The building-planning process: tips from the UMAB experience

By Frieda O. Weise, M.L.S., AHIP
Director

M. J. Tooey, M.L.S.
Assistant Director for Information and Instructional Services
Project Manager, Health Sciences Library/Information Services Building

Health Sciences Library
Information Services Division
University of Maryland at Baltimore
111 South Greene Street
Baltimore, Maryland 21201

The University of Maryland at Baltimore (UMAB) is in the midst of planning a new health sciences library/information services building! The planning process for a new health sciences library is described, including the components of the process and the planning team. The UMAB planning experience, with thirteen tips for a successful process, are presented.

INTRODUCTION

Planning a new health sciences library or renovating an existing one presents many challenges. Certainly the mission, roles, and infrastructure of libraries will change as we move into the twenty-first century and as we begin designing structures that can serve well into that time frame. At a time when new information technologies are challenging the very concept of a library, it behooves us to plan carefully but also boldly and to look past conventional design.

The University of Maryland at Baltimore (UMAB) began planning a new health sciences library and information services building in 1991 and is now nearing completion of the building’s construction documents. Ground breaking is to take place in the fall of 1995, followed by two years of construction, with occupation early in 1998. Although this may seem an inordinately long planning time, it is not unusual.

This discussion focuses on the planning process, not on the building design itself. Components of planning a building and the planning team are noted in general, followed by a description of the process at UMAB. Finally and most importantly, thirteen hints for a successful planning process are presented, based on the experience at UMAB.

COMPONENTS OF THE PLANNING PROCESS

Preparing for planning

Planning to plan is extremely important. One should consult the literature, visit both new and old libraries, talk to colleagues who have gone through the process, and, of course, try to predict what the future will hold for the library.

There are a number of excellent resources that can be consulted to familiarize the librarian with the planning process. Metcalf provides a thorough discussion of all aspects of the planning process [1]. Although published in 1986, the planning principles and elements he describes are still valid. Mount also describes the planning process in some detail, while Hitt presents a good overview of the key planning team [2–3]. Building the Library/Information Center of the Future, the proceedings of a symposium cosponsored by the National Library of Medicine and the University of Maryland at Baltimore’s Information Services Division in April 1994, includes a number of case studies that discuss the planning process [4]. A forthcoming volume of Current Practice in Health Sciences Librarianship will contain a new chapter by Weise and Tooey on planning for health sciences library facilities [5]. Not to be overlooked is the journal lit-
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...temperature, which is particularly helpful in looking at trends in information technology and their impact on health sciences libraries.

The building program plan

The building program plan puts forth a vision for the building and sets the direction for that vision. According to Metcalf, the building program is "the comprehensive document describing and detailing the library building and its space requirements, its philosophy of service, functional areas and relationships, and spatial content and details as needed to communicate to the architects the desires of the owner-user" [6]. Requirements for a formal program plan may vary from institution to institution. The program plan can be a very formal document mandated by the parent organization or funding agency, or it can be a few pages stating why a new facility is needed. A thoughtful, articulate, organized, and well-prepared document can help ensure the success of the project. It can be used to secure funding and as a guide post for developing the project through all phases. It is a document that is used by owner and architect to develop a common understanding of the goals and language of the project.

In many institutions, units may exist, such as facilities management or institutional planning, that can provide direction or a template or formula for the document. In some cases, these units may actually write the program. However, the involvement and continuous input from the library director and staff cannot be emphasized enough.

Building-program elements may vary from institution to institution. Some of those elements might include
- a description of the project;
- the need and expected contribution to institutional services, including a general description of the current facility and the current needs for collection, users, and services/staff;
- general building considerations, including the site;
- spatial relationships;
- descriptions of individual areas such as access services, information services, and computer training labs;
- appendixes containing useful information about the library and its services, including graphs and charts [7].

Schematic design

The schematic-design phase further refines the program. After gathering the data and verifying the programmatic needs, the architect is responsible for designing a building that meets those needs. Working with the square footage and the site, work is begun to assemble the pieces. The structural, mechanical, and electrical engineers are brought in to aid in the process by studying the feasibility and constructability of proposed configurations. The architect begins to look at the practical and aesthetic possibilities for the exterior of the building, and the design begins to evolve. The interior spaces begin to emerge as they are laid out based on square footage allocations and function. Major public elements such as entrances, elevators, stairs, and service desks emerge. Whenever possible and feasible, it is beneficial to involve as many library staff as possible in reviewing the progress. There may be a number of different designs presented, and, by the end of this phase, the architect and librarian should be in agreement concerning general concepts for the building and its layout. There is generally a review phase at the end of schematic design where everyone on the institution's team will review the schematic design documents, raise questions, and suggest revision.

Design development

The design development phase involves getting down to the nitty-gritty details of the building design. The exterior elevations are finalized, but most of the detail work occurs in the interior. Final wall placements occur, and an interior designer is usually involved at this phase in the task of interviewing staff and designing the collection, staff, and user spaces. This may involve doing office layouts, selecting a conceptual model for the types of furnishings that may be desired. Individual departments may be asked to meet with the architectural team to discuss work flow within their units and to identify optimal layouts. Much information must be exchanged in order to satisfy the needs of both groups.

In addition to layouts, the architectural team will be working on the interior finishes. At the end of design development, a much larger set of blueprints will be submitted, and, as at the end of schematic design, there will be a review period where questions are raised. These are very thorough documents, which need to be reviewed closely.

Construction documents

Construction documents, or working documents, are the documents that actually delineate in great detail exactly how the building will be built. They may include but are not limited to landscape design; the exterior elevations; interior plans; furniture layouts; interior finishes, such as door hardware and floor coverings; electrical plans; computing and communications details such as wiring; mechanical systems, including heating and air conditioning; plumbing; details of built-ins such as service desks; lighting; and security systems. The review process is very intense and may involve a large team, with each member
responsible for particular sections of the documents based on his or her areas of expertise. When the review of construction documents is complete, the documents will be used in order to bid out the project for construction. When the contract is awarded, a number of meetings will be held to kick off construction and to set the construction schedule. During the construction phase, the library representative will only be involved peripherally, because the construction firm will most likely deal with an appointed representative of the institution or a project captain appointed by the architect to oversee the project. For ease of management, all suggestions or comments must go through this approved channel.

THE PLANNING TEAM

The planning team is composed of many groups and individuals, each representing different interests and each bringing different knowledge and skills to the process. It is likely that the whole team will never meet at the same time but must be coordinated over months or even years to reach its goal.

Several good discussions regarding the planning team can be found in Metcalf, Mount, and Hitt [8-10]. Metcalf provides an excellent discussion of the many types of committees that can be found, from trustees to students, while Mount describes the planning process in some detail. Hitt provides a succinct overview of some of the key players. The following discussion describes the most likely groups and individuals who should participate on the planning team and their role.

The project manager

Responsibility for coordinating the library's role in the planning process should be assigned to a specific person. Depending upon the setting, this could be the library director or another person from the library staff designated as the project manager. It cannot be overemphasized that one person should coordinate discussion among all the planning groups and represent the library's interest in an assertive but tactful way. The project manager must be available "as needed," because demands are frequently deadline driven and must be attended to immediately. This may consume large amounts of an individual's time, and the assignment should take this into consideration. The project manager should be the focal point for communication and contact with the architects, consultants, library staff, interior designers, the institution's facility planners, and advisory committees.

Library staff

Members of the library staff should be involved in the process, because they

- are knowledgeable about how users access services;
- understand internal library functions and how their offices and work areas operate for maximum efficiency;
- have high stakes invested in the building, because they spend their working life in it;
- are (or should be) well versed in library trends, new roles, technologies, and how users and functions may be affected; and
- can contribute insights and solutions to problems encountered in the design from their perspective.

Architects

It is important that the architects and library planners develop a positive relationship in the beginning of the process so that library functions can be reviewed in detail. Many architects are not familiar with library functions, and several meetings may be necessary to discuss the functions and spatial relationships.

Early interaction between the architects and the library will become fruitful as the building process continues. Functional relationships must be examined and firmly understood by the architects, because they may prepare several designs to which staff must react. Negotiation is definitely required, and compromises must be accepted on all sides. The project manager will play a pivotal role in the communications process.

Consultants

Consultants should be included in the earliest possible stages of planning and should have experience with similar projects. Normally, consultants are hired by the organization; however, some architectural firms hire consultants to assist their planners. Hitt points out three important reasons to hire a consultant: he or she can serve as a sounding board for the library's ideas; an outside observer can present objective alternatives that the local planning team might overlook; and, as an objective third party, the consultant can help settle differences of opinion when controversies arise [11].

In addition to the library building consultant, the architectural firm will most likely retain other consultants in interior design, landscape design, lighting, and computing and structural, mechanical, and electrical engineering firms.

Users

Because the library's ultimate purpose is to meet the needs of its users, it is important that user requirements, desires, and use patterns be understood. Users can be included through an advisory committee or through focus groups held early in the planning process. User groups will vary according to the institu-
tion but can include faculty, researchers, professionals, and students. It should be made clear to users what their role is in the planning process. They can be purely advisory to the library director or project manager; they can also be charged with oversight of the project by the administration of the institution.

Computing and data communications staff

Even though the library may have its own systems staff, the growing needs of the electronic library should be discussed with the institution's computer and telecommunications staff. Power needs, access to the internal and external communications networks such as the Internet, local-area networks, microcomputing needs, and a host of other information technologies must be addressed.

This variety of electronic requirements will necessitate the utmost in flexibility to allow the addition of cables or wires in the conduits and to provide convenient locations for future needs. The expertise of this staff in the prediction of future trends is invaluable.

Facilities management

Most large organizations have a facilities-planning department that may include architects, engineers, construction managers, and electricians. This department may be responsible for carrying out the planning and construction of the new library or for renovations. A project manager from this department may be named to act in a capacity similar to the project manager in the library.

PLANNING AT UMBAB

Planning for the Health Sciences Library/Information Services Building at UMBAB actually began in 1976 when the Commission of Higher Education of the Middle States Association pointed out the need for expanded and more modern library facilities. Several program plans were written and rejected over the years. In 1991, the state's Department of Budget and Fiscal Planning (DBFP) rejected a 1989 plan that involved renovating the existing facility and an addition across the street. However, DBFP recommended an entirely new building, and an enlarged site was designated in the UMBAB master facilities plan. A revised building program plan was completed in 1991, based on providing a new facility for both the Health Sciences Library and the Information Resources Management Division (IRMD), which were administratively joined in 1991 under a vice president for information services (IS). IS comprises the health sciences library, academic computing, administrative computing, telecommunications, and data communications. The challenge has been to design a building that will accommodate an integrated approach to library and computing services.

The planning process

The program plan, upon which the current design is based, The Health Sciences Library: a New Building for Information Services, focused on bringing the library and computing groups together under one roof rather than integrating staff and services [12]. We recognized early that this program would have to be rethought, because it did not address integration of services or functions, but we also recognized that we had the same number of square feet available.

Perry, Dean, Rogers and Partners of Boston, Massachusetts, in partnership with the Design Collective of Baltimore, Maryland, were selected in a competitive process as the architects by the state and the UMBAB campus. Before meetings with architects began, a questionnaire was sent to IS staff to identify elements they would like to see in the new building. The intent of the questionnaire was to begin to focus the attention of the staff on the new building. The response rate to the questionnaire was very high. The responses were collated and the results shared in a report to both IS staff and architects. Perry, Dean, Rogers and Partners has developed an interactive design process, wall boarding, which encourages and indeed is dependent upon participation of the client in the process. A feature of wall boarding important to IS was that it created interaction and discussion among the library and computing staff. The two groups were put into a position of determining how they would live and work together in the new facility and how services would be provided from an integrated facility.

The wall-boarding process was used for all phases of planning, including program verification, schematic design, and design development. For an organization in transition, the process encouraged learning about each other's services, priorities, and concerns. In fact, the process has been instrumental in building a cohesive staff.

At this point in time, construction documents are nearing completion. Once complete, they will be used to solicit bids from construction companies. We expect the library to be continually involved during the construction phase of the building.

The planning team

An immense number of people have been involved in the planning process. They include the following groups.

- UMBAB: administration, IS staff (all components), physical plant personnel, in-house architects, in-house engineers, library consultant, value engineers, sys-
tems designers, development officers, user advisory committee.

- Architects and consultants: architects, landscape architects, communications engineers, structural engineers, mechanical engineers, electrical engineers, acoustic and audiovisual consultants, lighting designers, civil engineers, cost consultants, interior designers.
- City of Baltimore and State of Maryland: Architectural Review Board, building department officials, fire marshall, Baltimore Thermal (utility company), Designer Selection Board.

The actual meeting between architects and the various groups began in June of 1993. During the first year alone, there were nineteen meetings of up to twenty-five people each. Most meetings were two days with three or four parts that addressed specific issues.

It has been an intense process for the entire team but was well coordinated by the project manager. After participating in and managing the planning process, we wanted to share some tips that may help others as they plan a new facility.

Planning tips: a baker’s dozen from the UMAB experience

1. Look beyond what exists. One of the most challenging tasks in developing a building program plan is to look beyond what exists. It is tempting simply to increase the space without analyzing the need for new functions or services. For example, you may think circulation is straightforward and that staffing and functions will not change. However, as we discovered, this is not a given. Circulation at UMAB will be developing an electronic reserve system, which will require not only more space for staff and equipment but different space to perform the work. When the program was written in 1991, we had no such plans, and some very creative rearranging had to be done in the circulation area to make it fit. On the other hand, we have planned for a distance-learning facility without really knowing how it will be used. Since 1991, it has become much more clear that this type of facility is necessary, and we believe we did the right thing. With ever-changing technologies and new roles for the library, it pays to plan a building that is flexible so that when opportunities arise, you are able to take advantage of them.

2. Gather information. First, understanding the planning process in your institution is very important: you must know where the library fits in and how much control and input you will have.

Second, read as much as you can about the planning process, other new library buildings, trends in library roles and services, and new technologies.

Third, visit new library buildings and some older ones. See what works and what does not. Talk to your colleagues about their buildings. By visiting other libraries, we learned to ensure the reference desk did not barricade staff behind it but allowed staff to move freely back and forth to assist clients.

Fourth, see and try out as many styles of furniture as possible. There is a range of comfort and price. Have your staff and users try it out as well. At UMAB, we had several styles of chairs for people to try, as well as prototype study carrels built expressly for this purpose. We got a wealth of information about how the furniture fulfilled people’s needs and comfort level.

3. Assign a project manager. The project manager plays a pivotal role in the planning process. This person should be responsible for communications among and between the library and other groups involved in planning. The project manager should set up meetings and be responsible for getting feedback to and from the architects and the planning team, keeping track of progress, making sure deadlines are met, and representing the library’s interests. The project manager also needs the authority to get responses from the staff on short notice. Many tasks, such as reviewing the schematic and interior designs, are vital to the staff. Usually there are only a few days in which to respond, so staff must be prepared to do so without delay.

The project manager should be relieved of other duties during the course of the project. Most of the activities are not routine and require large amounts of time. Additionally, the person should be able to handle many details. We assigned a project manager as soon as we knew the program was approved by the state. She has been responsible for all the work mentioned above and has been recognized by the staff as “she who must be obeyed” when it comes to responding to anything that has to do with new building plans.

4. Hire a consultant. We hired a library building consultant who had worked with our architects before. He represented our interests to the architects as well as to the university administration. It is important to have a person who can present an unbiased point of view from the outside and to validate your ideas. We were fortunate to have a very experienced person who had consulted on at least 200 library buildings throughout the world. Having him speak on our behalf was invaluable in gaining support for the building design from the deans, the Building Advisory Committee, and the university administration.

5. Select architects who use an interactive planning process. Having heard many horror stories about un-
responsive architects, we approached planning with some trepidation. Fortunately, all those who were involved in selecting the architects, including state government, university administration, and IS, agreed that an interactive planning process was desirable.

The wall-boarding technique used by Perry, Dean, Rogers and Partners made the entire process a joy. We felt free to criticize their ideas and plans and vice versa in a very nontreathening atmosphere.

Additionally, persons who could not attend meetings could comment, because the plans were posted and notes could be left. We felt this style of planning created enthusiasm among all involved and helped to focus staff on thinking about the integration that will occur in the new facility.

6. Set aside planning space. We set aside a loft space that was fairly unfurnished in the IS building. This provided planning space for meetings of large groups, tables to lay out blueprints, and walls on which to post plans for comments. Staff and users were able to review the plans at their convenience. The architects and the planning team appreciated having this space in which to work and review progress; we highly recommend setting aside space, because it will make the whole process more manageable.

7. Get input from staff. This was mentioned earlier, but its importance should be reemphasized. Staff will have to function in the building and certainly will have ideas as to how to create spaces for their work and library users.

8. Get input from campus computing and data communications staff. Working with this group is very beneficial in terms of wiring the building for maximum flexibility. We wanted to be sure that the information access areas, study rooms, carrels, microcomputer labs, computer rooms, and the distance-learning center were properly wired to accommodate changing needs. This group worked with the architects and consulting engineers on layout, design, and wiring standards. If the institution does not have a group such as this, it is advisable to hire a consultant.

9. Get input from users. We decided to have a Building Advisory Committee that represented campus users as well as people from neighboring institutions. It resulted in some provocative suggestions and proved to be quite beneficial. For example, one person recommended that we make it a truly electronic library and provide no paper printouts; another was concerned that our central staircase would be dangerous; while another applauded the idea of the coffee bar. We hasten to add that the latter feature is outside the entrance to the library itself!

10. Learn to read architectural plans; learn the vocabulary of architects. Actually, both the librarian and the architects must learn each other’s language—jargon abounds. Architects speak of “elevations,” and they don’t mean heights! Librarians speak about ILL, OCLC, MEDLINE and many other acronyms, which are a mystery to architects. Take time to learn how to read drawings and to learn what symbols mean. There will be less confusion, and one can respond to the latest set of drawings in a timely way.

11. Know your funding limitations. It is important to know what your funding source covers. Does it include planning, construction, capital equipment? What is included as capital equipment? Has money been allocated to provide services so that the new building can actually open? Does it include moving the collection? These questions should be answered so that if fund-raising from private sources is required, you will know for what and how much.

At UMAB, we know that computer equipment is not considered part of the capital budget. This means that we must raise money from other sources so that we can open with a fully equipped building. We began to work with the office for institutional advancement early in the planning process to develop a fund-raising plan.

12. Pay attention to details. Every person involved in the planning process, not only the project manager, must pay attention to details. If a wall outlet is not on the plan, it will not be in the finished building. If a door is in the wrong place on the layout, it will be wrong in the building. If the wiring for electronic access is not laid out correctly, it will be very difficult to change once the library is built. In short, no detail is too small!

13. Be patient. There are many times during the planning process when frustration occurs. There are periods of intense activity and of little activity; mistakes are made; plans must be checked and re-checked. At times, you may think the building will never be built and that you will never see yourself in it. Obviously, several years of planning requires patience. We actually began in 1991—four years later, we see that the end is in sight. Ground breaking in the fall of 1995 is the milestone for which we are waiting; moving-in day will only be two short years from then!

There are many other considerations and details that must be taken into account in the planning process. Those mentioned here are those that have been most important to the success of the process at UMAB. We hope that others will benefit from our experience.
REFERENCES

6. METCALF, op. cit., 590.
9. HITT, op. cit., 396.
10. MOUNT, op. cit., 53-64.
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