

FACILITY PROGRAM PLANNING GUIDELINES FOR HIGHER EDUCATION CAPITAL CONSTRUCTION PROJECTS

April 5, 2007

Part 1 Statutory Authority

Statutory Authority C.R.S. 23-1-106, et. seq., establishes the duties and powers of the Commission with respect to capital construction and long-range planning. C.R.S. 23-1-106(2)(3) gives the Commission authority to prescribe uniform policies, procedures, and standards of space utilization and to review and approve master planning and program planning for all higher education capital construction projects on state-owned or state-controlled land. Given this authority, these guidelines outline components to be included in the preparation of facility program plans and the criteria by which the Department of Higher Education (DHE) will conduct individual program plan reviews.

C.R.S 23-1-106 requires state higher education institutions to submit program plans for state and cash funded project requests with costs greater than or equal to \$500,000 and for 202 projects (projects that will be constructed, operated and maintained entirely with cash funds) with costs greater than or equal to \$1,000,000. Projects seeking state funding with costs below \$500,000 can request a program plan waiver from the Department of Higher Education. All capital construction requests for state funds greater than \$0 must be appropriated by the Colorado General Assembly. Cash funded and 202 projects that fall below their respective program planning requirements of \$500,000 and \$1,000,000 are reported annually to the Department of Higher Education on the SB01-209 report. For detailed policy requirements and procedural information please refer to the current Department of Higher Education Capital Assets Policies (Section III Part E) and the current year Instruction Manual for Higher Education Facilities, Program Planning and Budgeting. These documents can be found online at <http://www.state.co.us/cche/policy/newpolicies/iii-parte.pdf> and <http://www.state.co.us/cche/capassets/index.html>.

Part 2 Overview

The framework for campus growth and development is provided in the facilities master plan, the annually submitted institutional five-year capital construction plan (CC-P form) and any additional long-range plans developed by an institution. Program plans allow for the implementation of specific capital projects that have been identified in institutional long-range planning efforts. Programming requires an analysis of existing and projected data and the application of planning criteria to establish the amounts and types of space needed by a department or specific function of an institution.

Generally, a program plan should provide justification for the project based on existing and projected conditions/space needs, existing long-range plans and an analysis of program and facility alternatives. The program plan should also establish room specifications, spatial relationships and special design requirements based on program or facilities needs in order to guide the project into the design phase.

It is acknowledged that not all capital projects will conform to the program planning criteria within these guidelines, especially those that do not adjust academic space such as, physical plant facilities, dormitories and recreation facilities. Given this, deviations from these guidelines based on specific facility/infrastructure use and planning and design considerations may be acceptable under certain circumstances. Please consult DHE staff during the program planning process if a question arises regarding deviations from these guidelines. Additionally, while professional program planning consultants or staff with expertise in the subject will certainly be helpful in the development of a facilities program plan, these services may not be entirely necessary for certain types of projects if funds are not available to hire professional facilities planners. It is important, however, that program plans convey the necessary programmatic space needs to inform the project as it heads into the design phase. State statute directs that architectural/engineering plans must be consistent with DHE approved facility program plans. The Office of the State Architect and the DHE Capital Assets staff coordinate comparisons between program plans and finished projects. Please consult DHE Capital Assets staff with any questions related to facilities program planning.

Part 3 Program Planning Guidelines

These guidelines consist of four sections including an overview, justification, design and implementation criteria, and appendices. Part 3 provides a narrative on what should be included within each of these four sections.

Overview

The overview section should include an executive summary of the proposed project identifying the problems that need resolution, describing the program, department or school function that is being affected and relating the project to the Facilities Master Plan.

Executive Summary

Provide a brief abstract of the project's scope, justification, relation to institutional master plan, future considerations, project cost, financing sources and proposed schedule.

Description of Academic Program

A concise statement describing the educational program related to this Facility Program Plan, including educational program objectives and accreditation

standards. If the program plan describes an auxiliary project without academic functions, the plan should include information on the affected institutional function.

Relation to Facilities Master Plan

The program plan is a required element of the capital construction and facilities planning processes in Colorado. The need for program plans should be anticipated by institutions with sound facilities master plans that relate to overall institutional goals and academic strategic plans. Since program plans are an essential piece of the facilities planning process, a plan should articulate a strong relationship between the facility being built or renovated to the facilities master plan and any other interim long-range planning an institution has undergone.

Justification

This section includes analysis of existing conditions, consideration of proposed changes to those conditions, the total space requirements, and facilities/programmatic alternatives considered by the institution needed to meet the projected conditions.

Existing Conditions

An analysis of how existing space accommodating programs affected by proposed changes should be conducted in order to establish parameters for change. A classroom utilization study may be necessary to determine whether current classroom space and scheduling results in sufficient seats and if class size and capacity meets institutional goals. The plan should assess quality of existing space in terms of physical conditions and functionality.

Included in the existing conditions section should be a clear assessment of any facility operational problems, code, or health/life safety deficiencies. For program plans involving the renovation of existing facilities, this information should be coordinated with the Office of the State Architect Facility Audit Program. Information on the Facility Audit Program is available online at <http://www.colorado.gov/dpa/dfp/sbrep/audit.htm>. If available, a recently updated facility audit report should be included with the program plan. If a recently updated facility audit is not available, determining health, life safety and code issues should be included as part of the program plan.

Changes and Projections

In this section, institutions should identify any proposed changes to existing conditions that will affect programming in new or renovated facilities. Information should be provided on: enrollment projections by academic discipline; new or modified academic programs; new instructional methodologies; changes to class sizes; and, special needs. Enrollment figures and projections should be based on student FTE and should be consistent with DHE student FTE reporting policies and guidelines (section V, part B). These policies and guidelines can be located on the web at <http://www.state.co.us/cche/policy/newpolicies/v-partb.pdf> and <http://www.state.co.us/cche/policy/newpolicies/v-partb-guidelines.pdf>,

respectively. Generally, projections should show annual student FTE increases or decreases ten years into the future.

Total Space Requirements

Based on the analysis of existing conditions, proposed changes and projection, this section should apply planning criteria and DHE space utilization guidelines to determine the number of stations required and how they will be distributed to individual rooms, to select appropriate station sizes and to calculate room areas. This analysis should then determine the total amounts of assignable square feet (asf) and gross square feet (gsf) that will be added or reconfigured by the project. For renovations, total asf and gsf figures should be provided for the current facility and the facility after project completion. Necessary building efficiency factors (asf/gsf) by building type can be determined from current DHE space utilization guidelines. This sections also identifies the space required to accommodate specialized instructional or research equipment.

After detailed space planning has been completed, summaries of space requirements, by program and by space category, should be included in the program plan. If significant deviations from the Facilities Master Plan occur as a result of this study, the Facilities Master Plan may need revision and re-approval; consult Department Capital Assets staff with questions on the process for amending a facilities master plan.

The analysis should also include a statement of the intended facility improvements resulting from implementation of the Facility Program Plan

Space needs can be justified based on the applicable Department of Higher Education space utilization guidelines. Should a need for modified utilization criteria arise, the plan should provide appropriate justification. For example, if site analysis, cost analysis, or a conflicting strategic plan restrict the total amount of space needed as determined by the program plan, these restricting conditions should be explained.

Alternative Analysis

The program plan should summarize alternate facilities and program solutions considered, including (as appropriate) lease/rent, real property acquisition, construction, relocation, restricting admissions and alternative academic strategies. Plans can also explain contingency plans for operating the program in the event that capital construction funds are not approved. The plans should explain why the selected project was chosen over alternative solutions including a discussion of alternative operating costs and space efficiency. Additionally, a life-cycle cost analysis could be a useful technique for facility alternative cost analysis if appropriate at this stage of an institutions planning and design process.

Implementation and Design Criteria

This section extends the space planning needs determined in the justification section to begin establishing specific project implementations and design criteria, such as, spatial relationships, room specifications, project costs and financing methods, site requirements and any unique features to the program and/or project.

Spatial Relationships and Room Specifications

Documents should include diagrammatic plans or bubble-diagrams illustrating the interaction and working relationships between and among the different spaces. Organization of the proposed new spaces can be summarized by functional areas, spaces shared by different organizational units, and spaces that will be used exclusively by specific organizational units. Room specifications should be developed through consultations with the users and relevant institutional departments. Rooms should be specified by type, size in assignable square feet, function, capacity by number of stations, special equipment or facility needs, and relationship to other rooms in the facility.

Site Requirements and Design Requirements

This section should summarize the pedestrian/vehicular access, topography, soils condition, surface and subsurface drainage, vegetation, and utility system requirements, assessments of utility infrastructure as well as basic building system design and capacities that impact the cost or design of the project. This section should also include a description of design guidelines that the project will adhere to including architecture, building heights, land area coverage and any energy savings, green building or LEED standards that will be applied. This information may be summarized from the facilities master plan.

Project Schedule, Cost Estimate and Financial Analysis

These components of the plan are also a large portion of the budget documents (CC-C spreadsheet and support information) that must be submitted for every higher education capital project. Detailed information on submitting completed CC-C information is available in the current year Instruction Manual for Higher Education Facilities, Program Planning and Budgeting available online at <http://www.state.co.us/cche/capassets/index.html>. The information in this section of a program plan should directly correspond to the information presented in the CC-C spreadsheet and support information.

Further information can include: the project's relation to or dependence upon other current or future master plan designated capital improvement projects; the relative urgency for funding the project and the consequences of delaying the project; and, the construction management process that impacts project phasing along with full disclosure of all planned phases of the project.

Additionally, this section should clearly describe the source(s) of funds intended to fund the project including capital construction appropriations, cash funds, bond proceeds, gifts or bequests, or lease/purchase arrangements. For projects that are

self-funded, revenue-bonded, lease-purchased, or lease-financed, provide a financial analysis, including interest rates, length of term(s), repayment schedule(s), and source(s) of repayment funds. The analysis also should include a discussion of the institution's debt structure and the impact of this project on that structure. All capital budgeting documents should take into consideration inflationary costs. Program plans should articulate the methodology used to account for inflation to avoid future supplemental and budget adjustments. A suggested method would be for the institution to estimate when funding might be realized to the anticipated midpoint of construction and compound using a research based inflation factor to that date. Also, if the project is being funded through student fees, this section should detail when the fees were approved, how they were approved, what the intent of the fees were and the how the body that governs the fees determined their use.

Appendices

Supporting Documents

Append such supporting documents, as appropriate, to establish approvals from other federal, state, or community agencies having jurisdiction over any aspects of the project. Examples may include hazardous waste management, hazardous emissions, ditch company easements, zoning authorities, etc.

Room Utilization Addendum

This section should detail room scheduling and station utilization rates, by course, as they relate to the facility being programmed. Data showing room sizes, weekly room contact hours, hourly room use, average section sizes, and percent of station use should be appended.

Independent Third-Party Review

Include the report from the independent third-party review required by C.R.S. 24-30-1303(1)(r). This review should be completed before final governing board approval of the program plan.

Part 4 Program Planning Outline

- I) Overview
 - a. Executive summary
 - b. Description of academic program being affected
 - c. Relationship to the facilities master plan
- II) Justification
 - a. Existing conditions
 - i. Current program enrollment
 - ii. Assessment of space functionality
 - iii. Current space utilization by classroom/lab hours of use and percent station utilization
 - iv. Facilities Condition Index

- v. Specific health/life safety deficiencies
 - b. Changes and projections
 - i. Enrollment projections by program or department
 - ii. New or modified academic programs/instructional methodology
 - iii. Changes to class sizes
 - c. Total space requirements
 - i. Planned program space utilization
 - 1. Number of student stations required
 - 2. Room areas needed by function
 - ii. Total asf and gsf needed
 - d. Alternatives analysis
- III) Implementation and design criteria
 - a. Spatial relationships
 - i. Diagrammatic plans or bubble-diagrams illustrating the interaction and working relationships between and among spaces
 - b. Site improvements and requirements
 - c. Design requirements
 - i. New utilities required
 - ii. Building systems and any applicable performance criteria
 - 1. Planned green building goals
 - iii. Architectural design features
 - d. Project schedule, cost estimates and financial analysis
 - i. Project schedule and phasing
 - ii. Cost estimates
 - iii. Financing explanation
- IV) Appendices
 - a. Supporting documents
 - b. Room utilization addendum
 - c. Third party review