

Pennsylvania State System of Higher Education Facilities Manual

Volume V System-Financed Facilities Projects Planning and Programming Guide

Background

This document provides standard procedures for planning, programming, and financing facilities projects that are to be funded from System non-capital appropriation resources. The Board of Governors adopted a policy in 1984 to finance major renovation and new construction projects for auxiliary facilities from fees assessed to the beneficiaries of those facilities. The Board reiterated its commitment to this policy for all auxiliary facilities by adoption on April 19, 1990, of the formal policy statement, [Policy 1990-03-A, Finance, Operation, Maintenance, and Capital Renewal of Auxiliary Facilities](#). In 2000, the Board directed that before System financing will be approved for auxiliary facilities projects the requester first must explore obtaining the work through private development or means other than System bond financing. Capital facilities projects for educational facilities are generally programmed with Commonwealth capital appropriations as described in [Volume IV](#) of this manual. However, the Board has approved financing projects for educational facilities where there is significant justification.

Projects Financed:

- **Auxiliary Facilities:** These projects are the most common projects financed using system bond financing as described in this manual.
- **Infrastructure and Land Improvement Projects:** In 2000, the Board designated a portion of the student tuition (\$35 per semester) for renewal of the System's infrastructure and land improvements based upon the level of capital appropriations required to support the educational facilities. Infrastructure and land improvement projects may be undertaken with System bond financing with Board approval.
- **Educational and General Use Facilities Projects:** Educational facilities projects may be System bond financed with Board approval. Generally, such projects must be funded from savings generated by reducing expenditures in other areas of the university's operating budget. Facilities projects or change in facilities use that create additional educational or auxiliary space require Board approval.
- **Guaranteed Energy Savings Act Projects:** Guaranteed Energy Savings Act (GESAs) projects involve contracting with an Energy Services Company (ESCO) to make facilities repairs, improvements and/or alterations with the express goal of improving the energy efficiency of the facility. Each project done under this Act should have a specific payback in terms of reduced energy billing and/or decreased maintenance requirements that cover the debt service for financing the project. The Construction Support Office should be contacted for procedures and assistance with contracting under the GESAs.
- **Routine Operations, Preventive Maintenance (PM), Maintenance, and Repair Projects:** Routine operations, preventative maintenance (PM), maintenance, and repair projects administered within university resources are not eligible for financing and not included in procedures outlined in this volume (see [Volume III](#)).

General Process

The process begins when a university identifies a facilities deficiency and proposes a method for eliminating the deficiency. Projects requiring Board approval should be identified to the Office of the Chancellor before extensive planning proceeds. With concurrence from the Office of the Chancellor, the university proceeds to prepare documentation to obtain Board approval.

Board approval generally requires a project feasibility study, an acceptable financial plan, concurrence from the student body by referendum for student union and recreation projects, the university's council of trustee's approval by resolution and signed loan covenant agreement. Following approval by the Board the project may proceed to selection of a design professional for preparation of contract documents, construction, and subsequent occupancy. The university and the Office of the Chancellor personnel should work closely at each step to ensure affirmative actions by the trustees and the Board of Governors.

The flow chart shown in Figure V-1 summarizes the steps of the process. The following sections provide details for successfully accomplishing each step in the process for each type of project.

Planning Facilities Projects and Requirements Identification

Board of Governors policy [2000-02, Capital Facilities Planning, Programming, and Financing](#), establishes the programming and financing requirements for facilities projects. Board [Policy 1990-03-A](#), for financing, operating, maintaining, and renewing auxiliary facilities, states that such facilities shall be financed from revenues, gifts, or fees charged or generated for the use of those facilities. In order to minimize the financial burden on the students, it is imperative that capital renewal projects, as well as routine operation and maintenance for facilities, be planned with the utmost care to ensure that only the most essential and financially viable projects are undertaken.

Preliminary planning for existing space deficiencies may be made based upon the space allocation planning criteria shown in [Volume VI, Section B](#). Additions or new construction should be considered only after other alternatives prove unsatisfactory. Construction of new residence halls should not be undertaken until the local housing market can no longer adequately provide acceptable housing for the students, and/or public or private alliances fail to satisfy the requirement. Construction of additional dining hall space should be considered only after extended meal hours and/or other alternatives no longer provide adequate food services. Construction of recreational facilities should be considered recreational and intramural athletic activities cannot be accommodated adequately in the university instructional and intercollegiate sports gymnasiums, field houses, or outside playing fields, courts, etc.; in this case, the recreational facilities should be constructed primarily for recreational activities and not for instructional or intercollegiate sports activities.

Planning Renovation of Existing Facilities

Renovation and/or major repair to existing facilities should be planned on the least cost renewal cycle based on the facilities' life cycle profile. Prior to proceeding with programming a renovation project, a preliminary analysis should be conducted based upon a facility condition audit to determine if the facility should be renovated or replaced. If renovation is the best or most viable alternative, the scope of the renovation work shall include restoring the facility to prevailing life safety and local building codes. Upgrade of the interior finishes and amenities should be planned to produce cost effective, long-term maintenance and operation of the facility. Energy conservation provisions should also be considered and included, if cost effective.

Reconfiguration of interior space should be planned within the space allocation criteria shown in [Volume VI, Section B](#). Remember, the Board must approve increases to space inventory categorized as general educational for which universities will seek funding through the allocation formula. This

includes, but is not limited to, increases made through lease, new construction, building additions, or conversion of space categorized as auxiliary.

Planning Construction of New Facilities

Planning construction of new facilities begins with preliminary planning to determine that new construction is the best alternative for satisfying the deficiency; continues with preparation of a feasibility study to determine the site, scope, and cost of constructing the new facility; and ends with devising an acceptable method of financing the project. Alternatives such as reconfiguring, converting or rehabilitating existing facilities, leasing, lease/construct/lease-back (if approved), or third party construction should be explored in conjunction with the Office of the Chancellor and considered prior to undertaking planning of a new construction project. The alternatives considered should be included in the request to proceed with a new construction project. The parameters to be considered in using a lease/construction/lease-back method for satisfying facilities deficiencies are shown in Volume V, Appendix 1.

Preliminarily, the size and cost of the new facility shall be planned within the space guidelines and should include a reasonable allowance for future growth. The estimated fees and the long-term viability of sustaining the fees necessary for financing a project at the resultant size and cost should be determined. This preliminary planning data will serve as the initial “ball park” scope for a feasibility study, when pursued.

Planning of recreational facilities projects requires additional considerations. These facilities should be planned using the space guidelines listed in [Volume VI, Section B](#), Category 670. Other categories should be added, as appropriate. Since these projects are to be financed from student fees, separate facilities such as locker room areas shall not be incorporated for the university staff or faculty. Approval to plan and build recreational facilities as auxiliary facilities was not intended to supplant programming instructional and intercollegiate athletic facilities through the Commonwealth Capital Facilities Program. The book by Richard B. Flynn entitled *Planning Facilities for Athletics, Physical Education, and Recreation*, published by the Athletic Institute and American Alliance for Health, Physical Education, Recreation and Dance, provides helpful considerations for planning and programming recreational facilities.

Results of the preliminary planning should be recorded on the data sheet, shown in Appendix V-2, and forwarded to the Office of the Chancellor for review and concurrence prior to providing a feasibility study for the project.

Infrastructure, Land Improvement, Deferred Maintenance, and Other System-Financed Projects (Non-Auxiliary) Requirements Identification

In addition to auxiliary projects, facilities projects that will create additional space, conversion of auxiliary space to educational space (see [Volume VI-B](#)), or require incurring debt to accomplish will require Board of Governors’ approval. These projects must be financially viable without draining resources from annual operating resources. They must solve a valid university facilities deficiency or reduce operating costs. Energy saving projects must result in payback within a reasonable period of time when compared to the life expectancy of the energy saving materials/equipment to be installed. Energy conservation projects should be justified with a detailed energy analysis or investment grade audit. A viable financial plan must be submitted with each project.

The Feasibility Study

A feasibility study is usually prepared by a professional architectural or engineering firm primarily for a facility project to define the scope of the project further, to identify the construction site, and to establish an estimated cost for construction of the facility. The feasibility study should also determine

the estimated time to construct the facility, and the estimated yearly cost to operate and maintain the new facility.

Selection of the professional to prepare the feasibility study is accomplished according to the State System's prescribed procedures for merit selection of design professionals.

The applicable space guidelines should be specified as the basis for preparation of the feasibility study. The study conclusions should show the resultant criteria in the same format prescribed and/or recommended by the professional for the project.

The university should participate actively in the preparation of the study and should analyze the results of the feasibility study to ensure the requirements are satisfied within acceptable financial levels. If the university desires to proceed with design and construction of the project, the feasibility study, along with the results of the university's analysis, should be forwarded to the Office of the Chancellor for review and comment. The Office of the Chancellor will review the study thoroughly, analyze and discuss the study, or provide written comments on the contents of the study in preparation for programming a project for Board of Governors' approval.

Programming a System-Financed Project

Programming a State System financed capital facilities project involves obtaining Board approval to construct and finance the project at the planned scope and cost estimates to build or renovate the facility. The Board's final approval of the project is obtained prior to obligating funds to the project. A planning and programming checklist is provided in Appendix V-3 for use in processing the project to completion through the bidding phase. The Board is notified and approval obtained after completion of an acceptable feasibility study, and prior to proceeding with the project design, specifications, and contract documents.

After the university has reviewed and thoroughly analyzed the results of the feasibility study, concluded what project is the best alternative to satisfy the deficiency, and determined an affordable project can be constructed, the university should submit the documentation specified on the project checklist shown in Appendix V-3. The Office of the Chancellor should receive the required information at least sixty (60) days prior to presentation to the Board of Governors. Student approval by referendum by a representative sample of the student body is required for all student union, recreational, and other student-initiated capital facilities projects. A sample for reporting the results of the referendum is shown in Appendix V-4.

Council of trustees' approval by formal resolution is required for all System-financed facilities projects. A commitment to pay debt service, construction costs, and the additional future operating costs for each project, including maintenance, adequate life cycle repair and renovation reserves, and/or raise sufficient fees to finance the project by formal resolution and endorsement of a standard loan covenant agreement is also required. Sample formal council resolutions and standard loan covenant agreements are shown in Appendices V-5 and V-6, respectively. The financial plan shall contain, as a minimum, the information shown in the Appendix V-7 spreadsheet. Additional information may be necessary depending on the circumstances of the project.

Financing the Project

The financial plan for funding total project costs should be developed with the Office of the Vice Chancellor for Administration and Finance (VC for A&F). The cost and cash flow information as presented in Appendix V-7 should be completed and submitted to the vice chancellor's office. Costs should include design, contingency, construction (including site preparation and furnishings), additional operational costs, and life cycle reserve requirements. Cash flows should identify the funding source and include up-front monies dedicated to the facility (including loans), student fees (referendum amount and number of full-time equivalents), bookstore revenues, or any other funds pledged to service debt.

Costs for the life cycle renewal are normally programmed at 2.25 percent of the current replacement value of the facility over the life of the facility. Rates other than 2.25 percent can be used if a sound engineering basis for the alternate is provided and approved. Life cycle reserves must be collected through the life of the building and used to replace components, systems, and finishes that have reached the end of their useful life. This can be done through periodic renovations and repairs or by replacement of the building, whichever is determined to be most cost effective. Volume VI-D of the Facilities Manual contains general information on life-cycle requirements.¹

Utilities serving these facilities should be independently metered or prorated on a square-foot-cost basis and reimbursement made accordingly. Agreements shall be made and reimbursement collected for use of the facility by the university for educational or administrative uses. These costs and reimbursement estimates shall be included in the financial plan submitted to the Office of the Chancellor.

The Office of the VC for A&F will perform a credit analysis based upon the information provided in Appendix V-7. All entities, other than student fees, that pledge revenues for debt service must be verified with acceptable audited financial statements. It is important that the Office of the VC for A&F be integrated early into the project finance planning and acquisition process. This will ensure no surprises of financial feasibility given the scope of the project.

The president or his/her designee must endorse the projected cash flow schedule provided in Appendix V-7. The State System will not actually borrow funds for the project until the contracts are awarded. Funding for contingency for System-financed capital facilities projects will not be included in the amounts to be borrowed for the project.

Ultimately, the financing plan approved by the Board of Governors will establish the funding requirements for the project. The project financing plan will be used to evaluate the likelihood of generating the necessary funds from necessary sources in a timely manner to meet the design and construction requirements of the project. Funding commitments greater than \$1 million made from existing university funds, cash donations, or other sources will be placed in a **project account** controlled by the PASSHE Treasury Office (PTO) prior to starting the project. Projects without adequate financial resources to meet the funding requirements as per the financing plan will be postponed.

¹ The requirement for charging adequate fees to fund life-cycle needs and capital replacement is specified in Section 20-2011-A(a) in Act 188 of 1982 (as amended) and extended to all auxiliary buildings in BOG [Policy 1990-03-A, Finance, Operation, Maintenance, and Capital Renewal of Auxiliary Facilities](#), Paragraph B.

Project Account

Funds placed in a PTO project account will remain the university's funds and will be provided back to the university for project expenses or upon final completion of the project. Reimbursement of applicable project costs will be made upon submission of university payment documentation for suitable project expenses or invoice/cash flow documentation to support cash flow needs. Funds will be returned to the university through an ACH transaction. The PTO will not make direct payment to contractors or others from the account. The PTO will provide an annual report on the balance of the account and any interest earnings. Interest earned from the funds in the account will be returned to the university.

Designing the Project

The university must manage the design process, and should not abdicate its position, responsibilities, or authorities to the design professional and ensure the design is consistent with the facility approved by the Board of Governors. The university sets the design parameters for cost, size, and intended use of the facility. The design should incorporate the concepts of least life cycle costs for materials and systems; use tested building systems that are architecturally compatible with its surroundings; incorporate "green design concepts" to the extent feasible; and provide an easily maintainable facility that satisfies the intended use and space requirements. Further, the university should ensure that the cost allocation and space standards are maintained during the design process. The end result should be a facility that satisfies the requirement, is architecturally compatible with its setting, is durable and easily maintainable, is reasonable to operate, is in harmony with the environment, and is affordable.

Additional Board of Governors' approval may be necessary if there are substantial changes in scope or cost estimates have escalated significantly from those previously presented and approved.

Construction Contracting and Project Management

Universities will follow the established System procurement, construction contracting, and project management procedures. Board of Governors' approval may be necessary if bid prices are significantly higher than expected or major issues develop during construction that dramatically change the financial plan for the project.

Facility Management After Occupancy

After the project is complete and occupied, the Occupancy Report shown in [Appendix VII-A-2](#) should be submitted to the Office of the Chancellor's Facilities Management Office. The University must also make any necessary changes to the PASSHE facilities database including the construction date or renovation date and changes, reductions or additions to the space and space categories.