Chapter 2, College Master Planning

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Chapter 2, College Master Planning

Note: Since 1972, the California Code of Regulations, Title 5, Sections 55402, 55403 and 55404, have required that community college districts maintain educational Master Plans for each college in a district and for the district as a whole. The regulations do not stipulate the methods college staff would use to create Master Plans or the ultimate contents of educational Master Plans as they relate to facilities. Experts in the field of community college facility planning have seen the need to relate educational Master Plans with facility needs and, in an effort to assist others with their own planning, have created the following chapter. The chapter presented below is advisory only and does not present required techniques for developing Master Plans or elements that must be contained in every Master Plan.

2.1 MASTER PLANNING ELEMENTS

The college 'Master Plan' is defined as a comprehensive planning document encompassing all functions of the college or district. Given the complexities of most communities, the master planning process is not a step-by-step, linear process but a dynamic process consisting of a mixture of methods. Information and ideas are exchanged at every level, combined and recombined, until a particular approach emerges as a good choice. That approach is developed, often leading to new ideas and combinations, until a feasible plan is constructed and accepted. The plan must be idealistic enough to inspire improvement and change and realistic enough to be implemented successfully over time. This chapter is intended to serve an “interim guideline” for the development of the college Master Plan.

Several districts that are experienced in master planning indicated that Master Plans should have the following elements in common:

1. Statement of purpose.
2. Description of the community and regional context.
3. Analysis of community and regional needs.
5. Description of the educational philosophy of the college.
6. Brief description of the scope and emphasis of existing educational programs and related services in relationship to the college's purpose and philosophy.
7. Identification of the needs of educational programs, student services, other services and activities, justified in terms of the previous information.
8. Formulation of long term educational goals and short term objectives to meet these goals.
9. Analysis of resources, available and needed, to implement these objectives.
10. Implementation plan including tasks, timelines, and accountability mechanisms.
11. Preparation of a campus design.
12. Identification of facility projects relative to the above steps.
13. Formulation of an implementation and funding plan, subject to periodic evaluation and revision.

Typically, colleges combine their most intensive evaluation and planning efforts with the preparation for accreditation self-studies and in response to the recommendations of accreditation teams. Capital outlay plans and proposals that are responding to the self study and to the recommendations of accreditation teams should be emphasized when seeking state funding.

2.2 MANAGING THE MASTER PLANNING PROCESS

Most colleges, or districts, have an 'institutional planning committee' that represents each major college constituency, e.g. administration, faculty, student services, students, facilities, finance, and human resources. This committee is normally responsible for developing a statement of educational philosophy and college priorities to the satisfaction of all the constituencies. Moreover, educational planning is carried out in a working relationship with the Academic Senate, the curriculum committee, and/ or a committee established specifically to address such issues, while the institutional planning committee focuses more upon the communal and regional issues and the implications of the educational planning for the overall development of the college.

In addition -- or as a part of the institutional planning committee -- most colleges find it essential to create or to maintain a 'community liaison committee' to assist them in the planning process on a periodic or on-going basis. Such a committee typically has representatives from education, business, government, and service organizations to the extent that their participation is relevant.

Colleges which have been most successful in achieving Master Plans that best meet the foreseeable needs of their communities, are agreeable to all constituents, provide an effective basis for gaining the necessary resources, and are achieved by a process that does not put undue strain on the colleges resources have found certain elements to be essential to the process.
In particular, colleges which have developed effective Master Plans have found it essential to be clear about the desired outcome and to have that outcome be one that has immediate appeal to all of those whose cooperation will be needed. Where the process is coupled with accreditation self-studies, they make sure that the requirements of the accrediting commission, of the district, and of the State are each accounted for adequately. Where consultants are used, they select a team that understands and respects the culture and concepts of higher education, can work effectively with its many constituencies, and relate these to sound concepts in fiscal management and capital outlay planning. Again, it should be emphasized that the team include faculty representatives.

However the process is carried out, it is essential that the roles of the various staff and units to be involved are clear and that the shared governance provisions of the district are fully honored, especially as these relate to the reliance upon faculty for educational direction of the college. It is this inclusive process that must be relied upon to assure that each of the following steps reflects the careful research and best thinking of the entire college and the various interests of its community:

1. Coordination of the work of institutional planning, accreditation, curriculum committee, academic senate and other college wide groups; divisions, and departments; and existing or ad-hoc industry and community advisory committees, representatives or members.

2. Analysis of college and community fiscal, demographic, economic, social, and academic projections, opinion surveys and other sources of information regarding the needs, concerns and priorities of the various constituencies.

3. Integration of local needs and plans with those of the region and the state, including especially those of other segments of public education.

4. Development of a draft Master Plan including statement of mission, goals, educational plans and plans for related services and facilities.

5. Concurrence on the final version of the College Master Plan, from all constituencies and adoption by the Board of Trustees.

To assure that the time of the many people who will be involved in this complex process is well used and that the process moves forward in a timely fashion with a minimum of conflicts and frustration it is essential that the leadership of the process is clearly defined and provided with the authority, staff, and resources necessary to effectively carry out the following tasks:
1. Setup (tasks, budget, schedule) and monitor the process.
2. Gather and analyze information.
3. Select, monitor and coordinate the work with any consultants used.
4. Coordinate meetings and assure that critical decisions are made explicitly and in a timely fashion.
5. Prepare documents as needed.
6. Coordinate documents through the review and sign-off of all concerned parties.
7. Prepare progress reports and maintain timelines.

The outcome of the master planning will vary depending on the college. Some colleges produce general, long range plans. Others produce detailed plans with both long and short term objectives. Some colleges produce a series of related but separate plans for each sector of the college; others pull all of the parts together into one document. In any case, a Master Plan adequate to direct and justify the investment by the State and the college of human and material resources, and, in particular, the expenditure of funds on capital outlay projects, must include at least the following three components, among others:

1. An educational plan that (a) adequately explains the college's overall purpose, community context, educational philosophy, alternative delivery systems, curriculum and educational programs and related support, student service, administrative, and categorical programs (such as EOPS, DSPS and matriculation) and (b) describes and justifies the intended future of the college; and (c) identifies needs and makes a convincing case for new resources to meet these needs.

2. A facilities plan that evaluates existing land, infrastructure, facilities and systems in relationship to the colleges purposes, plans, and needs, specifying the capital outlay projects necessary to meet these needs.

3. A resource plan showing how the human, financial, and material resources will be provided to implement the objectives in the educational and facilities plans.

Well conceived and well-justified capital outlay projects are but one outcome of a sound college master planning process, but they are among its greatest beneficiaries. Only where a proposed capital outlay project fits within the overall context of a college's Master Plan, can it hope to be funded in the current fiscal climate. Only with a strong Master Plan, can the Chancellor's Office justify to the Board of Governors, the Department of Finance, the Governor's Office, and the Legislature, the State funding necessary even to develop the plans for any particular project, much less invest in the full implementation of those projects.
2.3 COMPONENTS OF MASTER PLANS

Statement of Purpose

The college's interpretation of its basic purpose sets the parameters for master planning. The purpose must fall within the State and California Community Colleges parameters and any regional agreements with other districts, California State University (CSU), and University of California (UC). The statement of purpose should define the basic service, the service area, and the population to be served.

The purpose may be interpreted broadly or narrowly. It may be perceived as whatever the community needs or what the college can best provide. However it is interpreted, the purpose is the underlying reason for capital outlay projects and should be stated in the Master Plan and restated in the Five-Year Construction Plan and the Final Project Proposals.

Describe the Community and Regional Context

The description of community context is the key to a Final Project Proposal. Local district and State funds are provided to higher education for the basic purpose of making the people of California the most highly skilled, well-educated population in the world. Education is considered the key to California's economic stability and success.

One of the best arguments in favor of a facility project is that it provides the means to accommodate a program that is a priority need outlay as identified by a significant or particularly under served portion of the population, increases or maintains economic opportunity in the area, supports the regional cooperation of the other segments of public education, or realizes the most efficient use of resources already invested in and unique to the area. The description of the community context in the Master Plan sets the stage for this argument.

The community context is described by contrasting the history of the community with current circumstances in the community and with its likely future, based upon current trends and projections, especially those shaping the environment ten years ahead when the building will come "on-line." Currently unmet needs and emerging circumstances dictate the types of education that the college must be prepared to provide. The extent to which these emerging circumstances vary from existing and past circumstances dictates the need for changes and additions in programs and facilities.
Characterizations of future circumstances must prove a basis for determining whether
the unmet educational needs that generate the demand for new or remodeled facilities
will continue, diminish, or increase. State funded capital outlay projects typically take
five to eight years to plan, budget, receive funding and complete, and once completed,
remain to be used--and maintained--for fifty to a hundred years or more. There should
be reasonable certainty that the project will still be needed when it is finished and well
into the expected life of the building.

The description of community context sets the stage by generally establishing that:

1. There is a need for a new type of program that requires new facilities.
2. The enrollment in a program(s) and service(s) has grown or will grow beyond the
capacity of the existing facilities.
3. The current facilities have been or will become physically or programmatically
   inadequate.

   and

4. The driving need for the project can be expected to continue well into the future.
   or

5. The project can support other significant needs should the driving need diminish.

A concise but convincing statement of the community context and needs should be
written into the Master Plan, the Five-Year Construction Plan, and each Final Project
Proposal as the following examples illustrate:

---"Our college began forty years ago as a suburban campus for young, transfer students from the local area,
but is now in the center of new urban development center with a large commuter population in need of
developmental and computer skills for business."

---"Our college has a history as a job training center for disadvantaged populations and is now providing
support for several immigrant populations and a burgeoning sector of entrepreneurs."

----"Our college has traditionally focused on preparing students for certain regional defense industries. Now
with those industries gone, the region is in considerable flux and our students need extensive training in
platform skills for transitioning into a variety of jobs."

---"Our college is well established as the main transfer institution in this region, with strong ties to its
nearby UC and CSU colleges, and a long-standing reputation for providing exceptionally well-prepared
students in the sciences and performing arts. For us to continue to assure the currency of our students in
these disciplines, we are substantially redesigning our core courses in both of these curricular areas with
plans to upgrade our facilities wherever necessary to support the update."
Analyze Community and Regional Needs

Wherever possible, the description of community context should be backed up by data and analysis. Factors to be considered are:

1. Demographics.
   A. Census, Chancellor's Office, county, city or other population studies.
   B. Population breakdown by age, gender, race/ethnicity, education, vocation, culture, etc.

2. Economic and job market forecast.
   A. Employment statistics.
   B. Status of major employers in the region.
   C. Job market trends.

3. Community educational issues.
   A. Educational level and learning proficiencies in the population.
   B. Multi-lingual and cultural issues.
   C. Needs of transfer students.
   D. Educational access for disadvantaged populations.
   E. Educational direct and indirect costs.
   F. Societal educational need e.g. drugs, health, mediation, environment.
   G. Political educational need e.g. common language, citizen rights, voting.

4. Educational programs in the community.
   A. Programs that work with particular segments of the community.
   B. Benefits from pilot and non-profit programs.
      1. Other colleges, private, CSU, and UC.
      2. High school and adult education.

5. Area community plans.
   A. Community development plans.
   B. Planning and zoning.
   C. Sustainable public economics and services.
   D. Capacity of local environment and resources.

   A. Chancellor's Office projections and caps.
   B. Current enrollment patterns.
Discuss and Analyze Future Trends and Developments

Discussion, brainstorming or other techniques can be used to discover what types of programs and delivery methods have potential to provide for the educational needs of the community, business, and industry. What kinds of traditional and alternative approaches will improve facilities utilization and access, enrollment, program scope and quality, delivery, learning matriculation, transfer, and employment? Which ones are within the purpose of the college? Which one(s) does the college choose to pursue?

Describe the Educational Mission of the College

The educational approach is the college’s interpretation of its purpose and role in meeting the community’s need for education. The fundamental purpose might be to "develop core competence applicable to future employment," "impart knowledge as a base for further education," "develop natural talent to benefit society," or "assist every student in reaching their full potential."

The purpose and context come together into a basic approach for providing education to the community. This approach drives the need for programs and facilities. For example:

---"Our college is focusing on employment for disadvantaged students using realistic job settings both on campus and in partnership with local business. Our classrooms are located around the community at work study sites with video links to the instructors on campus."

---"Our college believes that students can best achieve their potential through mentored individual study programs supported by access to extensive video libraries. We use a lot of small conference rooms for mentored study teams in conjunction with state-of-the-art video production capability."

---"Our college emphasizes platforms skills such as problem solving, communication, and collaboration in an open experiential setting. Our rooms are flexible, combining labs with lecture and study areas, open round the clock."

---"Our college is geared to respond quickly to the changing needs of the community. We use a lot of rough, open space with extensive, mobile equipment so instructors can be creative. We provide our more basic courses over the local cable TV channel with study groups and testing on campus."

---"We will be phasing out some of our classroom programs over the next ten years in preparation for today’s baby boomers, gradually converting 40% of our programs to a more experiential, multi-media approach and 20% to self-guided study with mentors. These goals will be modified each year in response to current trends and resource availability."

---"We are committed to the development of an open, learning community over the next 20 years. Our basic, knowledge based classes, (about 30% of the program), will be converted to video and available over pay cable. Our advanced, analytical classes, (20%), will be smaller, more collaborative, working on-site and at select community sites. These courses will be supported by 24 hour drop-in, supervised labs. Fifty percent of our program will remain more traditional, relying on student-teacher contact and expertise."
Identify the Needs of Educational Programs and Student Support Systems

Although the evaluation of programs is beyond the scope of this Handbook, the identification of the needs of educational programs, student services, and other activities drives facility decisions and must include the information to make those decisions. At a minimum, the identification of the needs of programs, services, and other activities should include:

1. A list of current educational programs (that is, degree, certificate and transfer programs), student services and other activities (library, etc.).
2. The expected life span of each educational program and student service/instructional support activity.
3. The current and projected enrollment (FTES), faculty (FTEF), and staff by educational program.
4. The learning goal created by each program.
5. The learning environment needed for that experience.
6. All space, equipment, or systems required for each program and other activity.
7. The student services programs.

The list of programs and other activities should include all functions both on and off campus. Every function that uses space, equipment, or systems should be on the list -- food service, library, distance learning programs, facilities maintenance, etc. The programs and activities should be described quantitatively in terms of their current and projected life span, weekly student contact hours (WSCH), full time employee, location, and hours of operation.

Some method should be established for quickly describing the learning experience. For example:

1. Classroom instruction by faculty.
2. Laboratory instruction by faculty.
3. Collaboration in student groups.
5. Community experience.
6. Accessing information.
7. Individual contact between students and mentors.
8. Exercises for individual development (tutoring, etc.).
9. Participation in campus lifestyle and activities.
10. Personalized service sought by individual.
Some method should be established for quickly describing the learning environment. For example:

1. A type of room (e.g. lecture, laboratory, seminar, office) with certain characteristics (e.g. small, large, quiet, impervious to messes, lots of electronic hookups), and certain equipment (e.g. Bunsen burners, computers, tools, etc.).
2. A type of information (e.g. books, tapes, videos, broadcast, networks, etc.).
3. Access to an electronic interaction telecommunication system (e.g. interactive video, student network, virtual reality).
4. Outdoor space (e.g. athletic fields, gardens, amphitheater).
5. Access to a community setting (e.g. field trip, work, service, study abroad).
6. Access to equipment for use at home or several campus locations.
7. Access to an open, hands-on museum or workshop.
8. Performance space.
9. Or some combination.

If the information is known, then specific requirements can be included such as: a classroom for fifty students, a type of computer and network, a special type of equipment, etc.

**Formulate Long-Term Goals**

The time frame for the Master Plan should be as long term as possible. State funded capital outlay projects normally take five to eight years to complete, longer if funding is not readily available. Phased infrastructure and systems projects may have to be implemented over ten or fifteen years. The facilities and systems themselves need to be relevant over their life span, perhaps fifty years or longer. The more far sighted the Master Plan, the greater value it will have to the institution.

Long-term goals allow more time for fund-raising campaigns and developing financing and support for large capital outlay projects that do not qualify for State funding.

A farsighted approach is also helpful in applying for State capital outlay funds. A consistent approach over a period of years, gradually improving the campus, has a lot of credibility. Credibility remains high even if circumstances change and the approach must be modified, so long as the modifications make sense within the larger context.

**Define Short-Term Objectives**

The inclusion of shorter term strategic objectives helps define and support capital projects. For example:

--- "The campus needs grounds, pathways, and lighting improvements to increase night enrollments by 20% over the next two years and better utilize existing facilities."
---"Our rural campus has aged and lost its appeal for our increasing suburban population. Landscaping, lighting and parking are needed to attract and accommodate an increase of 5000 students by 1999."

---"To insure that our students can compete in a highly technological job market, we are instituting a five year plan to upgrade all our equipment and telecommunications."

---"Science enrollment is expected to increase by 50% over the next 8 years, requiring retrofit of the horticultural building by 1999 and an addition of 20% to the science capacity by 2003."

---"With advancing technology and limited resources, the district is instituting systems to serve students with a variety of new accessible computer equipment and telecommunications."

**Analyze Resources**

From the point of view of capital outlay projects, the evaluation of resources includes:

1. Forecasting feasible local, district and state funding sources for capital outlay projects.
2. Setting appropriation amounts and schedules for the projects.
3. Projecting future staff and operations costs for building projects.
4. Determining downstream operations or capital outlay savings for cost efficiency projects.

**Develop the Implementation Plan**

The timetables and accountabilities associated with the Master Plan may be part of an administrative plan for implementation of the Master Plan. It is important that an administrator be responsible for follow through with specific dates for reports or accomplishments. This is particularly important for capital outlay projects which must be started many years before they are completed and become available for classes.

**Identify Facilities Needs**

Campus facilities must function well to enable and/ or support the educational programs. They are also capital assets representing years of growth and investment. As such, they need to be properly maintained and upgraded over time. The facilities evaluation analyzes the 1) capacity, 2) condition, 3) adequacy, and 4) cost efficiency of existing assets and sets forth objectives for keeping them functioning at an optimum level over the next few years.
Chapter 2 Facilities Planning Manual

Capacity

'Capacity' is a term used to express the amount of enrollment that can be accommodated by an amount of space. After an initial land purchase is made and the core buildings completed, additional capital outlay funds are provided primarily because of growth. Historically, this has been the reason for most of the capital outlay projects in the Community Colleges -- growth of student enrollment exceeding the capacity of the buildings or the campus, requiring new buildings and campuses.

In 1955, California adopted space standards for higher education based upon facility space capacity allocations in existence at that time and these remain the official standards for establishing the need for capital outlay projects on a given campus where needs are driven primarily by increased enrollment. The space standards are set forth in the California Code of Regulations, Title 5 Sections 57020 through 57033.

A complex system developed out of a desire to fairly distribute state funding where it was most needed. Enrollment is divided by programs and translated into 'weekly student contact hours' (WSCH) -- the average number of hours of student instruction conducted in a week in a primary term of an academic year. Space is defined in terms of 'assignable square feet' (ASF). It is inventoried by room and categorized according to a taxonomy of programs. Capacity is then defined by these space standards -- a number of ASF per 100 WSCH. For example, 235 ASF of biology laboratory space is allotted for every 100 WSCH of biology laboratory enrollment. If the campus has less space available than the allotment for every 100 WSCH for each TOP code of space, a capital outlay project may be justified.

The WSCH and ASF are analyzed by program and against standards set for each of the major categories of space (classroom, laboratory, office, library, and audio visual/ television) to determine whether there is an overall need for space or only a programmatic need for a particular usage of space that might be satisfied by converting some existing space to a different use.

Whether this system actually does a good job of determining when a program or campus is over capacity is debatable. It has a number of problems: cumbersome lists, categorization, and calculations; categories that don't cover some situations; and standards that are not always realistic.
The fundamental problem is that the current capital outlay needs assessment procedures were designed for a very different era, one in which resources were available to fund most educationally defensible projects. These procedures were not designed to address the many issues raised by a very different era, one with severe constraints on funding. In this new era, critical capital outlay projects are necessarily put in competition with other equally deserving projects, yet existing review procedures provide no basis for deciding among them and present review procedures require too little explanation of educational program considerations to determine significant, priority need for capital improvements.

Capacity shortage has been the primary issue for K-12 schools since the post-war baby boom and primary issue for higher education since the California Master Plan was initiated in 1960 to accommodate those same baby boomers. And today, even as other factors gain in importance, sheer capacity need continues to be a major issue, with a continuing birthrate of about 600,000 babies per year, an influx of about 200,000 immigrants per year, and ever increasing demands for education as adult learners are forced by continuous technological changes to repeatedly return to college.

But now, there are other factors driving the need for facility improvements: 'condition' and 'adequacy.' And, the definition of 'capital outlay expansion' is expanding to encompass new forms of educational delivery systems beyond those currently identified (classroom, laboratory, office library, and audio visual/ television).

The timing for introduction of these issues and the addition of new forms of facilities is particularly troublesome, as they are occurring just when there is also a serious reduction in the funds available to make all of these facility improvements. And this lack of funds has itself given rise to yet another driver: 'cost efficiency.' In some circumstances, it may be cost efficient to pay the costs of a one-time facility improvement in exchange for an ongoing reduction in operation budget or a reduction in financial risk.

**Condition**

The condition of existing facilities has become important because some campuses and buildings are aging and have reached the end of their useful life span. With capital outlay funds needed for demolition, new utility systems, and building replacement of reconstruction given the tight funding situation, the need for demolition, reconstruction and utility replacement funding continues to grow.

Demands from aging have been compounded by changes in facilities codes and regulations. When many utility systems, roads, and buildings were built, they were considered static, as buildings had been for decades. The magnitude of regulations that have intervened (asbestos, PCBs, seismic retrofit, handicap access, and more), requiring
constant reconstruction and in many cases shortening the effective life span of a facility, is staggering. Demands go beyond the capability of operations and maintenance departments and require phased capital outlay improvement projects.

A similar problem has occurred with deferred maintenance. Backlogs in this area have become so great that capital outlay projects are sometimes required simply to bring a facility back into usefulness.

Adequacy

In the past, what was considered educationally adequate was sufficiently straightforward and static that it could be addressed by formalized standards. Forty years ago, when the initial space standards were developed, a standard classroom, lab, or workshop with basic equipment was considered sufficient. Now, as instructional delivery systems are rapidly evolving, facilities also must be designed to evolve with them, as continuously as possible, in order to permit optimum effectiveness over the long term. Designs must now be evaluated to see if they are educationally adequate for the specific learning outcomes that they are to enable, given better understanding of what kinds of experiences and facilities are essential to these outcomes.

The integration of curriculum--particularly academics and technical education--demands that facilities be designed for ever greater flexibility. Increasing use of collaborative learning across the entire curriculum calls for more flexible facilities and "lab-like" settings. Increasing reliance upon real world settings for occupational preparation requires more distributed delivery systems at disparate sites. And, as has been the experience of most of us, with the expansion to virtually every discipline of critical new uses for computers and telecommunications has made adequate provision for electronic systems a fundamental consideration in all new and remodeled facilities. In short, facilities must evolve right along with the curriculum and instructional methods and student services delivery and modalities and services.

Thus space allowance is not the only consideration; the effectiveness of educational and service delivery methods and learning environments must also be factored in. As programs and course curricula are increasingly developed around more varied and more appropriate learning experiences, facilities must be able to support these experiences. If the facility cannot, it is inadequate, and either the facility must be changed, or the program must be abandoned in favor of one that can be taught effectively by contemporary standards, in the facility as it is—or else the program must be left to die off gradually as it falls ever further behind its competitors.
The magnitude and urgency of these educational changes both with regard to electronic "high tech" delivery systems and to collaborative, "high touch instructor/student" systems is creating the need for an updated approach to defining the needs and standards for the design and construction of facility projects.

**Cost Efficiency**

With a broader definition of capital outlay, new possibilities arise with regard to cost efficiencies. It may be appropriate to provide the funds for a one-time capital outlay project, if there is an ongoing reduction in operations cost or financial risk. It also may be appropriate to provide funds for installation of an electronic delivery system in lieu of building construction.

The most obvious example of cost efficient projects are energy conservation projects. Improving lighting, fans, and controls, or refitting the central plant for thermal storage or cogeneration can reduce utility costs to produce a 'payback' of the project cost in a few years. For every year of operation after the payback of the up-front construction costs, there is a clear reduction in annual operating cost.

This same reasoning might be applied to a project which provides a video production studio for distance learning at home in lieu of incurring the continuing costs of on-campus facilities, staff, and operations; or a campus security project in lieu of increased insurance and liability.

The addition of 'cost efficiency' as a category of need to capacity, condition, and adequacy allows for greater innovation to cope with the reduction in both operations and capital outlay funding and to more effectively make use of public funds overall. However, cost efficiency must be applied to a technology with demonstrated cost savings.

**Source Information for Evaluation of Facility Needs**

The base document for the analysis of facility needs is the Space Inventory. The inventory lists the building, its construction type, year constructed, gross square footage, condition, and ownership. The rooms in the building are then listed by number in terms of program, use, assignable square feet, and number of stations. The condition of the building is described in terms of conformance to the current building code, extent of the need for renovation, and the need for demolition or termination of the space. The need for renovation is a judgment call by the college. The Inventory process is described in detail in the Space Inventory Handbook provided by the Chancellor's Office.
The college maintenance and operations Master Plan, deferred maintenance, and energy assessment reports contain additional information used to evaluate facilities. If these documents with the space inventory provide all the necessary information then no further work is needed. Often, however, these documents are not inclusive of all the facilities on the campus.

To fully analyze the condition, capacity, and adequacy of existing capital assets, it is helpful to consider facilities as systems (not in priority order):

1. The use and health of the natural land systems, e.g. soil, drainage, and natural reserves.

2. The age, condition, and capacity of utilities, e.g. water, gas, electric, central heating and cooling, energy and water conservation, sewer, waste, telecommunications, lighting, and security.

3. The age, condition, and adequacy of the transportation systems, e.g. roads, pathways, parking, loading areas, emergency access, handicap access, construction staging, and evacuation areas.

4. The age and condition of landscaping and sprinkler systems as they relate to campus appearance, noise reduction, shade, outdoor activities, etc.

5. The effectiveness of health and safety systems, e.g. security, fire, disaster preparedness, emergency communications, hazardous materials containment and removal.

6. The need for maintenance and operations areas, e.g. workshops, storage, and service yards.

7. More detailed analysis of building conditions in relation to new safety and environmental regulations, changing climatic conditions and seismic safety.

8. Equipment repair and replacement schedules for both educational equipment and building systems equipment e.g. heating, ventilation and air conditioning (HVAC), steam, air, water, and waste.

9. The need for telecommunications and information technology systems upgrades. This includes building, local area and wide area networks.

10. The consideration of centralized, interactive service systems and office.
The capacity of existing land, buildings, equipment, and systems is determined by State space standards, by building code occupancy classification, or by common usage figures or by common sense. A more detailed discussion of capacity is included in the Five-Year Construction Plan section of this Handbook (Chapter 4).

Evaluating the adequacy of a building or space as a learning environment is difficult. Feedback is needed from faculty who use that space to determine whether a particular space is too noisy, or cold, or lacking hookups for equipment, in need of better equipment, or requiring remodeling due to changes in delivery methods or technology.

Evaluation of cost efficiency is done by reviewing the operations budget for areas where conservation might be effective and by reviewing future enrollment increases to see where other options such as an electronic educational delivery system might be substituted for a building project.

Specific factors that should be considered when evaluating facilities are (not in priority order):

1. Structural and seismic stability.
2. Changes in building code.
5. Use of hazardous materials.
6. Use of indoor volatile organic compounds.
7. Use of regulated compounds, refrigerants, etc.
8. Adequate protection of fiber optics systems and components.
9. Use of telecommunications infrastructures.
10. Increased electrical infrastructure loads.
11. Increased utility costs and fees.
12. Replacement of underground tanks.
13. Removal of hazardous substances, including asbestos.

When the evaluation of existing facilities is complete, it provides the information to determine:

1. The operations and maintenance budget including deferred maintenance and special repairs, and hazardous substances removal.
2. Methods for more efficient allocation and utilization of existing facilities.
3. Identification of the need for capital outlay improvements.
4. Definition and scope of individual capital outlay projects.
In addition, the information is useful for preparation of the Five-Year Construction Plan, the Space Inventory, deferred maintenance plans, preventive maintenance programs, insurance forms, and other reports.

**Prepare a Campus Design**

The Master Plan often includes a revised design for the campus that shows how the capital outlay objectives can be achieved. The need for a design depends on the numbers of new facilities and systems that are proposed. If a campus is going to remain physically the same, with emphasis on improving programs and equipment, a redesign is not necessary.

If there are changes in land use, roadways, open space, and buildings proposed in the Master Plan, a design is needed to see how well they might fit together into an overall plan of the campus. The design process will confirm the feasibility and cost of the improvements and help to determine the best way to proceed with capital projects.

The design begins with the preparation of a current land use plan which includes topography, active slopes, soils, drainage, vegetation, flood plains, natural reserves, environmental analysis, and existing improvements. The environmental analysis should include all the factors required by the California Environmental Quality Act.

**Campus Physical Systems**

Building massing and circulation patterns are studied to establish an overall campus build-out plan based on maximum enrollment. This is coordinated with all the campus physical systems and possible capital outlay projects:

1. Natural systems include:
   A. Land: topology, soils, seismic, drainage....
   B. Ecosystem: creeks, wetlands, wildlife, plant life....
   C. Micro-climates: wind, air quality....
   D. Examples of projects: habitat restoration, impact mitigation, erosion control, natural preserves, environmental classrooms....
2. Utilities systems (wires and pipes).
   A. Water, gas, electric.
   B. Central plant, cogeneration, heating, cooling.
   C. Energy and water conservation.
   D. Sewer, drainage, toxic waste.
   E. Telephone, TV, telecommunications.
   F. Lighting, security, warning systems.
   G. Examples of projects: cogeneration plants, electrical capacity upgrade, telecommunications infrastructure, energy conserving lighting, variable speed fans, thermal storage.

3. Transportation systems.
   A. Public access: roads, parking, bus, shuttle, light rail, bicycles, pedestrians, wheeled pedestrians, disabled ...
   B. Staff access if different....
   C. Service access: roads, parking, loading areas, garbage removal, maintenance and construction staging, ....
   D. Emergency and security access: fire roads, evacuation routes....
   E. Examples of projects: ADA improvements, signs, parking structures, storage yards.

4. Landscape systems.
   A. Campus atmosphere: greenery, entrances, plazas, sculptures....
   B. Environment: shade, noise reduction, wind breaks, way finding, lighting....
   C. Activities: signing, gathering, forums, sports, drama, sculpture, outdoor classrooms...
   D. Examples of projects: drought resistant planting, sprinkler systems, athletic fields....

5. Health and safety systems.
   A. Toxins removal: asbestos, fume hoods, drains, neutralization, storage, underground tanks....
   B. Emergency: phones, lighting, warnings....
   C. Seismic: building upgrades, warnings, evacuation areas.
   D. Fire: sprinklers, access......
   E. Security: building locking, ...........
   F. Examples of projects: seismic upgrade, tank replacement, hazardous chemicals storage building.

6. Maintenance and operation systems.
   A. Workshops, service yards, custodial rooms, rolling stock storage, vehicle access....
   B. Examples of projects: central plant upgrade, maintenance building.
7. Building systems.
   A. Lecture classrooms, labs, studios, shops, offices, support services...
   B. Examples of projects: new buildings, additions, renovations, multi-building upgrades.

8. Equipment systems.
   A. Building systems equipment, e.g. steam, water, gases, Educational equipment.
   B. Support equipment.
   C. Service equipment.

9. Telecommunication systems (Detailed telecommunication plans should be developed).
   A. Computer networks within buildings.
   B. Television, broadcast, interactive and conference studios.
   C. Examples of projects: Local area networks, wide area network connections such as microwave and satellite up and down links. (Internet, CSU/ CCC Statewide Network).

A campus design includes all the campus systems and brings them together into a series of campus plans showing all the systems. Often these become part of the published Master Plan showing future building sites and possibly footprints of future buildings with perspectives of building designs. If the plan is used for fund-raising or redevelopment considerations, the costs of the buildings and fund raising goals may also be included.

Before publishing land use plans, proposed sites and buildings, the college should check the feasibility of funding, environmental regulation, surrounding area general plan, community reaction, and any other factors that might be crucial. Any phasing should be compatible with funding priorities and schedules.

**Master Plan Environmental Impact Reports**

If a land use plan is developed as part of the master planning process, the college should do an environmental study of the plan. If the plan is for a new campus or a large undeveloped portion of an existing campus, then an environmental impact study or report may be required as part of the California Environmental Quality Act (CEQA).
Implement Methods for Periodic Evaluation and Revision

The Master Plan should be reviewed annually to determine if its goals and stated objectives should be changed. For those plans which are more visionary, there may be no changes to the written plan. Related plans might have to be revised instead. For those plans that list specific objectives with timetables, a revision will probably be required every year or two.

It is important that changes be made in the facility Master Plan and Five Year Construction Plan as circumstances change. Going ahead with a project which is no longer needed or letting needs sit without indicating their presence works against future applications for capital outlay funds. The former indicates lack of accountability and the later indicates poor planning and makes future requests seem unnecessary. The Chancellor’s Office should be updated yearly on district needs and plans for essential capital outlay projects.

Similarly, Master Plans that never change become suspect over time when there are so many changes taking place in education in California communities. Annual updates may be needed to explain why the community needs are not changing.

Annual updates will have greater credibility if they are based on some kind of empirical feedback process. For example, the college might have an annual community survey or internal evaluation. The annual Space Inventory update is part of that feedback loop for facilities. It might be supplemented by various facilities systems reviews or some other management reports.

The following reports may supplement the Master Plan on an annual basis:

1. Technology Plan.
2. Staffing Plan.
3. Program Review
5. Financing Plan.
6. Space Inventory.
7. Space Utilization Plan.
2.4  TIME FRAME FOR THE MASTER PLAN

The time frame for the comprehensive Master Plan depends upon how the plan is conceived. Where the Master Plan is visionary it will cover a long time frame, at a very general level, setting a broad context for a series of more specific plans that are regularly updated. In this case, the working documents are the Space Inventory, Deferred Maintenance Plan, Five-Year Construction Plan, and Energy Assessment Plan.

In many ways, the Master Plan is more useful as a long range umbrella document because it can be more visionary and flexible, guiding fifteen or more years of development. From a facilities perspective, keeping in mind that buildings take upwards of ten years to plan, budget, and build, and building life spans are 50 years or longer, master planning tends to be more long-range in nature. If the Master Plan is done as a long term document, it must reference other documents that provide the shorter term objectives that insure implementation.

On the other hand, where the Master Plan itself is the working document for the entire campus, it may address a shorter time frame, be more detailed, and itself need to be updated more frequently.

Coordination with Statewide and Regional Master Plans

There is a growing recognition that regional planning is a necessary component in increasing efficiency, reducing costs and facilitating student progress, especially between segments and in relationship to employer needs. The impetus for regionalization is nowhere more evident than in the expectation that colleges and schools in a given region, in all segments, will share facilities as fully as possible, and will coordinate with each other in planning for the upgrading of existing and construction of new facilities, especially those that involve investment in specialized and expensive equipment, and even more particularly any planning for electronic media and telecommunications. If these kinds of projects are presented for funding without regional planning, the project may be delayed while the project is coordinated with the projects of other districts.

Typical projects that fall into this category are:

1. Radio and television production and broadcasting.
2. Extensive multi-media computer and learning resource centers.
3. Projects in support of specialized regional programs.
4. Projects for development of new centers or colleges.
Since funding is limited, these kinds of projects should not be duplicated within a region or area. The plan must indicate the best location for the project and explain any agreements for joint use by community college districts or other education entities in the region.

Moreover, the regional plan should explain the project's position in the higher education community, any telecommunication network linkages, distance education agreements, or other factors relevant to a regional approach.

Statewide approaches to high technology educational and service delivery methods are currently under intensive study. When these studies are complete, any resulting policies regarding capital outlay improvements will be included in this Handbook.

More generally it may be said that to the extent that any project can be shown to be a cost-efficient solution to significant need within several districts, the more likely it is to become part of a statewide plan.

2.5 SUGGESTED METHODS OF MASTER PLANNING

The methods presented here can be used for either new Master Plans or for the revisions to existing Master Plans. When a Master Plan is revised, the intent of the previous Master Plan should be carried forward to present a consistent picture of the college's goals and objectives. If there are changes from that intent, the previous intent and the reasons for the changes should be explained to establish a new level of consistency. If there is no previous plan, the new plan should describe the history of the college and the general intent of past activities and events, in such a way as to give a consistent picture of college development.

It is the compelling sense of mission and the coherence of the plans put forward in support of this mission that remains in a reviewer's mind when deciding the merits of a particular capital project. The Master Plan paints this picture by being cohesive -- with all program and facilities goals and objectives leading back to clear intentions -- and these intentions thoughtfully developed out of the college purpose and community context.

Successful master planning really depends on the college's commitment to a process which engages in a deep, honest self-evaluation; hard analysis and observation of community need; open-ended brainstorming of possibilities; the making of clear choices; reflected in specific goals and objectives; and realistic plans for implementation.
Two methods for master planning are described in this Handbook. Both are presented with emphasis on those components that influence the definition and justification of capital projects. The other components of a Master Plan are critical and necessary to the college, but they are beyond the scope of this Handbook.

For convenience, the methods are entitled "Master Planning Method A" and "Master Planning Method B" and are laid out in a step-by-step thought progression. The differences between Master Planning Method A and B are primarily ones of starting points, assumptions, emphasis and sequence rather than content. Master planning Method A emphasizes the college -- its purpose, capabilities, and resources--and is organized around its structures, i.e. the units of organization. Facilities and related support systems are viewed as physical support for the educational program. Method A may be easier to understand and to plan. It takes more for granted and raises fewer questions.

While the choice of method primarily reflects the college's 'culture' and the style of leadership, Method A may be the more likely approach of the college that is well-established, with a distinctive history and reputation to maintain, a regional and communal role it can afford to take for granted, a community that is relatively stable, and for whom there is thus no immediate impetus for deeper soul-searching, nor need to expend the additional resources of time and creativity that Master Planning Method B can demand. It is especially appropriate if a college has previously engaged in an in-depth educational planning process and is now updating that plan based upon current program review data, more recent trends, newer state or regional guidelines, or the need specifically for new capital outlay projects.

In Master Planning Method B, facilities and related student support systems are viewed as educational delivery system and the current mission and structure of the college is taken less for granted. Method B emphasizes the community -- its current strengths and needs. It may place less stock in the historic relationship of the college to the community, and more in the potential of the college to serve in new and unprecedented ways, for populations or needs not previously associated with the colleges operations. Such an approach is especially appropriate to the rural or urban college whose role, or potential, as the center of inspiration and development in the community will be far greater than in other settings. For the college whose community changing rapidly or suffering greatly, the need to look deeper at how they might serve looms paramount. Similarly for the college that has lost its way, gone stale, is no longer animated by its old sense of mission, Method B may prove the preferable method.

As long as the method used by a college is consistent with principles of shared governance and fiscal responsibility and results in an educationally defensible plan that fully justifies the capital outlays requested, no particular planning method is required by the Chancellor's Office. The two methods presented are generic; neither reflects the...
many phases of planning in which any college will in fact engage, nor are they exhaustive of the possibilities. They are included here merely to give a sense of how differently effective processes can be designed and to illustrate the ways the process itself can influence the results, particularly with regard to capital outlay improvements.

Both methods have their advantages and disadvantages, and colleges often combine them in an effort to address the concerns of their various constituencies. The success of any method is dependent on broad, multi-level participation at the college -- from the top down and from the bottom up. The more open the process, the more possibilities will be explored and the greater will be the opportunity to achieve an innovative, responsive and balanced plan that all stakeholders strongly support.

Many of the steps listed in both methods already occur as part of the accreditation process and the existing procedures for curriculum and program review, Technology and Telecommunications Plan, Space Inventory Report, Five-Year Construction Plans, deferred maintenance planning, and energy assessment planning. The Master Plan process should be the means by which all of these processes are brought together into an integrated whole to yield a coherent and persuasive plan for the entire college.

2.6 MASTER PLANNING METHOD A

Master Planning A is more conventional and has the advantage of being well understood. The educational plan precedes and drives the facilities plan. The resulting facilities plan can be easily used to identify capital outlay projects and produce the Five-Year Construction Plan.

The word "program" is used broadly here to include basic skills, student services, and all other college activities.

The steps in master planning method A are:

1. Developing the Educational Plan.
   A. Alignment with state, California Community Colleges, and regional educational policy and objectives.
   B. Definition of the college educational philosophy and mission.
   C. Analysis of the current program scope and quality in relation to the mission.
   D. Discussion of ways to improve programs e.g. program review, program delivery.
E. Survey community and college needs and demands for current and proposed programs.
   1. Demographic study and forecast.
   2. Economic and job market forecast.
   3. Area college and university plans.
   4. Area community plans.
F. Project future enrollment in current and proposed programs.
G. Develop program objectives including:
   1. A list of current and proposed programs with projected life spans.
   2. Objectives for reduction, conversion, and phase out of programs.
   3. Objectives for improving, expanding, and adding programs.
H. Provide the information necessary to develop the facilities plan:
   1. The learning experience and environment associated with every program.
   2. Any specific educational delivery systems required by programs.
   3. Any comments about the programmatic adequacy of current facilities.
   4. Level of support/student service needs.
I. Provide the information necessary to develop the resource plan.
   1. Possible revisions in staff associated with program revisions.
   2. Any special costs associated with revisions in programs.

2. Developing the Facilities Plan.
   A. Inventory all owned facilities e.g. site, buildings, equipment, systems.
   B. Evaluate the physical condition and projected life span of all facilities.
   C. Research new and upcoming regulations and trends affecting facilities.
   D. Prepare a plan to correct current and upcoming physical and regulatory deficiencies.
   E. Identify physical and regulatory deficiencies that require facility and system improvements.
   F. Evaluate the program use and adequacy of facilities.
   G. Evaluate the capacity and utilization of facilities.
   H. Review the educational plan for changes in programs and program requirements.
   I. Prepare a plan to improve assignment, adequacy, and utilization.
   J. Identify inadequacies and capacity deficiencies that require facility\system improvements.
   K. Combine the lists of facility and system and evaluate physical, financial feasibility.
   L. Prepare a physical design of the campus.
   M. Propose a prioritized list of projects showing time frames and magnitude of cost.
   A. Evaluate current and future human, financial, and material resources.
   B. Review the feasibility of program changes in the education plan.
   C. Review the feasibility of capital outlay projects in the facilities plan.
   D. Show proposed district, State and alternative funding sources and schedules for capital outlay projects.
   E. Indicate project feasibility in terms of downstream operational funding.

4. Combining the plans into the comprehensive plan.
   A. Reconcile any conflicts between the educational, facilities, and resource plans.
   B. Prepare a description of purpose, community context, and educational approach.
   C. Describe long term goals.
   D. Describe shorter term objectives.
   E. Set timetable and accountabilities for the objectives.
   F. Produce the Master Plan document.
   G. Review and approve the Master Plan document. (Approval procedures should include the educational program and academic senate representatives, faculty staff and college/district management.)

5. Follow through
   A. Monitor objectives, timetables, and accountabilities.
   B. Make program improvements and changes within the context of the plan.
   C. Plan and develop the Five-Year Construction Plan and Initial Project Proposals within the context of the plan.
   D. Prepare annual feedback and revisions.

2.7 MASTER PLANNING METHOD B

The Master planning B is a systems-based method. The educational program and educational delivery system are integral with one another, established based on community focus and need. The word "need" is used broadly to mean need, desire, want, or demand.

1. Setting the planning parameters.
   A. Alignment with State, CCC, and regional educational policy and objectives.
   B. Definition of the service area(s).
   C. Definition of the service population.
2. Determining the community "need" for education and support needs.
   A. Demographics.
   B. Economics and job market analysis.
   C. Analysis of community educational issues and benefits.
   D. Community input.

3. Establishing a collaborative approach to meet community need.
   A. Meeting with other districts, CSU, UC and private colleges.
   B. Meeting with vocational schools and training programs.
   C. Meeting with high schools and adult schools.
   D. Meeting with business, economic sector.
   E. Meeting with non-profit, service, government sector.

4. Collaborative discussion of ways to effectively meet community needs.
   A. Extent to which need can and is being met by the college and other institutions.
   B. Ways the college and other institutions might improve programs and delivery.
   C. Suggestions for joint programs and/ or shared delivery systems.

**Concurrent Internal Evaluation of College Effectiveness in Meeting Community Need**

5. Evaluation of current programs.
   A. Review of program scope, quality, cost, and effectiveness.
   B. Review of program accessibility, enrollment and contacts.
   C. Suggestions for program improvements.
   D. Suggestions for improvement of learning environments.
   E. Suggestions for improvement of educational delivery systems.
   F. Suggestions for improvement of student support systems.

6. Evaluation of the condition of existing facilities.
   A. Inventory all facilities e.g. site, buildings, equipment, systems.
   B. Evaluate the physical condition and projected life span of all facilities systems.
   C. Research new and upcoming regulations and trends affecting all facilities systems.
   D. Prepare a plan to correct current and upcoming physical and regulatory deficiencies.
   E. Identify physical and regulatory deficiencies that require facility/ system improvements.
7. Evaluation of the adequacy of existing facilities.
   A. Evaluate use and adequacy as educational delivery systems.
      1. Location and access.
      2. Safety and security.
      3. Environment, e.g. appearance, noise, light, sun, temperature.
      4. Interior and exterior space, horizontal and vertical.
      5. Equipment.
   B. Evaluate effectiveness as learning environments.
      1. Student feedback.
      2. Student utilization.
   C. Suggest ways to improve adequacy.
   D. Identify inadequacies that require capital outlay improvements.

8. Evaluation of the capacity of existing facilities.
   A. Calculate physical space capacity per building code.
   B. Calculate capacity by using space standards.
   C. Compare with current and future WSCH.
   D. Suggest space reassignments, increased utilization strategies.
   E. Identify significant deficiencies requiring added space and capital outlay improvements.

9. Evaluate facilities role in shared programs and/or delivery systems as appropriate within district policy.
   A. Evaluate the feasibility of shared programs and delivery w/ existing facilities.
   B. Suggest ways to accommodate shared programs and delivery.
   C. Identify any capital outlay improvements that will be needed.

10. Combine lists of capital outlay improvements.
    A. Suggest a list of projects.
    B. Check the physical feasibility of the projects.
    C. Prepare a physical design of the campus.
    D. Estimate the magnitude of project cost.
    E. Prioritize the suggested projects.
11. Evaluation of current and potential resources.
   A. Evaluate current and future human, financial, and material resources.
   B. Review the feasibility of the suggested program improvements.
   C. Review the feasibility of the suggested capital outlay projects.
   D. Show proposed funding sources and schedules for capital outlay projects.
   E. Indicate project feasibility in terms of downstream operational funding.
   F. Evaluate the feasibility of shared programs and delivery.
   G. Suggest tradeoffs between resources, facilities, and programs to increase feasibility.
   H. Suggest any additional possibilities for shared programs and/or delivery.

12. Reconciliation of collaborative and internal suggestions into a Master Plan.
   A. Intensified brainstorming, discussion, and proposals.
   B. Preparation of a tentative program plan.
   C. Description of the delivery system proposed for each program.
   D. Description of the resources proposed for each program.
   E. Description of joint program and delivery plans.
   F. Coordination into a long term general plan.
   G. Prepare a description of purpose, community context, and educational approach.
   H. Describe long term goals.
   I. Describe shorter term objectives.
   J. Set timetables, and accountabilities for the objectives.
   K. Produce the Master Plan document.
   L. Coordinate the document with other community plans.
   M. Review and approve the Master Plan document (include all parties).
   N. Contribute as necessary to a community educational Master Plan.

13. Follow through.
   A. Prepare Five-Year Construction Plan and Initial Project Proposals (IPPs).
   B. Monitor objectives, timetables, and accountabilities.
   C. Monitor effectiveness in the community.
   D. Continue to make program improvements within the context of the plan.
   E. Plan and develop capital projects within the context of the plan.
   F. Prepare annual feedback and revisions.

Master Plan Method B is dependent on the local board’s governing policy and on collaboration between the educational, student service, facilities, and resource sectors of the college and the greater community. It has the advantage of fostering new outlooks and solutions and the disadvantage of fitting less easily into the existing capital outlay process. Its greatest advantage may be as a vehicle to begin developing alternative educational delivery methods during this time of low capital outlay funding.
The kinds of alternatives that colleges are currently using:

1. Using schools, shopping centers, and other neighborhood buildings to provide more accessible classes and locations for distance education.

2. Building TV stations to broadcast education programs and courses. Providing English classes on local radio.

3. Increasing the scope of their programs by using distance education between campuses.

4. Using distance education to "trade" classes with CSU.

5. Developing video libraries for students to check out and take their classes home.

6. Alternately teaching half of each class by video to effectively reduce faculty-student ratios.

7. Coordinating programs regionally, each college providing a unique combination of programs and delivery systems accessible to students from the entire region.

8. Developing small, interactive classes on personal development, communication, collaboration, creativity, cognition, etc. (called high touch) to counterbalance electronic information and delivery systems.

9. Developing campuses into learning communities with extensive self-guided labs, museums, simulations, multi-media computer programs, and video libraries -- providing individualized, mentored programs to assist students in developing individual talents.

10. Providing cooperative programs in child development centers, senior centers, and public safety sites.

11. Using interactive TV/computers to deliver counseling and advising to distant centers from main campus.
These kinds of alternatives are more likely to emerge from master planning if the college purpose is defined within a paradigm more appropriate to the future than the past, e.g. the college as a source of local knowledge and locus of civic responsibility, a center of community continuity and renewal, combining the development of young adults with the assimilation of new citizens, stimulation of entrepreneurship and regional economic viability, and the constant upgrading of both the technical and organizational skills demand needed for economic and civic effectiveness over a lifetime of escalating change.

2.8 SUMMARY

The two master planning methods described here are very extensive and may seem to require excessive time and effort. In practice, however, much of the process already exists through the Space Inventory and other documents, while other parts of the process can be done at a general summary level, instead of in great detail. The level of effort depends on how obvious circumstances are at the college and in the community and on the extent of agreement amongst college staff with regards to educational approach and objectives.

Generally, a strong master planning effort may take up to 18 months and is updated as needed, often annually. A good Master Plan clarifies direction and revitalizes the college. A Master Plan that is short term, vague, contradictory, lacking objectives, or otherwise flawed, does not provide direction and is not worth the effort. The methods presented here are rigorous to ensure that all the factors are considered and the resulting Master Plan is a strong document with clear, credible capital outlay program objectives.