASF need for carrels is based on 30 NASF per station for 25% of the beginning graduate FTE, for 50% of the law FTE, for 25% of the advanced graduate science FTE, and for 50% of the advanced graduate non-science FTE, plus 20 NASF per station for 5% of the science FTE faculty and for 25% of the non-science FTE faculty.

Stack Areas   The NASF need for stack areas is based on an amount of space per library volume with all library materials converted to volume equivalents (includes all holdings such as bound volumes, video and audio tapes, cassettes, microfilms, etc.). The projected volume counts are based on current inventories plus a continuation of the previous year's acquisitions.

Non-Law Stacks
0.10 NASF/volume for the first 150,000 volumes
0.09 NASF/volume for the second 150,000 volumes
0.08 NASF/volume for the next 300,000 volumes
0.07 NASF/volume for all volumes above 600,000

Law Stacks
0.14 NASF/volume for the first 150,000 volumes
0.12 NASF/volume for the second 150,000 volumes
0.10 NASF/volume for the next 300,000 volumes
0.09 NASF/volume for all volumes above 600,000

Study Facilities Service Areas   The NASF need for study service areas is based on 5% of the total NASF needed for study rooms, carrels, and stack areas.

Instructional Media Facilities

Instructional Media rooms are used for the production or distribution of multimedia materials or signals. Included in this category are rooms generally called TV studios, radio studios, sound studios, photo studios, video or audio cassette and software production or distribution rooms, and media centers. Service areas such as film, tape, or cassette libraries or storage areas, media equipment storage rooms, recording rooms, engineering maintenance rooms, darkrooms, and studio control booths are also included in this category.

A minimum facility of 10,000 NASF and 0.5 NASF per FTE over 4,000 is provided for instructional media space on main campuses and 0.5 NASF per FTE for branch campuses with no minimum facility allowance.

Auditorium/Exhibition Facilities

Auditorium/exhibition facilities are defined as rooms designed and equipped for the assembly of many persons for such events as dramatic, musical, devotional, livestock judging, or commencement activities or rooms or areas used for exhibition of materials, works of art, artifacts, etc. and intended for general use by faculty, students, staff, and the public.

Service areas such as check rooms, ticket booths, dressing rooms, projection booths, property storage, make-up rooms, costume and scenery shops and storage, green rooms, multimedia and telecommunications control rooms, workrooms, and vaults are also included in this category.

The NASF need for auditorium/exhibition facilities is based on a space allotment of 3 NASF per FTE with a 25,000 NASF minimum facility allowance for main campuses.

Teaching Gymnasium Facilities

A teaching gymnasium is defined as a room or area used by students, staff, or the public for athletic or physical education activities. Included in this category are rooms generally referred to as gymnasiums, basketball courts, handball courts, squash courts, wrestling rooms, weight or exercise rooms, racquetball courts, indoor swimming pools, indoor putting areas, indoor ice rinks, indoor tracks, indoor stadium fields, and field houses. Service areas such as locker rooms, shower rooms, ticket booths, rooms for dressing, equipment, supply, storage, first-aid, towels, etc. are also included in this category.

The NASF need for teaching gymnasiums is based on a minimum facility for each main campus of 50,000 NASF for the first 5,000 FTE enrollment, plus an additional 3 NASF per FTE for enrollment over 5,000 FTE.

Student Academic Support Facilities

A student academic support room is defined as a room in an academic building where students hold meetings or group discussions of an academic nature. Rooms that directly serve academic meeting rooms are also included in this category.

Student academic meeting room need is based on 0.6 NASF per FTE enrollment.

Office/Computer Facilities

An office is defined as a room housing faculty, staff, or students working at one or more desks, tables, or workstations. A computer facility in this category is defined as a room used as a computer-based data processing or telecommunications center with applications that are broad enough to serve the overall administrative or academic equipment needs of a central group of users, department, college, school, or entire institution. Rooms that directly serve these areas are also included in this category, as well as faculty and staff lounges.

The NASF need for offices/computer facilities is based on a space allotment of 145 NASF per FTE position requiring office space. Examples of positions not requiring space include maintenance mechanics, scientific photographers, and dental technicians. FTE positions are projected based upon the current ratio of FTE positions requiring space to annual FTE students. The number of C&G positions is based on a three-year average growth rate for C&G positions applied to the actual or base year. The need for faculty and staff lounges is based on 3 NASF per position.

Campus Support Facilities

Campus support facilities are defined as those areas used for institution-wide services. This includes maintenance shops, central storage areas, central service areas, vehicle storage facilities, hazardous materials facilities, plus related service areas such as supply storage areas, closets, and equipment rooms.

The NASF need for campus support facilities is based on 5% of the total NASF generated by the formula plus other areas maintained by physical plant staff such as continuing education buildings and clinic space.

Existing Facilities Inventory

The facilities inventory for each university is designed using the format and definitions prescribed in the Postsecondary Education Facilities Inventory and Classification Manual, 1992, published by the U. S. Department of Education, National Center for Education Statistics. The inventory documentation consists of a file maintained by computer pursuant to the Physical Facilities Space File Specifications prepared by the State University System Office of Information Resource Management.

The inventory contains information about each site, each building, and each room that is owned, shared, or leased by a university. All spaces in buildings, including those that are permanent, temporary, or under construction that are in satisfactory condition are considered in computing the total existing assignable square footage. Assignable space is that which is available for assignment to and functionally usable by an occupant.

The room records from the inventory are used to determine the amount of existing square footage in each of the ten assignable space categories. Each room record is assigned a room use code and is grouped into the appropriate space category. For each of the ten space categories, the existing assignable square footage is deducted from the cumulative space need. The assignable square footage used to determine unmet space needs does not include those spaces for which the formula does not generate a need. Examples of excluded space are leased space, special purpose lab equipment areas such as a wind tunnel or linear accelerator, and intercollegiate athletics areas.

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