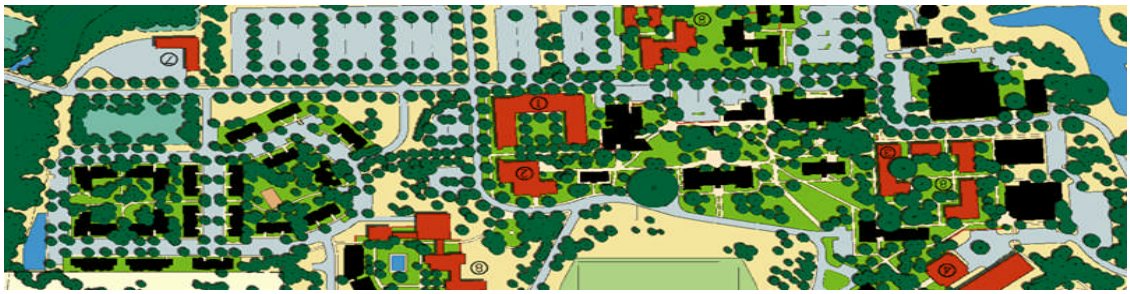
FACILITIES MASTER PLANS



Introduction

A Facilities Master Plan (FMP) establishes a framework for orderly growth and development of capital improvements on campus. It should be responsive to an institution's current and projected needs and sufficiently flexible to accommodate changes that can be expected to occur. The plan describes the optimal, desired development of available land, consistent with the approved mission statement of the institution. A serious environmental commitment to the concept of reducing greenhouse gas emissions and combating climate change in development and operations should be a premise and ongoing theme throughout the plan.

Sometimes the plan is expressed in terms of future improvement of undeveloped or to-be-redeveloped property, as in the case of UMBC's 1960s plan that still guides the campus today. Most often, however, plans are used to help tie a variety of existing buildings and building sites together into a reasonable, cohesive whole, and then plot a logical course for future development. This is best illustrated in the plans for the urban campuses of UMB and UB, though ongoing planning of most other Maryland institutions reflects this approach as well.

Regardless of its purpose or scope, the FMP is a working document that will require consistent evaluation and periodic updates. Furthermore, though the goals of the plan should have temporal components to encourage their achievement, the plan is not tied to a commitment to a specific timetable for the funding or completion of projects. That occurs as part of the capital budgeting process.

Planning Process and Components

An FMP includes information about the institution's role and mission and how these relate to facilities requirements. This involves an analysis of space and program needs to implement the approved mission; a description of existing land and facilities, including a description of the possible new or revised use of existing land and facilities; projections of needs over the next 10 to 20 years; and assumptions and criteria to meet identified needs. An FMP should be consistent with the mission of the institution as has been approved by the Board of Regents and consistent with the State Plan for Higher Ed.

The format and components of the FMP vary by institution, due to the unique nature of mission, physical condition, natural environment, community setting, etc. In general, however, all master plans follow a similar framework (see page 4 for more detail):

- Statement of the institution's role and mission

- Assessment and analysis of existing land, facilities, space utilization, energy use and operations, including an emissions inventory

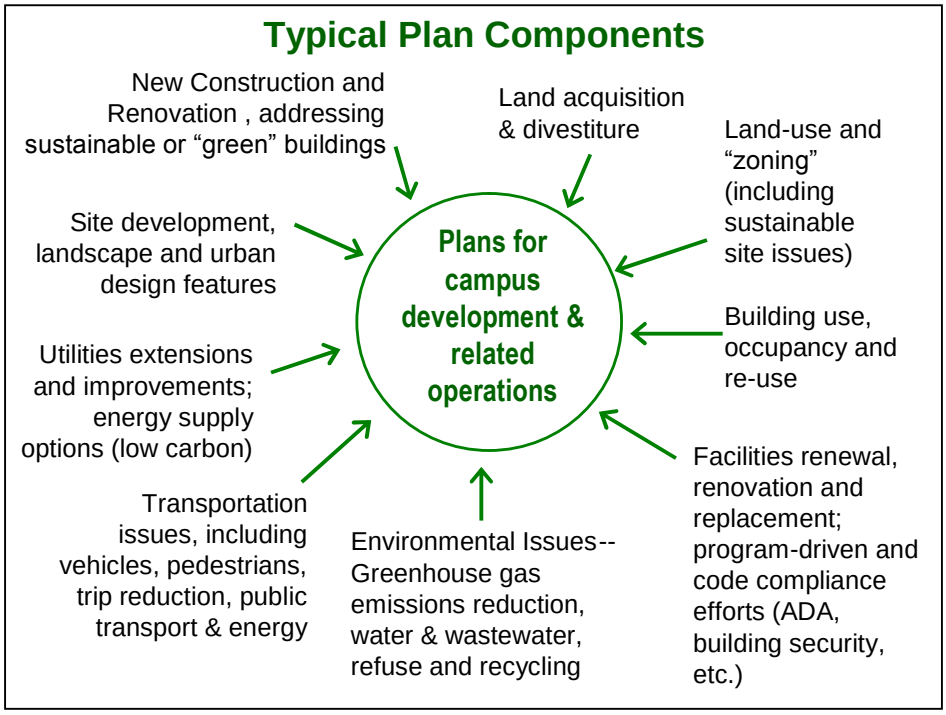
- Planning assumptions and guidelines for development based on

  - Comprehensive program of stakeholder participation;
  - Goals and objectives expressed by these stakeholders; and
  - A commitment to address the long-range challenge of climate change

- Specific plans in major component areas ***(see diagram, below)***

- An implementation strategy, including:

  - A summary of individual projects
  - Recommended sequencing of projects <u>without</u> specific time constraints
  - Emissions reduction measures and carbon offset options
  - A method and schedule for updating and improving the plan

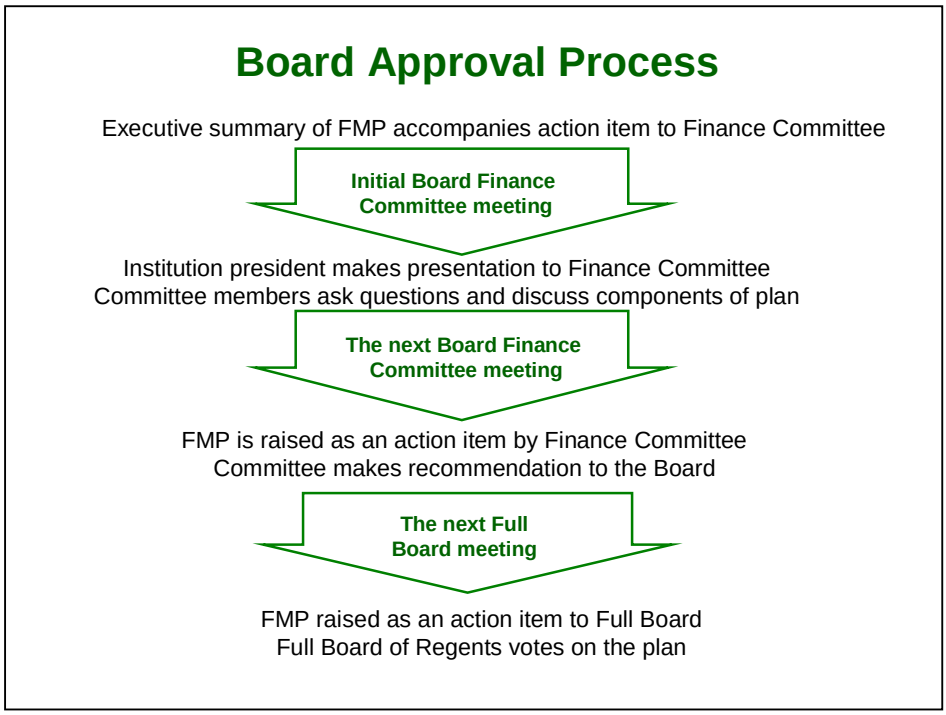


The Approval Process

The State requires an FMP as part of its capital budgeting and facilities program approval processes. In order for a project to be approved in the State's capital budget, for instance, it must be part of an approved master plan. The State does not approve master plans at USM institutions, as that is the role of the Board of Regents. The Department of Budget & Management does, however, review and comment on the plans.

Each FMP is reviewed by the Chancellor and USM Office staff for consistency with the requirements for facilities master plans, and with the System-wide goals and objectives established by the Board of Regents. An Executive Summary of the FMP is then submitted to the Board for their consideration and approval ***(see diagram, below).*** Once approved, copies are submitted to State agencies for their reference and records.

The newly constituted Maryland Green Buildings Council will help establish Statewide standards for sustainable construction. What role they will play in the approval of FMPs or individual projects (if any) is yet undetermined.



Implementation and Updating of the FMP

The Facilities Master Plan represents a comprehensive, strategic approach for implementing the University's future capital program and is used to direct the development of facilities and inform campus operations. The plan and process may be modified as necessitated by the actual conditions of each project as they are programmed for funding. Furthermore, approval of the plan by the Regents does not imply approval of capital funding nor commit the Board to a particular funding stream or timetable. These items will be reviewed through the capital and operating budget processes.

Board policy requires that the FMP be evaluated and updated on a periodic basis, including when substantial changes to the institution's mission statement have taken place, or at least every five years. The commitment of the individual institution and the USM to address in both facilities development and operations the challenge of global climate change is both fundamental and unending.

Climate Change-Related Component Suggestions

While the System doesn't provide a checklist of Climate-related components, the following are examples tied to USGBC/LEED requirements and the ACUPCC implementation guide. A commitment to Climate Change Mitigation can be physically accommodated within the plan, even if the specific requirements of the commitment may not yet have been formally adopted by the institution. Here are some ideas:

Introduction
- Definition of and commitment to "GHG Reduction" and "Sustainable Building"

Campus Development
- Zoning of uses to encourage pedestrian activity and minimize vehicle activity
- Building placement and orientation to maximize LEED point opportunities
- Effective use of materials and massing to minimize physical footprint of buildings and reduce impervious surfaces, mitigate the urban "heat island" effect, etc.
- Liberal plantings and forest replacement (emphasize natural materials, native plants)
- Clustering of similar functions and providing remote areas for solar and wind power generating equipment, biomass energy production, composting, waste management, recycling facilities, etc. (Note community concerns as well.)
- Providing facilities for alternative transportation (e.g., mass transit stops, bicycle racks, rail beds and crossings, bridges over busy highways, etc.)
- Providing facilities for refueling of vehicles operating on alternative or mixed fuels

Buildings and Facilities
- Specific mention of LEED goals and what that means for new buildings and the retrofit of existing buildings (see USGBC publications for more details)
- Materials (e.g., certified recycled/recyclable, locally produced, low emitting, etc.) and mechanical/electrical equipment standards (e.g., Energy Star)
- Roof configuration to accommodate solar panels (present or future)
- Provide more on-campus housing and amenities for students and (perhaps) faculty and staff to minimize commuting and off-campus trips during the day
- Provisions for controlling runoff and sediment
- Landscaping that minimizes use of water and fertilizers

Utilities and Infrastructure
- Energy conservation standards
- Clustering of facilities (and "SCUBs") to minimize loss of energy during long runs
- Accommodations for mixed and alternative energy sources (present or future)
- Electronic backbone to support distance ed. and teleworking

Conclusion
- Statement suggesting a carbon audit and mitigation plan (if not already underway)