CAPITAL PLANNING, DESIGN AND CONSTRUCTION
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9060   **STANDARDS FOR CAMPUS DEVELOPMENT PROGRAMS**

The standards used in campus development programs of the CSU are divided into two categories: program standards and project development standards.

Program standards are the result of experience, previous agreements with reviewing agencies or local governmental jurisdictions, and Board of Trustees policy. These standards, such as the standards for achieving energy efficiency in excess of Title 24 of the CBC, are subject to continuous review and evaluation. Where research or experience indicates a need for revision, it is the responsibility of the campus to notify CPDC. Although primary responsibility for review and research rests with the Chancellor's Office, each campus is encouraged to submit its experience and research, along with its recommendations for revisions.

Project development standards include statutory or CSU policy requirements for all projects from design through construction of facilities for the CSU. These standards are to be followed for all new construction and renovations except where specifically excluded on a case by case basis.

9061   **SPACE STANDARDS CHART (See Appendix B)**

9062   **PROJECT DEVELOPMENT STANDARDS FOR SPACE USE**

The programming of new capital outlay projects is governed by the Project Development Standards collectively known as Space Standards. The California Postsecondary Education Commission (CPEC) approved space standards are used to calculate the type of space in a facility, and its size. The standards are a set of space formula multipliers for level, type, and category of instruction, for graduate research, for faculty and faculty administrative offices and for miscellaneous shops and storage.

9063   **GENERAL ADMINISTRATION STANDARDS**

General Administration space will be provided according to the following standards, which are to be used as indicators of the upper level of support for General Administration space on a campus:

Campus Size (FTE)	ASF per FTE
5,000	7.99
8,000	7.94
10,000	7.91
12,000	7.88
15,000	7.84
20,000	7.76
25,000+	7.69

For individual office sizes see SUAM 9065.

The space requirement for General Administration in the ASF per FTE Model is identified by formula. Derivation of the formula was accomplished by plotting the campus ASF/FTE for General Administration against campus FTE and applying linear regression to fit a straight line. This standard replaces the 1955 restudy standards for CSU space planning.

9064   **MULTIMODE INSTRUCTION STANDARDS**

Multimode instruction is defined as: "A capacity space, which is configured and furnished in such a manner as to support classes in all three modes of instruction (lecture, activity, and laboratory)" by the Data Element Dictionary for the Academic Planning Database (APDB). Designated as space type 4 and "Multimode instruction" in the APDB, multimode instruction typically involves department-specific courseware installed on individual student

workstations, terminals, or other types of software-related equipment or furniture, and is usually associated with instruction reports as Course Classification numbers 01 through 16.

In developing a capital program that requires multimode instruction space, 20 ASF per station is allowed, and is subject to change by CPDC. Multimode instruction space is considered capacity FTE space.

9065   PROJECT DEVELOPMENT STANDARD FOR OFFICES

9065.01   ADMINISTRATIVE OFFICE STANDARDS

The square footage allocated for a standalone office for professional staff, one occupant (faculty or other) is 110 ASF as shown below. Use this value for building space requirement proposals (Form 2-4). For planning purposes, the ASF/FTE model generates 175 ASF per office which incorporates appropriate faculty office space with the balance, or cumulative balance for multiple offices, used for conference rooms, workroom/copy rooms, etc. It does not include storage, as that is calculated separately.

Office space will be provided according to the following formula:

Position and Number of Occupants	Square Feet
Campus President	300
Vice President or Dean	200
Associate Dean, Division Chairman, Associate Vice Library Director	180
Department Head or Librarian	150
Professional Staff, one occupant (faculty or other basic)	110
Professional Staff, two occupants	160
Professional Staff, three occupants	240
Professional Staff, more than three occupants in same office	240 + 80 for each added occupant
Secretary or Receptionist	160
Clerical or Technical Support Staff, two occupants	160
Clerical or Technical Support Staff, three occupants	230
Clerical or Technical Support Staff, four occupants	300
Student Assistant	60
five or more	300 + 75 for each added occupant

9065.02   FACULTY OFFICE STANDARDS

Faculty office space is provided for each full-time equivalent member of the instructional staff of the campus. The area provided for each faculty member is shown in section 9065.01. All new spaces constructed or spaces converted for faculty offices shall be individual offices (one station).

9066   CORRIDOR WIDTH STANDARDS

Except where special justification exists, corridor widths will be as listed below:

- Corridor with offices on each side: six feet or per Title 24 C.B.C., whichever is greater.
- Corridor with offices on one side and instructional rooms on the other: eight feet or per Title 24 C.B.C., whichever is greater.
- Corridor with instructional rooms on each side: ten feet or per Title 24 C.B.C., whichever is greater.

9067   CONFERENCE ROOM STANDARDS

Space for conference rooms for academic disciplines is generated by standards for faculty offices. The multiplier is found in the Space Standards Chart, Appendix B, under the column "Faculty Admin. ASF/Faculty FTE".

One presidential conference room in the administration building may be approximately 700 square feet. All other conference rooms for campus administration should be approximately 400 square feet.

9068   LIBRARY POLICY AND SPACE STANDARDS

Reference: Policies and Standards for CSU Campus Library Facilities, September 12, 1991 and Information Resource Facilities for the 21st Century: A Framework for Planning Task Force on Facility Planning for Library and Information Resources, April 1996 (see Form CPDC 2-9, Appendix B---used for space calculations for library projects.)

Introduction and Background:---The Library Plan, which was accepted by the Board of Trustees in November 1987 as the policy framework for the future development of library capabilities throughout the CSU is the basis for the facility policies, and standards articulated in the 1991 "Policies and Standards for CSU Campus Library Facilities" and supplemented in the 1996 report "Information Resource Facilities for the 21st Century: A Framework for Planning.

The development of these library space policies and standards involved:

- Widespread consultation with the CSU academic community.
- Negotiated agreements with the staff members of the California Postsecondary Education Commission, the Legislative Analyst, and the Department of Finance.
- Approval of the CSU Academic Senate and endorsement of the CSU Executive Council.

The CSU library space policies and standards were developed using the following assumptions:

1. CSU's mission of teaching and research related to the instructional mission will require a sufficient quantity and variety of immediately available library resources.
2. CSU's emphasis on research related to the instructional mission will require the acquisition of basic research materials, but not in sufficient quantities to justify special policy provisions for long-term storage of such materials.
3. Growth and development of library collections and access to information must be coordinated and managed to achieve the academic program goals of the campus.
4. The library facilities on each campus must support and enhance the campus' academic mission, not hinder it.
5. Future CSU campus library facilities should be designed for the campus' projected enrollment ceiling, thus reducing the number of times a campus needs to request a capital outlay project for library construction.
6. Campus library facilities should be designed to keep in step with the economy and rapidly changing technologies.
7. Long-range growth and development of the library collections will need to be managed within the total projected library space provided by the standards for each campus when it reaches its projected FTES enrollment ceiling.
8. Existing CSU library space standards should serve as the foundation upon which to develop the new standards.

Policy Guidelines:---The following policy guidelines establish the ten year planning horizon to be used in developing plans for new CSU library facilities; the types of space to be included in planning for and alteration of library facilities; the appropriate uses of standards and official data in calculating space needs for such facilities; the need to plan for the long-range development and management of the collections; and, the authority for each campus to develop its library resources to meet its academic program needs. In part, these policy guidelines are derived from Library Plan and, in part, they are the normal extension and expansion of CSU's existing policies, standards, and practices.

- Planning Horizon: When a campus library facility or addition is planned for a CSU campus in the capital outlay program, the size and scope of the project shall address, for a period of ten years, the amount of space needed to adequately house the library's collections, its non-book materials, reader stations, and technical processing and public service areas for the approved full-time equivalent students (FTE) enrollment ceiling of the campus. In some instances the plan may call for multiple construction phases to be consistent with the anticipated enrollment growth, in such cases the planning horizon is the target year plus ten years.

- Types of Space: The CSU systemwide library standards, herein described, are to be applied in determining the amount of space in a library facility to serve the needs of students and faculty and to maintain information in a diverse range of formats. Space is also to be provided for library staff to organize the information and to transmit it to students and faculty, and to allow for adequate growth of the collections to accommodate reasonable amounts of change in student, faculty, and staff populations.

- Calculating Needs: The library space calculations and projections used in a capital outlay program are to be based upon official data maintained by the Chancellor's Office. Space for the library collections is to be based upon the projected number of volumes the campus should attain after it reaches its approved FTE enrollment level. Non-book space is to be based on a percentage of the library collections space. Reader space is to be based upon the official projections of FTE. Likewise, space for library staff is to be based upon the projected number of FTELS (FTELS is the number of full-time equivalent library staff approved in the annual forecasted budget) at the approved FTE enrollment level.

- Collections Management: Each campus must develop a long-range strategy and appropriate annual implementation plans to grow, develop and manage the library collections to meet the campus' academic program needs. The strategy must consider the development and management of the library collections within the total projected space of the facility.

- Campus Self-Determination: The acquisition, selection, and allocation of library collections and related information shall continue to be vested with the individual CSU campus to insure compatibility with its academic mission.

- Tenant Use: Before an addition can be built on an existing library the plan must make provision for recapturing any space occupied by tenants. Conversely, if a new library facility anticipates having some of its space initially used by tenants, a detailed plan for such use must be incorporated in the project plan.

Space Standards:---There are four types of space that must be planned as part of a capital outlay program library project, including space for the collections, non-book materials, reader stations, and technical processing/public service areas. Inclusive within the campus entitlement is the potential for designating 20 percent of the space for integrated facilities to support electronic information instruction and delivery. That designation is recommended in the 1996 report along with comparisons of capital outlay estimates reflecting a richer cost per square foot allowance for technology. Examples of use of the space would be distance learning, faculty/staff development, Internet-enabled group study rooms and computer instructional areas for students, etc. The following space standards are to be used in planning and scoping CSU library facilities.

Collections Space:---The space for the collections is to be comprised of "open stacks" (OS), "movable aisle compact shelving" (MACS), or automated storage and retrieval system (ASR) technology. The amounts of each type of collections space will change as a campus' collections grow.

- Open Stacks (OS): Space for the collections contained in an "open stacks" area is to be planned at the 10:1 ratio (ten volumes per one assignable square foot). Each campus library will be constructed to provide a sufficient "open stack" area to accommodate 40 volumes per FTE at the campus' approved enrollment level. For instance, a campus with a projected enrollment level of 25,000 FTE will have an "open stack" area to accommodate 1,000,000 volumes, or 100,000 assignable space feet (ASF). At a minimum every campus will have an "open stack" area to accommodate 400,000 volumes.

- Movable Aisle Compact Shelving (MACS): Limited space for library materials not housed in the "open stack" area may be designated as "movable aisle compact shelving (MACS)." The MACS is calculated at 35 volumes to the assignable square foot of library space. This standard will apply to all campuses where appropriate, i.e., to meet needs of 200,000 volumes or more. ASR is a sophisticated storage capability that will enable CSU campuses to store over 100 volumes per ASF.

- (ASR) Automated Storage and Retrieval: Technology is an acceptable and preferred form of onsite high-density shelving. Various configurations and costs associated with ASR can be related to customization at each campus.

The projected volume for various campus sizes are:

TABLE I

ENROLLMENT APPROVED	PROJECTED VOLUMES	VOLUMES IN OPEN STACKS	ASF	VOLUMES INMACS	ASF
25,000+	1,775,000	1,000,000	100,000	775,000	22,143
20,000	1,500,000	800,000	80,000	700,000	20,000
18,000	1,390,000	720,000	72,000	670,000	19,143
15,000	1,225,000	600,000	60,000	625,000	17,857
14,000	1,170,000	560,000	56,000	610,000	17,429
12,000	1,060,000	480,000	48,000	580,000	16,571
10,000	940,000	400,000	40,000	540,000	15,429
8,000	840,000	400,000	40,000	440,000	12,571

The development of the collections space will involve initially providing open stack space for first 400,000 volumes. Then the total space for the MACS will be filled. Finally, the remaining open stack space will be utilized.

Non-book Materials:---Space for non-book library materials is to be calculated at 40 percent of the space allocated for "open stack" collections.

Reader Stations:---There are three types of reader stations to be provided including general purpose reader stations, study carrels, and library telecommunications/computer based workstations (LTCW). The LTCW has emerged in recent years as a result of the need to provide information (voice, video, text, graphics, and image) in electronic form from either on-site resources or remotely via telecommunications.

In total, these three types of reader stations are to be calculated at 20 percent of the projected full-time equivalent students (FTES) enrollment ceiling. The following provides the space standards for each type of reader station.

- General Purpose Stations:---Total projected reader stations are to be 88 percent this type and are to be sized at 25 assignable square feet per station.
- Study Carrels:---Total projected reader stations are to be 10 percent this type and are to be sized at 35 assignable square feet per station.
- Library Telecommunications/computer workstations (LTCW)*:---Total projected reader stations are to be 2 percent this type and are to be sized at 49 assignable square feet per station.

*The library telecommunication/computer workstation (LTCW) is not to be construed as a student access computing workstation. The LTCW is a specialized computer workstation whose principal purpose is to generate and enhance the transfer of bibliographic and full text information as an aid to the instructional process. The student access workstations are employed to meet the direct instructional computing support needs of the academic program. The two types of workstations have been conceived and are designed to serve different functions.

Technical Processing and Public Service Space:---CSU formulas have been in effect in this category for eighteen years and are being retained without change. Space for the library staff is to be provided at the rate of 225 assignable square feet per projected staff member.

The following is the projected staffing for various campus sizes:

Enrollment	Staff
25,000+	160
20,000	130
18,000	115
15,000	93
14,000	89
12,000	81
10,000	73
8,000	67

For additional information regarding CSU library development refer to the Policies and Standards for CSU Campus Library Facilities dated September 12, 1991.

9069   MULTIMEDIA, INSTRUCTIONAL DEVELOPMENT, AND AUDIO-VISUAL SPACE STANDARDS

The assignable square feet at target year is not to exceed:

      5,000 + (1 x FTE) for basic services (new campus)
      10,000 + (1 x FTE) for comprehensive services

9070   THEATER STANDARDS

Each campus is entitled to:

Type of theater	Stations
Black box theater (multi-purpose)	250
Little theater (Including fully-rigged stage)	500 (when campus reaches 5000 FTE.)

Campuses with a fine arts program are also allowed the following theaters:

Type of theater	Stations
Choral rehearsal hall	100-125
Orchestra rehearsal hall	100-125
Music recital hall	200

Auxiliary facilities for the stage, such as dressing rooms, makeup rooms, scene shop, and costume-design rooms, will be evaluated in terms of the approved academic program and campus enrollment.

9071   AUDITORIUM STANDARDS

Each campus requires a large auditorium with a minimum seating capacity of 1,200. Auditoriums may be converted to a performing arts center with private donations. See policy for large auditoria at: http://www.calstate.edu/cpdc/executive/policy.shtml.

9072   ART GALLERY STANDARDS

Each campus should have a 3,000 square foot initial art gallery. As the campus grows other program demands may justify additional gallery space.

9073   SCIENCE MUSEUM STANDARDS

Each campus should have a 3,000 square foot initial science museum. As the campus grows, other program demands may justify additional museum space.

9074 PHYSICAL EDUCATION FACILITIES STANDARDS

9074.01 INDOOR PHYSICAL EDUCATION FACILITIES STANDARDS

The total assignable square feet (ASF) for indoor PE is determined for each campus as follows:

TARGET FTE	ASF/FTE
2,000	12.0
3,000	11.0
4,000	10.5
5,000	10.2
6,000	9.7
8,000	9.0
10,000	8.1
15,000	7.4
20,000	6.6
25,000 +	6.0

9074.02 OUTDOOR PHYSICAL EDUCATION FACILITIES STANDARDS

Outdoor physical education facilities are planned for each campus as follows:

Enrollment	Teaching Stations	Acres
2,500	4	18
5,000	8	22
7,500	9	26
10,000	11	29
15,000	14	34
20,000	17	37
25,000 +	19	39

Each campus should have in its outdoor physical education facilities a running track not to exceed nine lanes in width, with one run out straightaway of 140 yards. The surface of the running track may be a synthetic product.

Special outdoor facilities such as tennis courts and handball courts are to be provided on the following basis: facilities providing for twenty-four students constitute one teaching station; that is, six tennis courts or six handball courts constitute one teaching station.

A swimming pool (or pools) adequate for three teaching stations is also to be provided.

9075 CORPORATION YARD SPACE STANDARDS

Corporation yard space is figured on the basis of the assignable square feet (ASF) per full-time equivalent (FTE) enrollment. Corporation yard space includes shops, drafting room, offices, warehouse, storage, shipping and receiving, groundsmen workroom, and campus security quarters.

FTE	ASF\FTE	ASF	Paved Area (sq. ft.)
25,000 +	1.8	45,000	55,000
20,000	2.0	40,000	50,000
15,000	2.4	36,000	45,000

10,000	3.0	30,000	40,000
5,000	4.2	21,000	33,000
2,500	4.8	12,000	20,000

9076   PARKING SPACE STANDARDS

All requests for new parking facilities require a thorough access assessment be conducted by an independent consultant. Reference: Financing & Treasury (see Form CPDC 2-21, Appendix B)

9078   ENERGY UTILIZATION STANDARDS

All new buildings and infrastructure projects constructed shall comply with the Procedure Guide and Design Requirements for Architects and Engineers http://www.calstate.edu/CPDC/AE/Design_STDS.shtml (Job Start Manual) and Executive Order No. 785.

9079   TELECOMMUNICATIONS CABLE STANDARDS

The inter-building voice, data, and video communications requirements for the project must be assessed in relation to available pathways, connections, and capacities. The CSU Telecommunication Infrastructure Planning Guidelines, http://www.calstate.edu/cpdc/AE/TIP_Guidelines and current coded memoranda will be used in the assessment and planning process.