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Living Museum Environment: A Program For Architectural Design

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LIVING MUSEUM ENVIRONMENT:
A Program for Architectural Design

Title

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May 5, 1977

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LIVING MUSEUM ENVIRONMENT:

A Program for Architectural Design

BY
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B.F.A., University of New Mexico, 1971

THESIS

Submitted in Partial Fulfillment of the
Requirements for the Degree of

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May, 1977

LIVING MUSEUM ENVIRONMENT:

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ABSTRACT OF THESIS

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ABSTRACT

Museums are a social sanctuary containing images of man's past, present and future. The task of collecting, conserving and exhibiting artifacts is the primary function of a museum. The artifacts will then be inherited by future generations so that they, too, may understand their place in the scheme of social evolution. The interpretation of the requirements of a physical plant for a museum and the creation of a unique design, which will enhance the life and experience of the visitor, is the subject of this thesis.

Museums depend upon good administration, adequate funding, well-engineered exhibit design and a sympathetic physical layout to provide a successful living environment for learning. Information has been collected by the author to study these factors, both on a general scale and in specific terms, for museums as a "type" operation. Research included: personal investigation of outstanding museums in the United States for a sound critical basis, literary study of the subject, surveys of staff and visitors. The author also interviewed persons knowledgable about general learning environments as well as persons involved with museums as a specific building type. A synopsis of this research is included in the text to provide an understanding of the evolution of the physical design criteria known as the architectural program. The architectural program is the medium employed to transfer comprehensible needs into physical

design. The design of the new physical plant for the Museum of Albuquerque is the base for development of specific needs within the architectural program; however, the principals involved could be applied to any educationally focused museum.

The architectural program is the mechanism by which architects must design all building types. This project can be read as a succinct example of that process which will provide the reader with a deeper understanding of the need for development of architectural programs for general application. The major work of this thesis has been to develop a proficient skill in architectural programming and interpretative design.

The actual design solution is the author's interpretation of the architectural program with his own design insight. The physical design fulfills needs of both staff and public in a pleasing flexible environment. The building design for the Museum of Albuquerque reflects an understanding of the interaction between the building and its setting, staff with staff and materials, and the visitor with the final exhibition. Two levels of design constraints have been imposed on this project: First, the constraints of the actual project for the Museum of Albuquerque, i.e. funding, staff, storage, etc.; and secondly, the author's own policy and design constraints which result in a learning environment more valuable to the community. The conceptual design of this museum is not one which overwhelms the purpose of exhibition and education; however, the building itself would be a landmark. Spaces experienced in the developed movement patterns are exciting

and inspiring as designed by the author.

An empathy for the surrounding historical area and the region have been combined with stimulating environments based on the architectural program. The result is a physical plant sympathetic to the goals and objectives of the Museum of Albuquerque. The ability and creativity demonstrated in the design solution are unique to the author. Thus, this thesis is a statement of his skills of interpretation and design.

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Introduction

This design thesis is based in research of museums in general, and museum learning environments in particular. The focus of the project is a continuing development of the author's architectural design capabilities. Through this demonstration of how the environment can be changed and improved, the ability to work within real conditions is shown. The goal of the process is to enhance life for the people who live in or use the future-built environments designed by the author.[1]

The choice of museum environments is based on two factors: past travel and future work. First, a good number of museum environments were experienced on a trip during the fall of 1975. During this trip, a basis for criticism was developed as to the quality of experience provided by particular museum environments. Secondly, the study of museum environments, and in particular the Museum of Albuquerque, will contribute to the author's educational experience within a working situation. At present, Antoine Predock, Architect, has been chosen for the design work of the new Museum of Albuquerque. The author is employed by this firm and will be involved with this particular job in the future.

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[1]Excerpts from Guidelines Independent Project mimeo, The University of New Mexico School of Architecture and Planning.

PART I

Museum of Albuquerque

The Museum of Albuquerque was established in 1967 with the broad goals and purposes as stated in the enabling city legislation:

> A city museum of the City of Albuquerque is hereby established with the purpose of diffusing knowledge and appreciation of history, art, and science, and to the end of establishing and maintaining in said city a museum and related reference library of collecting and preserving objects of historic, artistic and scientific interest of protecting historic sites, works of art and works of nature from needless destruction, of providing facilities for research and publication, and of offering popular instructions and opportunities for aesthetic enjoyment.[2]

The trustees' long range goal is "that of providing Albuquerque and the State of New Mexico with a truly comprehensive, multi-cultural, chronologically-oriented exhibition of area history."[3]

To this end the existing museum has presented temporary exhibits covering areas of arts, crafts, science, and history, and in the last few years, has developed a permanent exhibit depicting the Hispanic home in New Mexico (1821-1848).[4]

Permanent exhibit and storage space for the growing collections and the organization of the Museum of Albuquerque began to become more and more critical. Funding for

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[2]City Ordinance 92-1967, Albuquerque, New Mexico.

[3]"State of the Museum," DeBorghesi, Susan; mimeo. no date.

[4]"Una Casa de Nuevo Mexico," Museum of Albuquerque, mimeo, no date.

all capital improvements for the City of Albuquerque are obtained with voter-approved General Obligation Bond monies. The large request for 2.9 million proposed for construction of a new home for the Museum of Albuquerque was rejected by the voters in two bond elections. The bond election of October 1975 finally saw the passage of this proposal. As a result, programming of policies for the museum and for the physical interrelationships was initiated. Simultaneously, an architect was hired. The Museum of Albuquerque plans to open activities in the new building in spring of 1978.

The Museum is a department within the City of Albuquerque government which provides the staff, the building, and the basic operating funds. The exhibit and study collection are acquired through private and corporate donations or from funds classified by the Museum of Albuquerque Association for this purpose. The latter group are involved in providing volunteer support for museum administered educational programs (docents).

The space provided at Cutter Memorial Building (old Albuquerque Airport terminal) has served for several years for presentation of temporary exhibits but has been outgrown by the activities, goals and collections of the Museum of Albuquerque. Serious limitations of the activities for the museum have been the result of this space problem. The development of a permanent exhibit area for history could

not become a reality within this limited space. Educational programs are unable to be fully developed because of the needs for diversity of space essential to a successful learning experience. This is especially discouraging in the light that the greatest number of museum users originate from school groups. The acquisition program has been hindered by the grossly inadequate amount of storage space as well as the poor quality of the existing space in terms of conservation of collections. Use of the main exhibit space for exhibition, as well as a gathering space (i.e. exhibit openings, lectures, demonstrations), has functioned rather well; however, with great threat to the security of the actual exhibits. All of these factors point to a clear need for new spaces which must be well integrated, and satisfactory for circulation throughout this complex public forum.

Relationship of Independent Project to the Museum of Albuquerque

The author has developed an independent program of policies as well as an independent building program. The author has based the development of these programs on interviews, surveys, examination of the existing facilities and collections, other museums within the city, state and nation, and printed material provided by the Museum of Albuquerque. A strong personal feeling for the museum space as an educational environment has led to further research of literature and interviews into this particular aspect of the programming. Policy decisions and programming must first be established and then it becomes possible to arrive at a successful building program. At the time of this writing, a clear policy had not been well enough defined to interpret into a building program. The result of this situation is that the author has combined the information provided by the staff of the Museum of Albuquerque along with the above-mentioned sources to assume policy decisions and programming for purposes of this thesis.

Assumptions made to establish a reasonable programming of policies allow for development of a building program which provides information to establish functions and square footages. The Museum of Albuquerque is currently in the process of developing a rough building program modeled from a similar historical museum of larger scale in Colorado.[5] With this

[5]Colorado Historical Society, Colorado Heritage Center, 1973, mimeo.

knowledge and the assumed basic interactions of programs and facilities, the author was able to develop a realistic building program for the Museum of Albuquerque. The final building program produced by museum staff will perhaps differ largely from the program the author will present as a result of independent policy decisions.

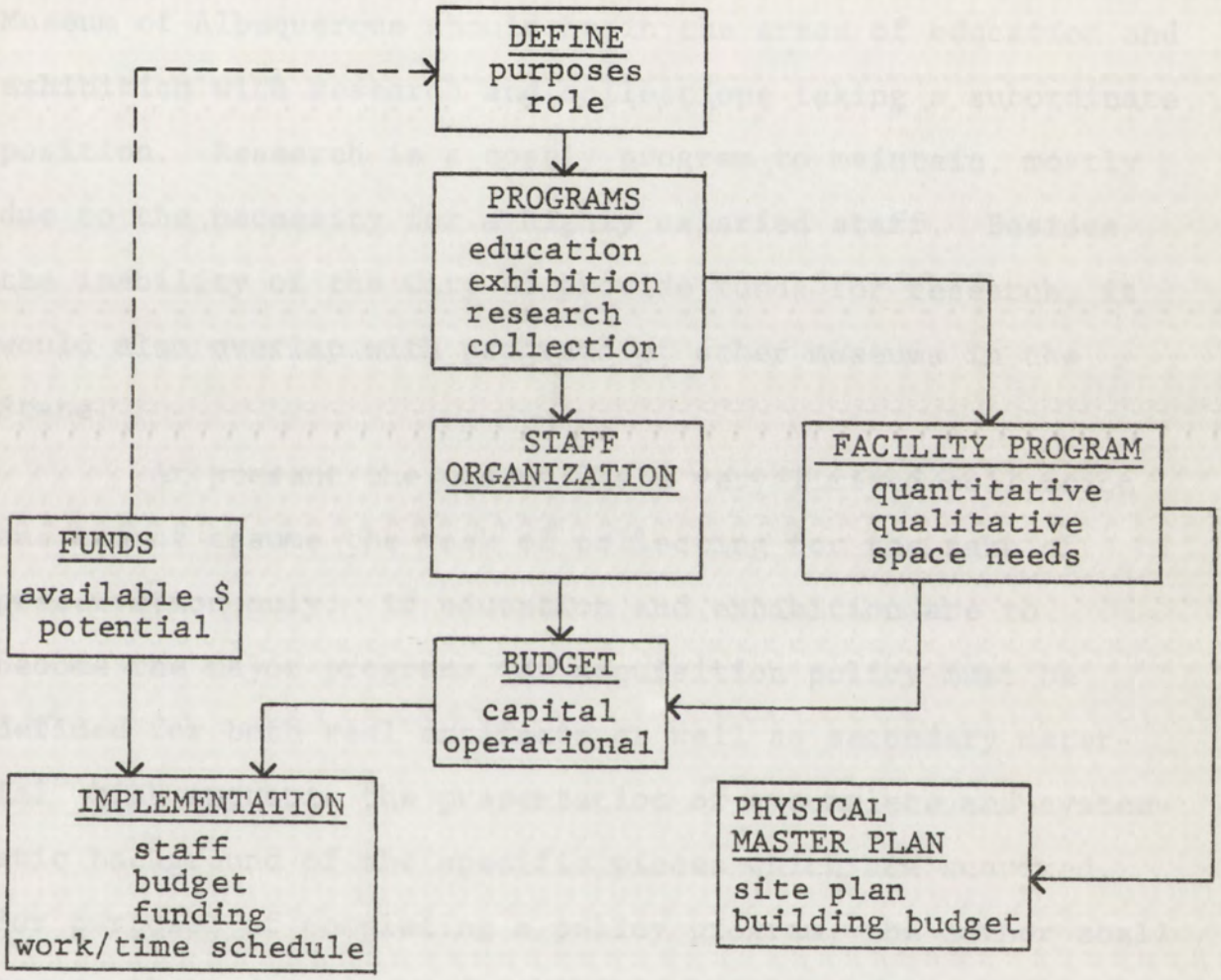
Figure 1 is a flow chart which shows the relationships of a statement policy and a building program. Role definition can be based on four areas:

1. need,
2. existing role of other museums,
3. availability of funds, and
4. availability of artifacts.

Presently, this museum does not overlap other programs in other museums around the city except in areas of anthropology. Its present role as an active educator presenting regional art, science, and history, fills a need within the City of Albuquerque. Local private funding has not proven to be as available as in cities with larger populations. This has resulted in a limit to activities. The availability of artifacts in this area supplies a ready source of materials for the development of a historical museum.

A major cause of failure in small museums in high community expectations and a low funding level. These factors force the museum to assume the role of "jack-of-all-trades." (See enabling legislation--Museum of Albuquerque.) A museum's programs must be selected and scaled

FIGURE 1 - MUSEUM INTERACTION FLOW CHART[6]



[6]"Museum Master Planning" lecture by E. Werner Johnson.

from three potential pieces of land in order to program monies for the General Obligation Bond Election. Each site which had been reviewed had contained existing buildings which were considered for the new home of the museum. Initially, the Navajo Trucking site in Old Town had been purchased to relieve the parking problems of the Old Town area. In order to save monies, this site was also chosen as the location of the new museum building. After the bond election of 1975, the buildings were more closely evaluated and deemed generally unsuitable except for a small heated office portion of the old trucking terminal. A new building was recommended. Thus, the original siting of the building on the northern half of the land in the existing buildings was no longer valid. Attempts at master planning the site were halted by opposition from particular city departments and some area businessmen. At present, the site planning as publicized in the bond issue will be used. Without the play of these political decisions, the author has chosen to master plan the site for purposes of this project.

The factors which support a master planning of the site: the city has planned the closure of San Pasquale Street between Mountain Road and Old Town Road. This action will present vehicular access problems if the parking is on the southern portion of the site. All possible routes to the parking will direct traffic through neighborhood roads which are not sized or constructed for this type of intense

use. The main source of traffic in route to Old Town is generated from I-40 to Rio Grande. Thus, Mountain Road becomes the most logical access point for the heaviest traffic loads.

A future pedestrian movement pattern is also foreseen between Old Town and Tiguex Park. The existing formal entry to Tiguex Park is aligned on the only pedestrian oriented access to Old Town Plaza. A parking lot on the southern portion of the site would create an unsympathetic environment for pedestrians moving between the park museum and plaza. If the Museum is located on the southern end of the site, there are positive benefits which can be gained. Using this pedestrian route to gain a captive audience will aid museum goals in areas of form, function, and economy.

In summary, there are two basic differences between the author's independent project and the actual museum project: programming and site planning, resulting in a building which reflects priorities established.

The author's architectural program is based on general research of museums and availability of information for this particular museum. The Museum of Albuquerque has excellent resources to provide a fine series of educational exhibitions; thus, the author feels that this is the policy this particular museum should adhere to. For the purpose of this study, the author has proceeded with the assumption that the Museum of Albuquerque would follow a course to

provide collections, exhibitions and staff to create this type of museum. Actual staff decisions may not reflect this goal as policy for the Museum of Albuquerque.

The author's evaluation of the site master plan is based on a large scale view of interaction and the best use of the Old Town site with both site and museum goals in mind. Siting of the building is crucial to a well-integrated area master plan. The form of the building is determined both by internal programming as well as site considerations so that site consideration plays a major role in the author's building program.

The assumptions made both in policy programming and in site planning vary from the actual museum project. This project is meant to be an independent project removed from the compromise of political decisions which play too much of a role in the actual program design. The author's project has a more ideal programming approach resulting in a more pure design process and solution.

Development of Museum Design Requirements

The history of museums has been a growth of a cultural communication phenomena originally shared by only a select few. Collections owned by the wealthy or powerful were enjoyed only by immediate friends and family. Many of these collections were passed to successors who found it increasingly difficult to store and preserve their holdings, and eventually they were passed again into the hands of organizations financially capable of assuming the responsibility. Cities, being financially stable, became collectors bringing under one roof cultural treasures which were originally spread through space and time. Collections thus became available to those who had the time and education to enjoy and understand them. In the recent past, museums have been considered as collectors of objects of the elite. Today, museums have a changing attitude, one of developing their educational potential and of becoming responsible for cultural communication which is "accessible, understood, appreciated, and enjoyed by all."[7] This means the collection and exhibition of objects of interest to all classes and the establishment of a common communication between them. Studies in other fields of education have increased the awareness of how individuals learn, and in particular, how museum objects relate to an individual's life. This

[7]Renee Marcouse, "Changing Museums in a Changing World," UNESCO Museums, Imagination and Education, UNESCO, Paris, 1973.

changing attitude toward utilization of objects to teach and to bring new experience which touch a wide audience will be the focus of museums in the future.

Museums rarely have a physical plant designated strictly for museum use; therefore, most museums are small and functioning in renovated shells of older buildings designed for other purposes. Investigation by the American Association of Museums has disclosed that most museums designed for museum use were designed between the years 1921 to 1940.[8]

In the past thirty years, those museums that have been specifically designed for that purpose have been formed from a few basic overlapping requirements: security, flow and flexibility. These requirements must be applied to all functional spaces of the building. Design for administration, exhibition, education, collection and circulation spaces must interact with one another while providing these basic requirements.

The collections are the base from which all museum activities spring. Restoration of the collections and their prevention from deterioration or loss is an essential requirement of the museum and its design. Security from natural environmental forces--sunlight, humidity, temperature, dust, and insects--is of great importance, as well as security from man himself.

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[8] P. 31, American Museums, The Belmont Report. American Association of Museums, 1969.

The security of collections overlaps a second set of design requirements which evolve from patterns of flow. Movement of collections and visitors form basic patterns within a museum. The process of adding new material to the museum's collections involves a hierarchy of controlled spaces from dirty to clean. Paralleling this process are the activities of identifying, recording, cataloging and storing. Once in storage, items enter another flow pattern of selection, to staging, to exhibition. On the public side of the museum, a clear pattern of flow insures that groups of visitors can complete a museum trip without fear of missing any portion of the exhibit. Security is insured if flow is concentrated through security checks, thus reducing numbers of entry/exit points.

Flexibility and provision of design for future growth has proven important in many building types in the recent years. Museums especially need to be designed with constant change in mind. The changing of stage for temporary exhibits dictates the need for highly flexible spaces, "permanent exhibits" which may be displayed for as long as 10 to 20 years, must have a capability for long term change and growth. The criteria of flexibility for other museum spaces, such as administration etc., would be similar to any office buildings providing for growth. The importance of flexibility of space for museums must be stressed in the design of museums.

Basic criteria by which museums have been designed in the past 30 years hold true in the present. Security of collections and flow of visitors are other primary issues which must be dealt with. The changing attitude toward museums as cultural educators has affected this basic criteria and has added new requirements.

Museum staffs in the past have had a disproportionate interest in the security of objects. Recently, more effort has been directed towards answering the question of how objects teach. Attitudes have changed as to how the collections can reasonably be used to increase the quality of the educational experience. Thus, the use of objects in new ways have generated new types of space. For example, the docent program (volunteer group of museum guides) has become more effective when space and equipment is provided for "pre" and "post" tour sessions which help the visiting group to focus on the learning experience at hand.

Visitor flow has also been affected by changing attitudes toward museums as cultural educational tools. A museum visit can be a very shallow learning experience if the flow pattern is not supportive to the experience. To encourage successful learning experiences, exhibition designers are, for example, producing environments which encourage visitors to choose and concentrate on particular portions of exhibits which may be of specific interest to them. Within particular exhibits, attempts are made to

provide eddy spaces where people may sit or stand without constricting other visitors' view or movement space. The excitement caused by exhibits can elicit behavior which can bring about positive and interesting consequences if space and material is provided.[9] The flow patterns which conserve this excitement to insure a successful learning experience is a new variation of basic design criteria of which museum designers must be aware. As an example, the museum can reproduce a historical environment in order to stimulate the visitor. This environment may be combined with an activity with which the individual may become personally involved and which should serve to provide an interesting means to emphasize the educational experience. Perhaps the visitor is able to purchase replicas of products from the historical period, or the individual is able to motivate some video tape which is capable of providing a wealth of information. Perhaps the experience may be so simple as to allow the visitor to activate a machine or use a tool from the period. The museum flow pattern should be so arranged to maximize this particular experience for the user to further a feeling of self-discovery.

The theme 'museum as an educator' will radically affect museums and it will serve to test their overall capability in the future. Growth as it is foreseen in educational areas is a strong design requirement as much as it is professional requirement of museums.

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[9]Museum News, "Museums as Learning Environments," pp. 37-39, Oct. 1975.

> A major function of a museum is to preserve and exhibit works of art, but no one museum can possibly own enough originals to represent the full range of cultural history. It is only through secondary materials like reproductions, slides, tapes, motion pictures, and photographs that a museum can fill the gaps; and it is through these resources that a museum can, and should, present a complete and systematic background to specific works of art and to man's heritage generally.[10]

Assuming that the goal of the museum is to successfully relate to the time and place of the visitor's life in an exciting and stimulating way which will truly result in an educational experience, the museum must be capable of displaying secondary material in an effective manner. The quality of this experience must become a new design criteria. Secondary materials, i.e. hands-on experiences and pre and post tour sessions, are the new tools for the successful museum visit. The design of the building must ascertain that these experiences are maximized and make the visitor aware of the availability of these devices which provide an opportunity for the discovery of self.

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[10] Mark Lucas, "The Museum as Educator," p. 148. Museums Imagination and Education UNESCO, Paris 1973.

The Living Museum

Simple exhibition of artifacts, be they priceless jewels or children's art, does not insure an effective museum. Museums must look to their primary function of education and set aside the importance of conserving and exhibiting their collections in order to be capable of success. A living museum uses its resources in providing each visitor with new insight into how their lives relate to exhibits presented. The sign of a living museum is "interpretation." Interpretation has been defined by F. Tildon as: "an educational activity which aims to reveal meaning and relationships through the use of original objects by first-hand experience and by illustrative media rather than simply to communicate factual information."[11]

Museum methods which aid knowledge-gaining behavior would be an interpretive technique. In the Milwaukee Art Center, the author experienced such an aid. In a number of small art exhibits were placed lounge seating and a telephone pedestal. A list of questions were printed on the pedestal related to the huge posters exhibited. The seating increased the author's length of stay and the telephone provided interaction with the exhibit. The author departed with considerably more knowledge of the artist's insight into eye movement as it related to the posters and advertising. This had been the information imparted as a result of dialing the number

[11]Tildon, F. 1957, "Interpreting Our Heritage," University of North Carolina Press.

relating to the questions printed on the pedestal: by utilizing the telephones, the museum was able to record a large amount of information, yet the visitors had the choice of exactly what information he would be exposed to. The simple provision of the "aides" cause visitors to slow the pace of their visit, and take the time to become involved.

For the average citizens, a living museum must be one that carries out the activities of interpretation as well as primary functions. The author here is not degrading the function of many fine collections-oriented museums who seem to have only this primary function as their goal. For some, research and preservation may be their ultimate goal with the role of education playing a minor part in the museum's overall program. For example, the International Folk Art Museum in Santa Fe, New Mexico, provides the public with a complete collection in the areas of religious folk art; santos, retablos, etc. A portion of the collection is exhibited with utmost care for preservation. To a visitor with little knowledge of the meaning of the artifacts, the exhibit is uninspiring. Though, without this type of museum, many treasures of the area would be lost and thus limit research on the given subject. Without this indepth information, an interpretive museum could not provide an adequate presentation of the subject.

A living museum can be a living historical exhibit like Colonial Williamsburg, where a day-to-day reenactment of history occurs as it did years ago in the refurbished

original setting. Similarly, Old Sturbridge Village in Massachusetts goes beyond the basic experience of moving through an outdoor exhibit, but invites visitors to "role play" and take part in the 19th century events. Although the surrounding environment adds a great deal, this same technique can be experienced in a city museum. Regardless of resources, the quality of the learning experience is the key to any living museum. A professor of psychiatry and behavioral sciences has defined three principles which describe a successful learning experience.

1. Learning involves growth and differentiation of an already existing behavioral repertoire and thus requires experiences that are compatible with existing interests, needs and skills.

2. Learning must evoke a sense of wonder, excitement and curiosity.

3. The behavior that is elicited during the learning process must have positive and interesting consequences for the learner.[12]

The living museum experience is not a passive one; the sense of activity and involvement are the measure of its success. Interactions between the museum, its visitors and the site are its lifeblood. Reaching out to involve those traditionally in the role of onlooker and transmitting to them both a source of knowledge and the methods for gaining knowledge is the purpose of a living museum.

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[12] Chase, Richard A. 1975, "Museums as Learning Environments," Museum News, Sept./Oct. 1975, pp. 37-39.

PART II

POLICY PROGRAM*

Goals and Objectives

The goal of the Museum of Albuquerque is to stimulate the interest of each visitor so that he or she may further educate themselves with information available. This goal is greater than the simple spoon-feeding of information through exhibition techniques: it is to demonstrate a first-hand experience through the exhibit in one of many ways. The objectives, then, must be to provide the largest variety of experience in a common communication which will support the goal of self-education and self-realization. The Museum of Albuquerque should focus these learning experiences upon history, science, and art and should attempt to collect and conserve those objects which can be used by staff in a way which will further the community's education upon these subjects. Each visitor must be considered a social resource that will have gained by each new visit to the museum. The visitor should leave the Museum of Albuquerque with a feeling of discovery, pride, commonality with fellow man and educational stimulation.

Museum Programs

The museum should limit its programs to the areas of education and exhibition in the fields of history, science

*Operation and function relation to an architectural program.

and art.

Acquisitions programs should narrow its focus to those artifacts and secondary materials which fulfill the goals and objectives of the museum. Collections donated to the museum should be accepted with the stipulation that the collection will be used in the most beneficial interest of the donation and the public. Thus, the museum reserves the right to break up a collection, perhaps even to distribute the collection to other museums whose programs better fit the particular object or artifact.

The existing program of exhibits should continue with two basic types of displays: temporary shows and permanent exhibitions. Temporary shows in arts and crafts, science, and hsitory programs should be expanded to include as many possible visitor experiences as the museum may be able to provide. A permanent history exhibit should be established with a program of enlargement to correlate to an exhibit master plan. All exhibits should be stimulating to the visitor with common use of secondary materials and expansion of the visitors possible experiences.

The present education program should be expanded and the quality upgraded. The experience and education received should be oriented toward self-discovery through the docent program with the assistance of school groups. This method of information conveyance should replace the oftentimes overwhelming experience of lectures, which contain large amounts of uninspiring facts. This entails

coordination with schools to help teachers and students understand the museum's resources as learning aids. The educational program and exhibits must function together to provide tools which guide the individual through a successful learning experience.

Funding Program

The museum should create a six-year budget program which should reflect goals for growth in programs, staff, housing needs, and support materials. This program should be introduced to and approved by the City Administration as an aid in overall city fiscal planning. A detailed one-year subsequent program should be presented to the budget office and should be funded in accordance with the adopted goals for growth with any major changes in growth policy needing review through administration.

A six-year capital improvements program should be submitted to the City Administration with goals and objectives as the long-term planning base for new capital construction. This program should be broken into three consecutive bond elections to accomplish and realize goals for the museum.

The museum staff should make a determined effort to familiarize themselves with and acquire federal grants for museums. If a federal fund is found to yearly grant monies, some estimate of possible acquireable amounts should be programmed into overall budgetary planning.

A museum gift committee should be established to properly publicize, record and thank all donors. The committee should spearhead a drive to acquaint the community with the museum and the need for support donations. Though this group could accomplish a great deal, the museum must depend upon more stable monies and collections sources in order to be successful.

Organization of Personnel

The director of the department should set policy for staff to provide a clear direction of growth for the Museum of Albuquerque. The director should supervise all staff positions and should be responsible for all major activities within the department. The director should serve as liaison between upper administration and staff activities. The staff position of director is the heart of a successful program to the community. The function of the director should be as broad in scope as necessary for the growth and success of the department.

Clerical staff should be comprised of executive secretary, clerk-typist and receptionist. The one secretary and clerk-typist should manage and coordinate museum correspondence, support, supplies and all payroll, etc. for the administration. The receptionist should be responsible for interaction with the public as they enter the museum. The receptionist should be trained to impart information as

needed, both in person and by telephone, taking responsibility for all incoming calls.

Technical staff should include a curator of exhibits, curator of history, a researcher, a registrar, two catalogers and a carpenter. Curators are chiefly responsible for research information as well as its use and programming in design of exhibits. The researcher is responsible for providing information that has been gathered on subjects, artifacts or persons related to a proposed exhibit. The registrar's main responsibility is control of collections. The two catalogers assist in this activity which entails accepting, recording, storing and monitoring use of artifacts. The carpenter is responsible for providing physical props and settings for exhibitions. All technical staff work with collections as well as assist in construction of exhibits.

Support staff are comprised of janitor, surveillance officer, and volunteer assistants. The custodial services as well as general building maintenance are provided by the janitor. The surveillance officer should monitor persons entering or exiting the museum at control points. Volunteers should provide assistance as necessary to help in the operation of the museum. These activities include food preparation, serving at exhibit openings, perhaps help in exhibit construction or giving information. An organized group of volunteers should be responsible for operation of the gift shop. These volunteers operating the shop may double in

assisting the receptionist as needed. The surveillance officer may also be trained as a reception-type person providing information or assistance. These persons should all keep well-informed about the various exhibits as well as operations of the museum for more efficient communication to visitors.

Facilities

A brief description of space of facilities needed to support the proposed policy program should be presented at this time. This description should not be interpreted as an architectural program but rather a statement of support facilities needed for this policy program.

Offices. Administrative offices allowing for controlled public access should be the actual work areas and should provide a pleasant environment with exterior view relief. Within this area, private conference areas should be provided.

Exhibit Material Areas. Curatorial offices should relate to staff activities of processing exhibits, artifacts or collections. Interaction among staff is critical to this facility function. Exhibit material areas are needed to receive, record, repair, and store artifacts. This area must be supportive to conservation of artifacts as well as provide space for creating exhibits.

Receiving areas for artifacts should be out of the way of the main entry while relating to curatorial staff areas.

A library is needed to provide book/magazine storage as well as a quiet space in which the curators can research. Curators can also use this zone as a meeting place with the public. The library should also store materials relating to the "secondary materials" program, and provide space in which to use them.

Meeting rooms are required for the needs of smaller groups. School groups will be the major users. These rooms will be used for practical work activities which could be aided by a direct relationship.

A kitchen/lunchroom is desirable for staff use and must provide space for preparation of exhibit opening refreshments. This area should be accessible for public area service as well as to staff areas.

Public Areas. Public areas are needed to house large groups approximately once a month for exhibit openings and other museum related events without endangering the exhibit.

A small auditorium is needed for meetings of museum groups and school groups. This space will be used for lectures, movies, demonstrations or other media to communicate information. The museum will schedule the use of the auditorium for non-museum related functions which bring people to the museum which in turn aids in "advertising" museum programs.

A courtyard space should be provided to allow out-of-door involvement with some educational aspect of the exhibit. A courtyard is an isolated space which is capable

of providing areas where the visitors may become involved with some activity without being distracted by other museum activities.

A sales area should provide revenue for the museum as well as offer for sale items which relate to the exhibits, and if possible, directly relate to successful learning experiences outside the museum.

A main lounge area is needed to provide a space where visitors can rest comfortably or wait for an activity to begin. Lounge areas should be provided wherever possible to lengthen stays by relieving museum fatigue.

Near the entry to the exhibits an orientation area is needed to direct visitors to particular exhibits, answer questions, and distribute complimentary literature of museum information.

The exhibition areas will be divided into a permanent historical exhibit, temporary exhibits and a conceptual exhibit. All exhibits will contain the use of secondary material: films, slides, video cassettes, hands-on material, etc. which relate directly to the exhibits. Activities relating to the exhibits which stimulate further involvement can be located anywhere within or on the exterior of the museum. Demonstrations could take place in courtyards, lobby, lounge, entries, etc.; anywhere that will draw potential visitors into the museum experience.

Site

The site should be studied to plan with the existing environment. Aspects of the study should include man-made influences, natural setting and factors, circulation existing and proposed, for both vehicles and pedestrians. Importance should be placed upon logical sensitive use of the site. Existing buildings which can be used for design and programming use of secondary materials toward educational ends should be utilized. A basic site plan for circulation, building orientation, and area interaction will be the result of research and planning.

The use of the site shall support the feeling that the public is welcome within. This may be facilitated with secondary materials, exterior exhibits or demonstrations, but especially through an inviting appearance from circulation and space.

Implementation

The policy program should be implemented along with the proposed building. The General Obligation Bonds from the October 1975 election will be adequate to provide primary functional facilities. Museum growth and space expansion will be based on the "Exhibit Master Plan" put forth by the Museum of Albuquerque 1976. This document basically programs expansion over the next six to ten years. Conceptual and temporary exhibits will open in the new complex in early 1978. The permanent exhibit will open in phases

with the speed of its growth, dependent upon acquisitions progress. It is hoped that this growth will be within the proposed six to ten years.

As exhibits and public spaces expand, storage and recording spaces will have to expand in order to house the growing size of collections.

As the museum continues a growth process over the next ten years, the objective of a stimulating educational experience will mean a need of growth of educational areas. This space growth should mean enlarging usable, as well as storage, areas for secondary materials. Growth of the museum to fulfill stated goals and objectives will follow a methodology which will be master-planned and adopted by elected officials. The museum as a complete complex to serve the City of Albuquerque will not be seen for some years. The architectural program put forth in this thesis will concern itself only with the first phase of this growth. These limitations were imposed by the author in order to deal within a realistic situation. Imposed funding, space and needs have been dealt with to provide a workable design program for the purpose of this work.

PART III

Architectural Program

The architectural program is the information which the client communicates to the designer that is the basis for the physical design. The program should define the final product without being involved with solutions. In this method of programming, goals and facts are gathered in one phase to be used as guides for information gathering upon concepts, needs and finally, a problem statement. If the design of the building can be considered as a problem, the information gathered for the architectural program provides the basis upon which to solve the problem.

The author has broken the architectural program into five sections which will be investigated in this thesis. The five sections are as follows:

GOALS
FACTS
CONCEPTS
NEEDS
PROBLEM STATEMENT[13]

Each section will investigate information which will be categorized under form, function, economy and time. If each category plays some part in the overall program, a balanced program will evolve. The evolution of this program will result in a concise and useful problem statement. The physical design of the building will reflect research on general museum layouts, but the focus of the physical design will be upon the particular qualities criteria set forth by a

[13] Problem Seeking, by William Pena and John Focke, 1969, Caudill, Rowlett, & Scott, 1111 West Coop South, Houston, Texas 77027.

building and its environment for a museum for the City of Albuquerque.

GOALS

1. The Museum has roughly defined its square foot needs as follows:

Temporary:		4,500 sq. ft.
Art	3,000	
History/Science	1,000	
Conceptual	500	
Permanent:		9,000 sq. ft.
Natural American Prehistory	2,000	
Spanish American Introductions	2,500	
Anglo American Introductions	2,500	
Albuquerque and the Middle Rio Grande	2,000	
Total Exhibit Area		13,500 sq. ft.
Total Support Area		26,500 sq. ft.
Preliminary Estimate of Needs		40,000 sq. ft.

2. The Museum must make itself more accessible to people who would not make a conscious effort to experience it.

3. The Museum should capitalize on the resources around it: the site and its visitors.

4. The building must acknowledge the scale of surrounding spaces, the character of Old Town, and architecture of the Southwest.

5. The building must respond to energy-saving design and energy producing technology without damage to the collections.

6. The building must provide for the primary functions: collecting, conserving and exhibiting--in a secure environment.

7. The building must provide a good working environment for the staff.

8. The Museum must take into consideration the use of existing structures.

Function

1. The Museum must provide spaces which support the primary functions as well as interpretive functions.

2. The Museum must decrease the demand on resources, i.e., security staff and professional staff time, and support volunteer resources.

3. The building must respond and be accessible to a broad spectrum of society.

4. The Museum must capitalize on resources of cultural value which both site and visitor offer.

5. The Museum must be able to present its subject so that visitors can relate their lives to the Museum collection.

6. The Museum must aid the exhibition designer in incorporating a diversity of choice for the visitor with the opportunity for concentrating attention to induce an effective learning experience.

Economy

1. The total capital improvements program budget for the museum totals $2,900,000. An additional $150,000 has been pledged by the City for a portion of the cost of a solar heating system.

2. The building must respond to possible revenue-producing activities for ongoing museum funding.

3. Priority in terms of budget allocation must be given to spaces which the public comes in contact with.

Time

1. The Museum has proposed an estimate of two years for design and construction starting early 1976. They hope for an opening date in early 1978.

2. The Museum plans to open with the temporary exhibit space only. The permanent exhibit will be added in yearly increments, the first portion opening in 1979.

3. The building must respond to possible future expansion needs.

4. The building must respond to possible off-hour use without decreasing security.

FACTS

FIGURE 2 - MUSEUM OF ALBUQUERQUE SITE LOCATION

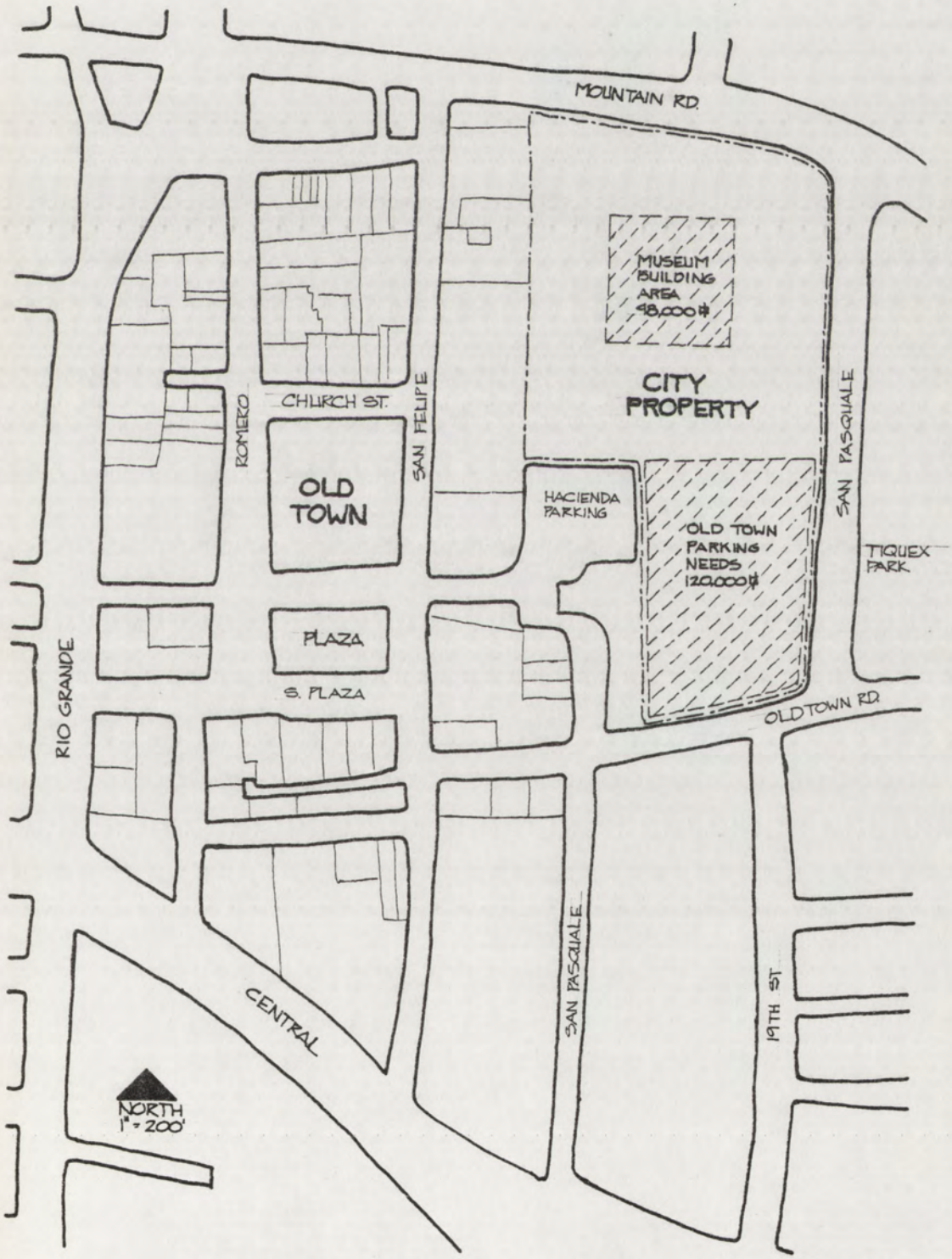
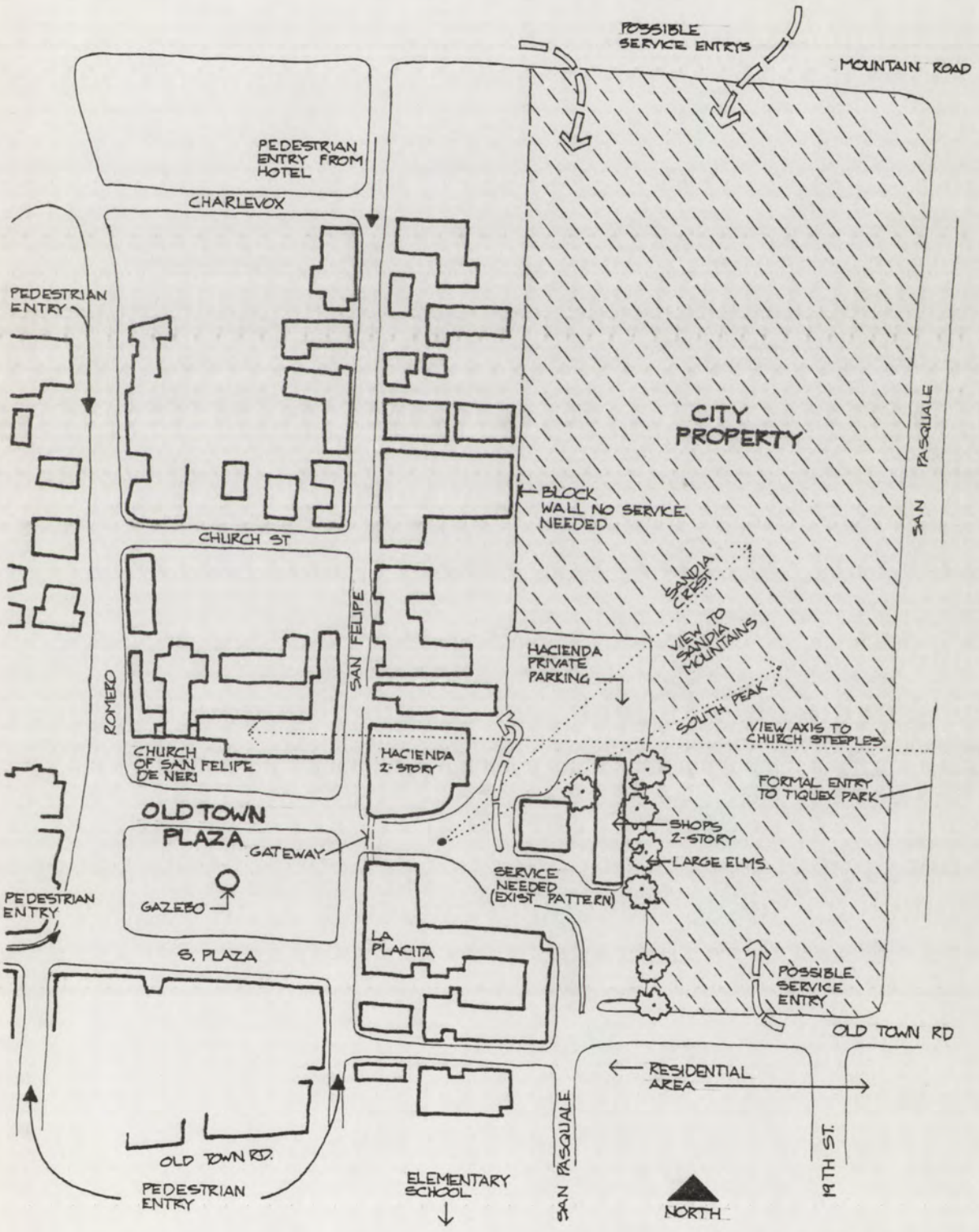


FIGURE 3 - MUSEUM OF ALBUQUERQUE SITE ANALYSIS



Building Code Analysis

For protection of public and artifacts, the author has decided that the Museum should be classified as Type I construction and will be sprinkled throughout.

1. Applicable codes:

   Uniform Building Code (1973)
   Life Safety Code
   Barrier Free Code, Chapter 41 of the 1973 New Mexico Uniform Building Code
   National Fire Protection Association Code as applicable
   Uniform Plumbing Code 1973
   American Society of Mechanical Engineers Elevator Code 1971
   National Electric Code 1975

2. Building Uses.

   The following uses will be on grade level

   auditorium
   meeting rooms
   offices
   library

   The following uses will be on the upper levels:

   office
   storage

   The following uses will be on the lower level:

   exhibits
   carpentry shop

3. Building Area: gross area = 41,100 S.F.

4. Occupancy Classification:

   U.B.C.

   B-2 (chapter 7) public areas

   F-2 (chapter 11) office areas

Life Safety Code

assembly occupancies (chapter 8)
Class B 300-1000 persons

business occupancies (chapter 13)

5. Construction Classification: Type I

6. Fire Zone: III (reference--Albuquerque Fire Department)

7. Area Limitations:

Unlimited with Type I construction with Type I construction occupancies B-2 and F-2 cannot have exterior walls less than five (5) feet from other buildings and openings must be protected up to five (5) feet. Actual area is 40,000± S.F.

8. Number of stories: height unlimited
Actual number of stories: 2.

9. Exit requirements:

U.B.C.

Exit widths

critical public areas(B-2)	S.F.	area/person table 33-A	code occupancy	exit width in feet
exhibits	13,500	15 S.F.	900	18
auditorium	1,725	7 S.F.	246	5
recep/orien/ lounge	2,128	15 S.F.	141	3
critical office areas(F-2)	S.F.	area/ person	area occupancy	exit width in feet
storage	8,500	300 S.F.	29	1
upper offices	3,528	100 S.F.	35	1
administrative offices	984	100 S.F.	10	1

No. of Exits

3302(a) upper floor must have 2 exits, one on either side of space.

Every story having occupant load of 999 needs 3 exits.

Distance to Exits

3302(d) 200 feet in sprinkled building (maximum).

100 feet can be added if moving through corridor with 1 hr. protection, 7 ft. high, 44 in. wide. Lobby is considered corridor.

Corridors

3304(f) dead end corridors - 20 ft. maximum.

Buildings without sprinkler systems

3802 Spaces greater than 1500 S.F. must have 30 inch openings every 50 linear feet for fire access.

Life Safety Code

Applicable Chapters - U.B.C. supercedes Life Safety Code on similar codes.

Chapter 5 - exits
Chapter 6 - features of fireproofing
Chapter 8 - assembly occupancies
Chapter 13 - business occupancies

10. Detailed construction requirements

Material Fire Ratings

	Table 17A (type 1)	Table 43-B
exterior walls	4 hr.	6" C.M.U. U.L.approved units
interior bearing walls	3 hr.	8" C.M.U. U.L.approved units
exterior non-bearing walls	4 hr.	6" C.M.U. U.L.approved units
interior partitions	1 hr.	steel stud with 5/8 inch sheetrock on both sides

Material Fire Ratings (con't.)

	Table 17A (type 1)	Table 43-B
shaft enclosure	2 hr.	8" C.M.U. U.L. approved units
permanent partitions	1 hr.	steel stud with 5/8 inch sheetrock on both sides
floors	2 hr.	4" reinforced concrete
ceilings	2 hr.	4" reinforced concrete

Zoning Code Analysis

1. Applicable codes:

   Comprehensive City Zoning Code
   City of Albuquerque

2. Building description:

   City Museum which would include public space and office space.

3. Building area: gross = 41,000 S.F.

4. Zoning district: M-1 (trucking terminal) application with City for zone change to SU-1.

5. Zone Use Regulations:

   Section 30.A.3.

   In approving application, the Planning Commission may impose requirements as may be necessary to implement the purpose of this ordinance.

1. Groups involved:

FIGURE 4 - MUSEUM OF ALBUQUERQUE GROUPS INVOLVED IN OPERATION

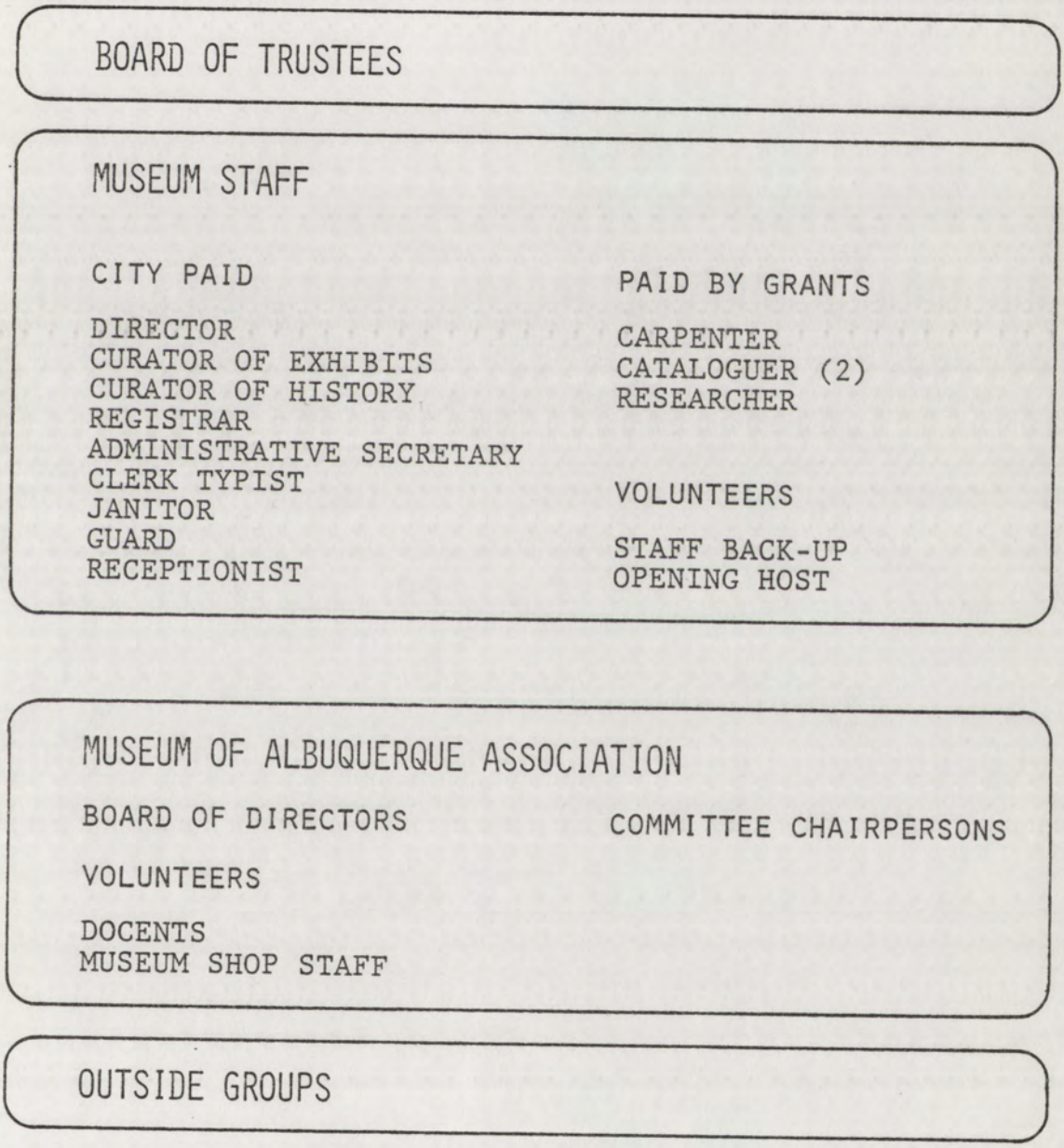
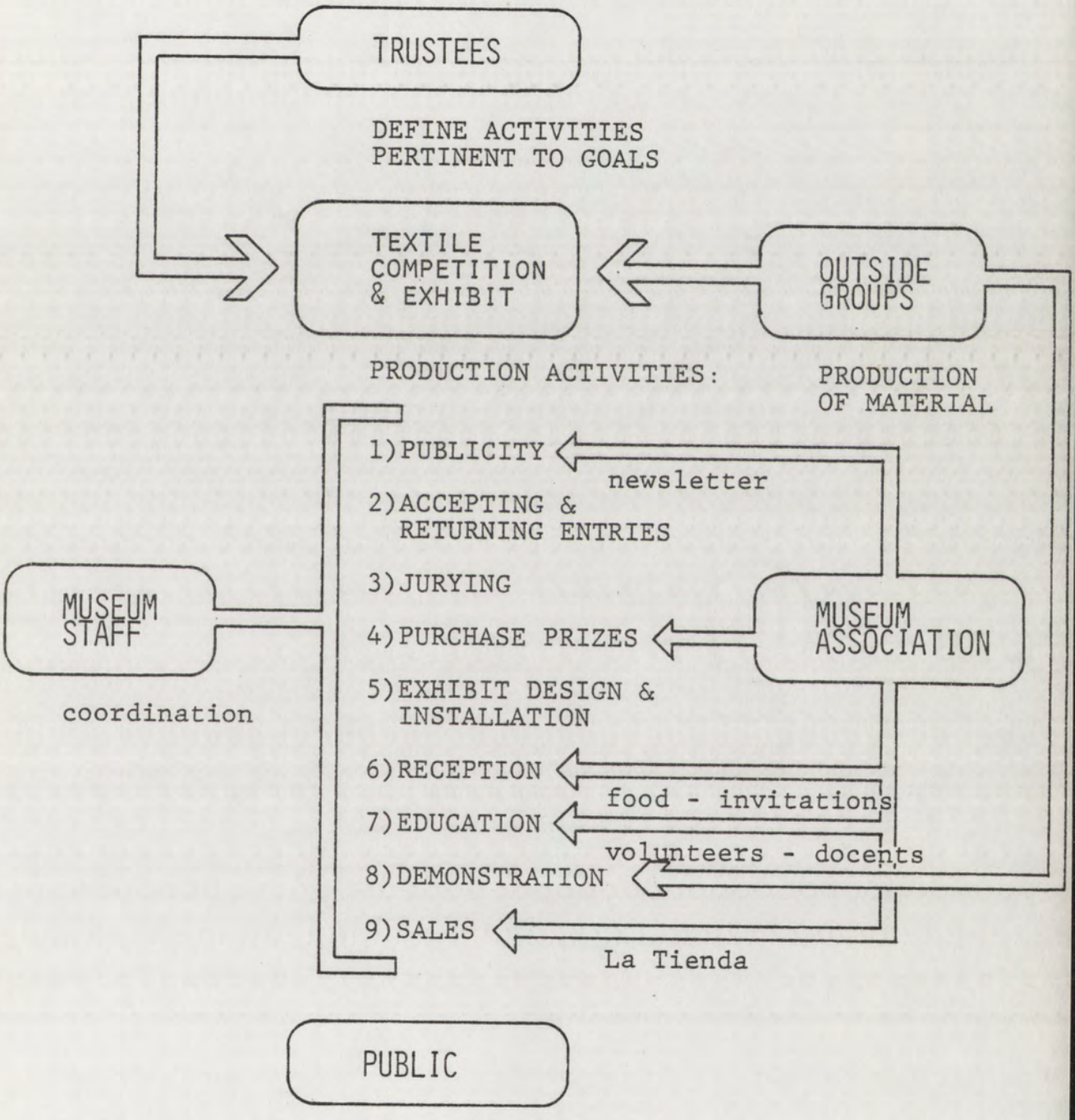


FIGURE 5 - MUSEUM OF ALBUQUERQUE GROUP RELATIONSHIPS INVOLVED IN TEMPORARY EXHIBITS



Economy

1. Square foot construction costs for museums in 1976:

low average = 36.51

average = 40.35

high average = 44.28

2. Staff salaries are the greatest expenditure of a museum's annual budget.

3. Increased attendance is a major factor in raising operating costs.

4. Most museums charge no admissions. If admissions are to be charged, control points are critical.

5. Possible sources or activities which can produce revenue for museum activities are:

lectures and movies

kitchen facility

sales - La Tienda

rentable meeting rooms.

6. $28/sq. ft. should be used for exhibition construction.

Time

1. Price escalation from October 1976 to mid-construction one year later will be 10%.

2. Present building budget will cover main museum functions. Large scale secondary material programs with a distribution program will require more space and staff. This would be programmed into the 10-year growth master plan

discussed earlier in the policy program. Normal alternates in case of building cost overruns on the main museum would be equipment and sitework.

AVERAGE BUILDING COSTS*

Building Type: Museums

Building System	low average $/SF	low average % TOT	average $/SF	average % TOT	high average $/SF	high average % TOT
Foundations	$ 1.96	5.6%	$ 2.07	5.3%	$ 2.19	5.1%
Substructure	1.72	4.9	1.82	4.7	1.92	4.5
Superstructure	9.70	27.6	10.28	26.5	10.85	25.5
Exterior Closure	3.87	11.0	4.47	11.5	5.11	12.0
Roofing	1.39	4.0	1.46	3.8	1.54	3.6
Partitions	2.69	7.7	3.28	8.4	3.87	9.1
Wall Finishes	0.53	1.5	0.65	1.7	0.77	1.8
Floor Finishes	0.47	1.3	0.57	1.5	0.67	1.6
Ceiling Finishes	0.73	2.1	0.89	2.3	1.05	2.5
Specialties	0.23	0.7	0.24	0.6	0.26	0.6
Conveying Systems	0.56	1.6	0.59	1.5	0.63	1.5
Plumbing	1.44	4.1	1.62	4.2	1.79	4.2
Fire Protection	0.38	1.1	0.42	1.1	0.47	1.1
HVAC	3.55	10.1	3.97	10.2	4.40	10.3
Electrical	3.38	9.6	3.78	9.7	4.18	9.8
General Conditions	2.18	6.2	2.31	6.0	2.44	5.7
Net Building Cost	34,78	99.0	38.42	99.0	42.14	98.9
Equipment	0.36	1.0	0.40	1.0	0.45	1.1
Gross Building Cost	35.14	100.0%	38.82	100.0%	42.59	100.0%
Sitework	1.37	3.9	1.53	3.9	1.69	4.0
Construction Cost	$36.51		$40.35		$44.28	

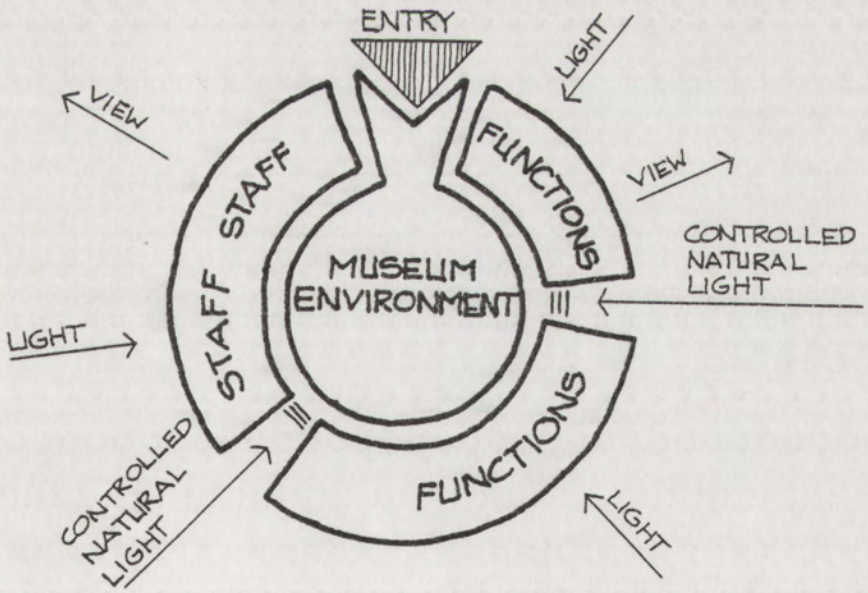
*1976, Dodge Construction Systems Costs, McGraw-Hill N. Y. Publishing Co.

CONCEPTS

1. Light: The control of light is essential for the creation of changing environments for the visitor.

Proper human working environments call for ample natural light.

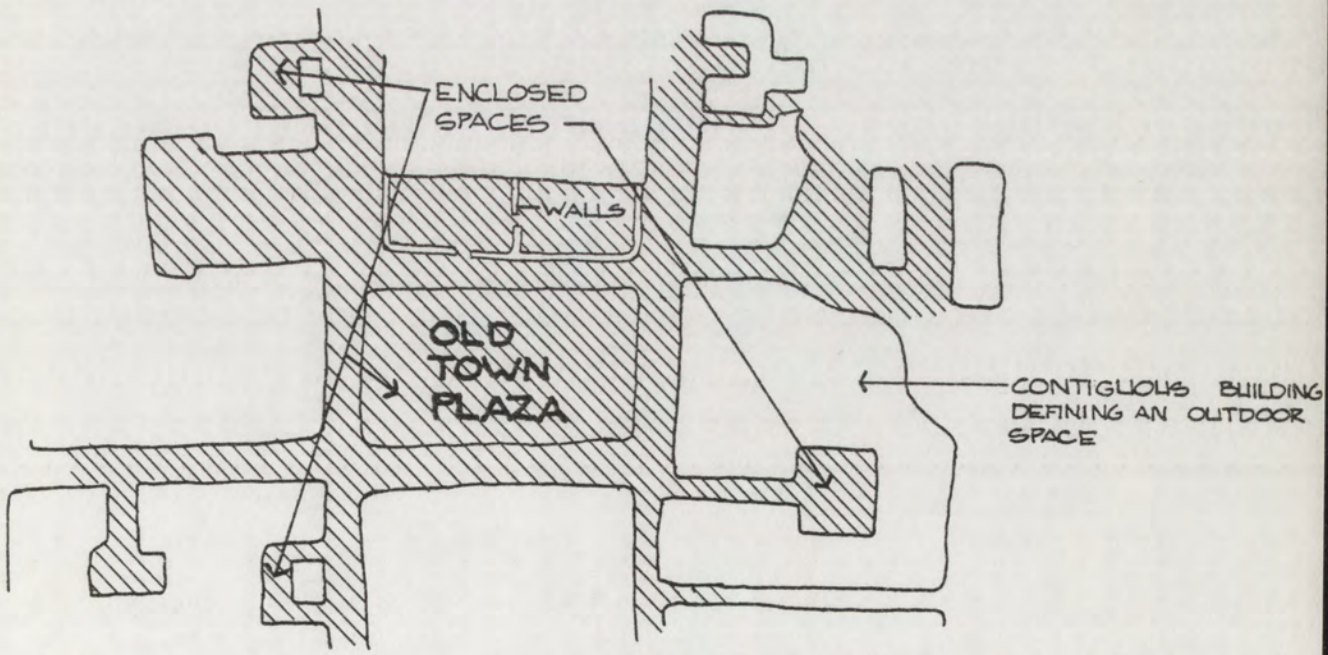
FIGURE 6 - CONCEPTUAL LIGHT CONTROL FOR MUSEUMS



2. Spatial experience: Old Town, as an example of Southwest architecture, is comprised of differing scales of exterior enclosed spaces. The use of contiguous buildings and walls to define outdoor spaces is an existing pattern of Old Town.

The Museum as a part of the Old Town experience should continue and support this spatial experience.

FIGURE 7 - CONCEPTUAL SPACIAL EXPERIENCE
OF ALBUQUERQUE OLD TOWN

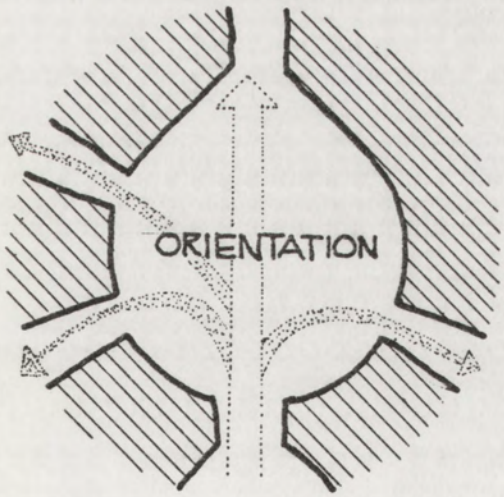


3. The orientation zone is a key space for:

   1) Diversity of choice for the local user.

   2) A movement path oriented to the new visitor.

FIGURE 8 - CONCEPTUAL ORIENTATION AREA



LOCAL USER NEEDS:

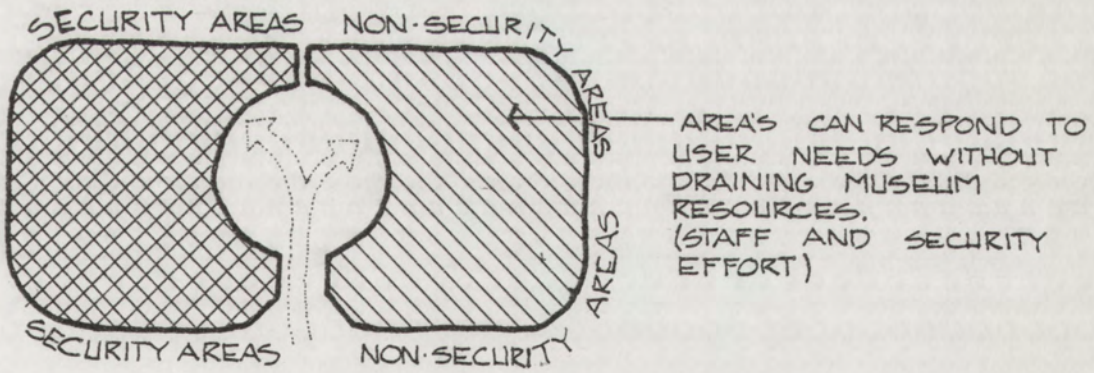
- A CLEAR UNDERSTANDING OF WHAT IS OFFERED
- CONSTANT EXPOSURE TO CHANGING PORTIONS

NEW VISITOR NEEDS

- CIRCULATION FLOW SO AS TO NOT MISS ANY PORTION OF THE MUSEUM
- RESTING POINTS - ANTI-MUSEUM FATIQUE

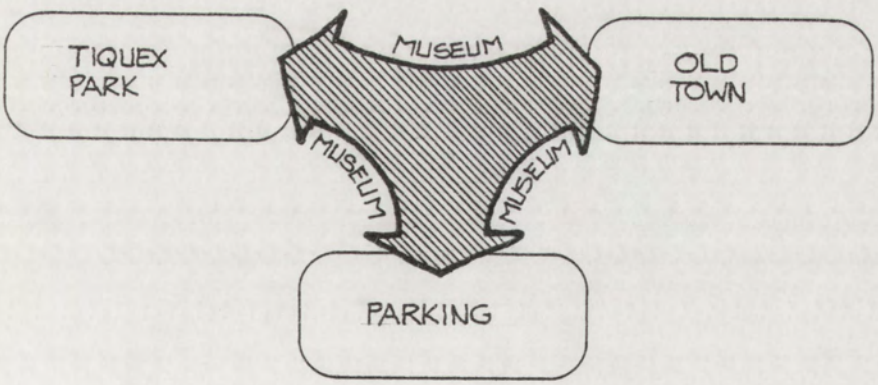
4. To decrease the demand on museum staff and facilities, a separation should be made between security and non-security areas.

FIGURE 9 - CONCEPTUAL SCHEME OF SECURITY AND NON-SECURITY AREAS



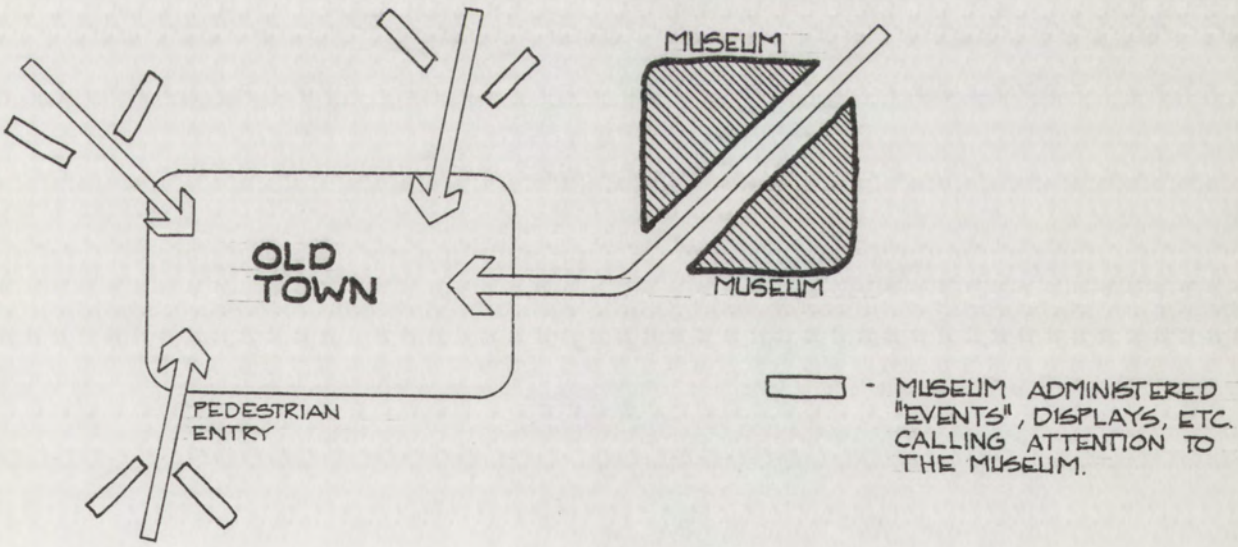
5. As an interface between functional areas of the site (i.e. Old Town, parking and Tiguex Park) the building should express these connections.

FIGURE 10 - CONCEPTUAL INTERFACE OF MUSEUM AND THE SURROUNDING AREA



1. The Museum as the entry to Old Town must work in conjunction with other minor entries to affect potential visitors as they enter Old Town.

FIGURE 11 - CONCEPTUAL ROLE OF THE MUSEUM AS ENTRY TO OLD TOWN



2. Functional Growth Plan

Phase I: Collections, conservation and exhibition and Secondary Material Program Development

Existing activities and functions will be moved into new building. Acquisitions of artifacts will be accompanied by supportive media use of secondary materials. These collections will emphasize upon museum goals and objectives.

Phase II: Secondary Materials Expansion and Distribution Program Development

As more media and secondary materials are gathered, expansion of exhibition space for these activities will be a must. A program of distribution of hands-on materials to community groups will be developed. All new or experimental programs will first be tested in exterior buildings.

Phase III: Collections and Secondary Material Expansion

Rather than expansion into new areas, the museum will continue to focus upon exhibition and education. The Museum will continue collections and secondary materials to support these activities. New storage, and curatorial office spaces will be needed.

3. Priority should be given in the following order:

a. Security of Collections

Conservation is the prime goal for future generations of visitors.

b. Relationships of Public Spaces

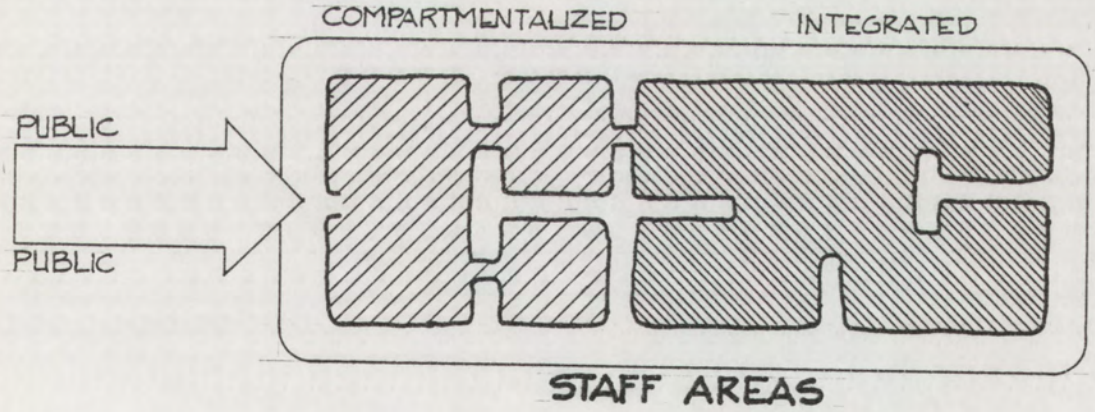
As a public function, the Museum's existence is for the enjoyment of the City's citizenry and visitors.

c. Relationships of Staff Spaces

The ease and flow of exhibit and collection material.

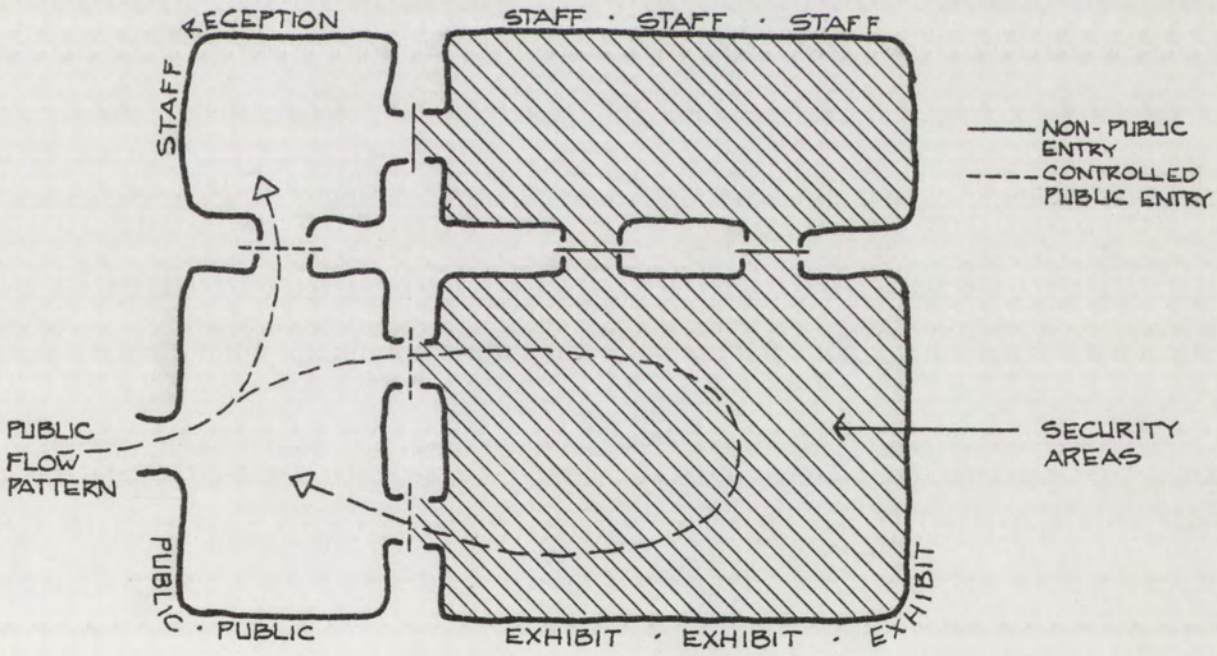
4. Within the staff area, public contact functions should be compartmentalized for privacy. Staff work areas should be integrated wherever functions are compatible.

FIGURE 12 - CONCEPTUAL SEPARATION OF OFFICES BETWEEN COMPARTMENTALIZED AND INTEGRATED SPACES



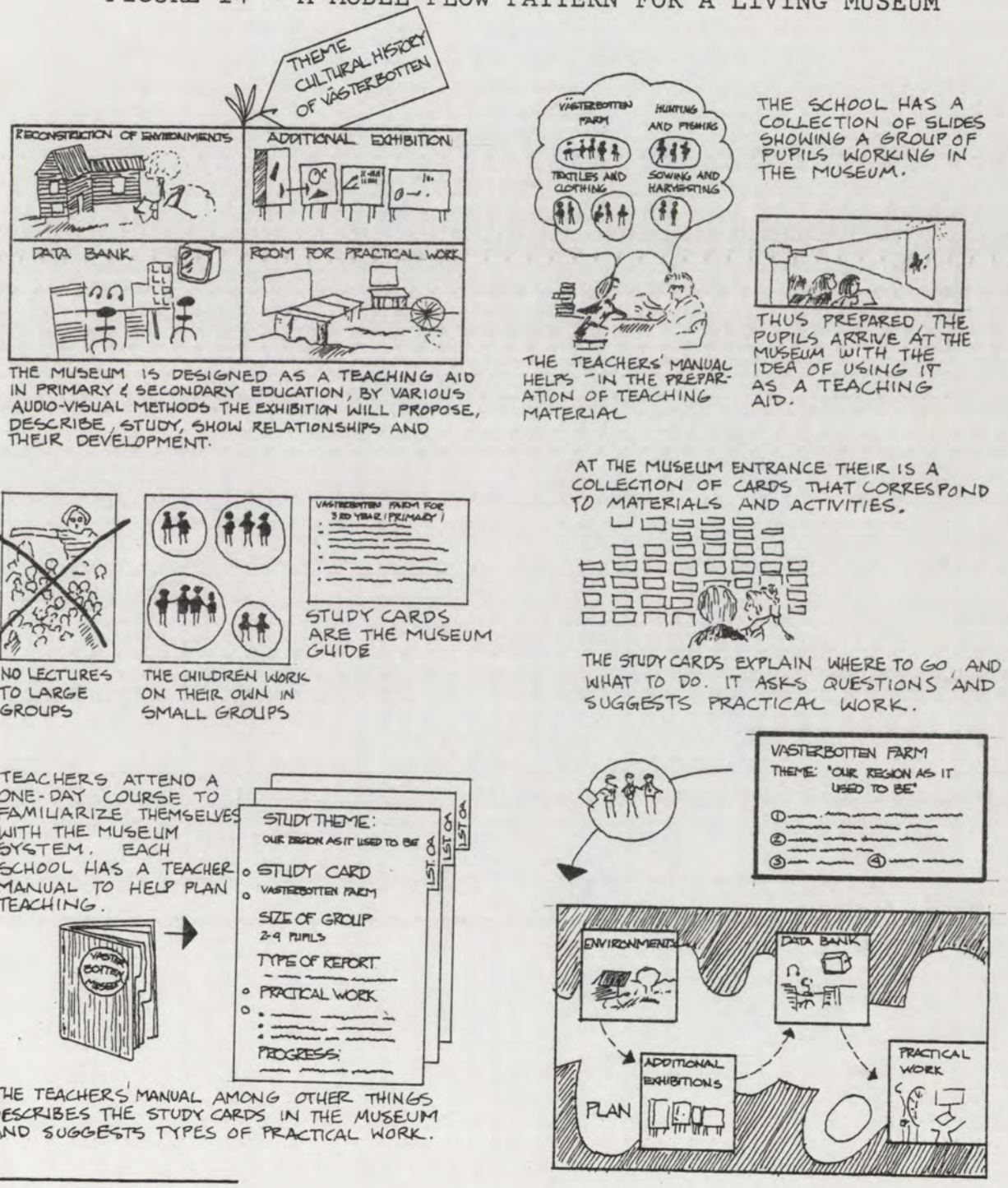
5. A clear and understandable system of 'locks' between areas will aid security. Location and form of entries can clarify areas open to the public.

FIGURE 13 - CONCEPTUAL INTERACTION OF SECURITY AREAS AND PUBLIC AREAS



6. The exhibition flow pattern should reflect the living museum concept of transferring information and its attestation at the same time.

FIGURE 14 - A MODEL FLOW PATTERN FOR A LIVING MUSEUM

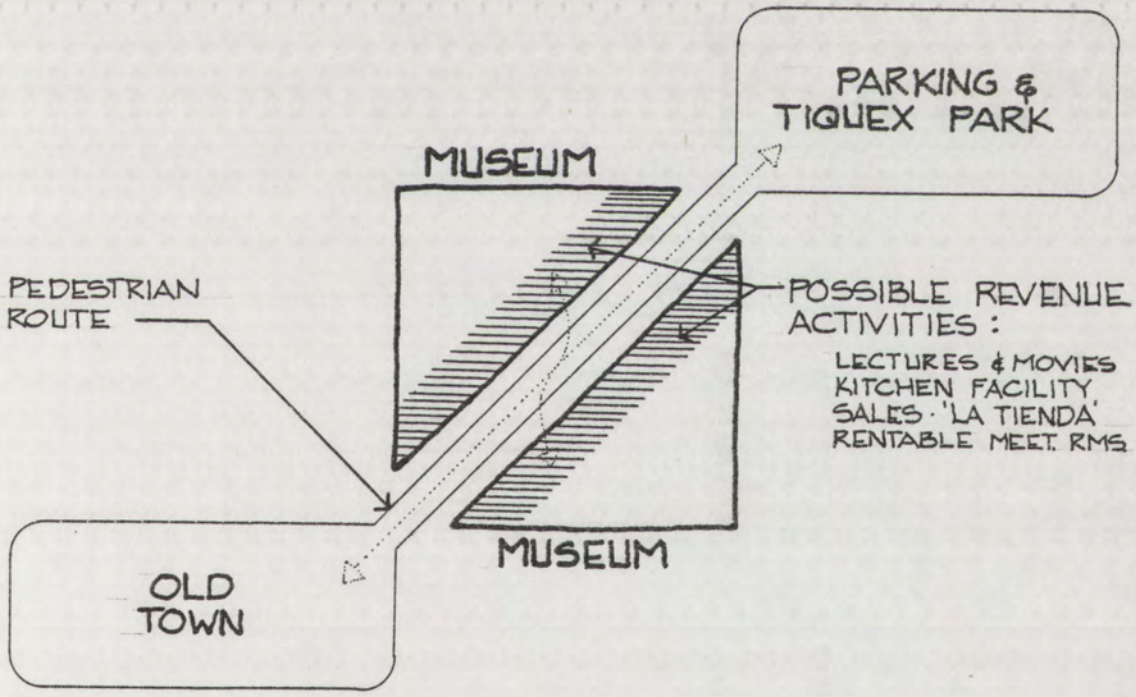


Jelinek, Jan, "Modern Living Museum," Museum, UNESCO, Switzerland, Vol. 27, No. 2, 1975; pp. 52 and 53.

Economy

1. Exposure of revenue-creating activities to pedestrian routes will bring vitality as well as financial support to museum activities.

FIGURE 15 - CONCEPTUAL SCHEME FOR ATTRACTION OF REVENUE ACTIVITIES FOR MUSEUM



2. Community involvement and volunteer participation help give the museum its 'living' feeling. In terms of quality these areas are listed below in order of priority.

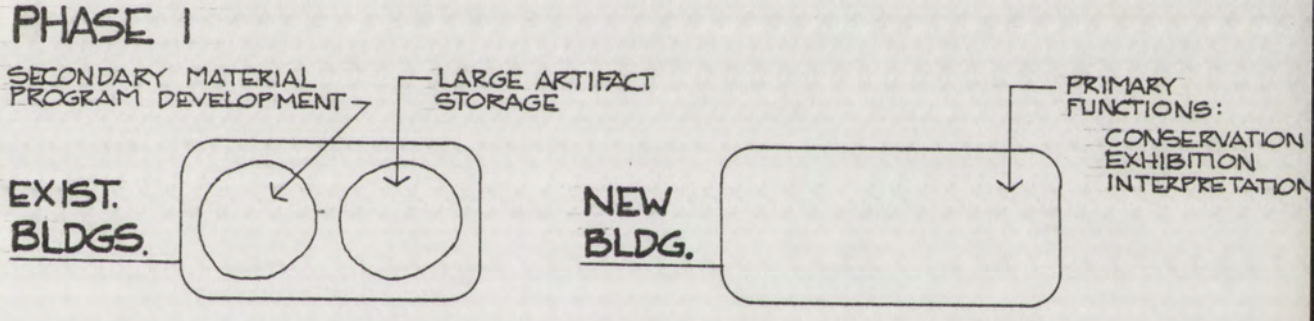
Budget distributions:

1. Volunteer areas; public spaces
2. Temporary exhibit area; staff office areas
3. Permanent exhibits

Time

1. Expansion concept.

FIGURE 16 - CONCEPTUAL ROLES AND SPACE OF BUILDINGS - PHASE I



NOTE: The space provided initially is sufficient for the primary functions (Phase I). Space in existing buildings will function as new program development. When new programs have developed to the point which justifies city investment, they will integrate with the new building (Phase II). Long range growth probabilities point to expansion of storage areas, educational functions and curatorial offices.

FIGURE 17 - CONCEPTUAL EXPANSION OF
ROLES AND SPACE OF BUILDINGS - PHASE II

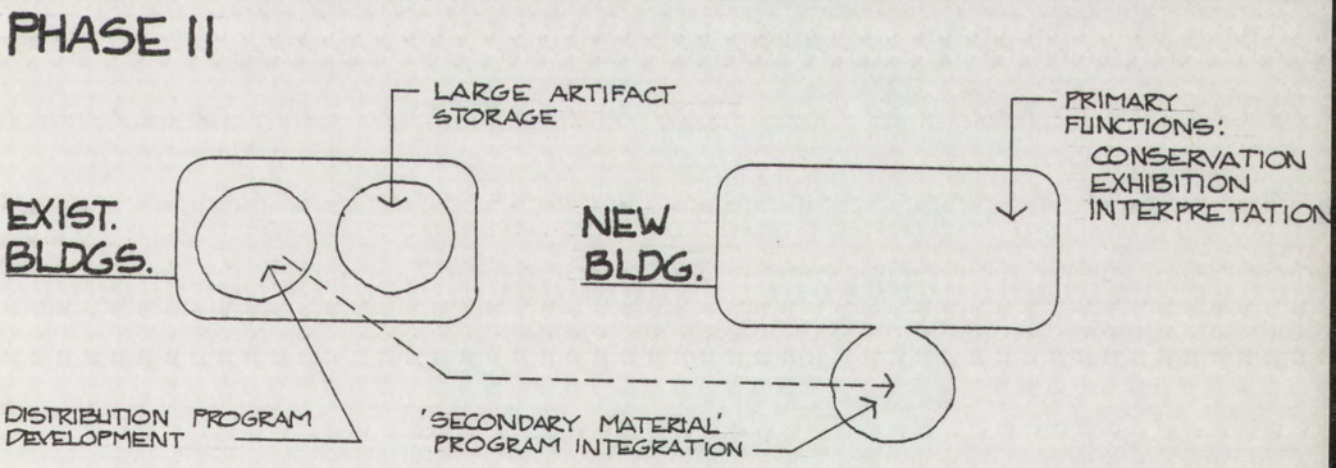
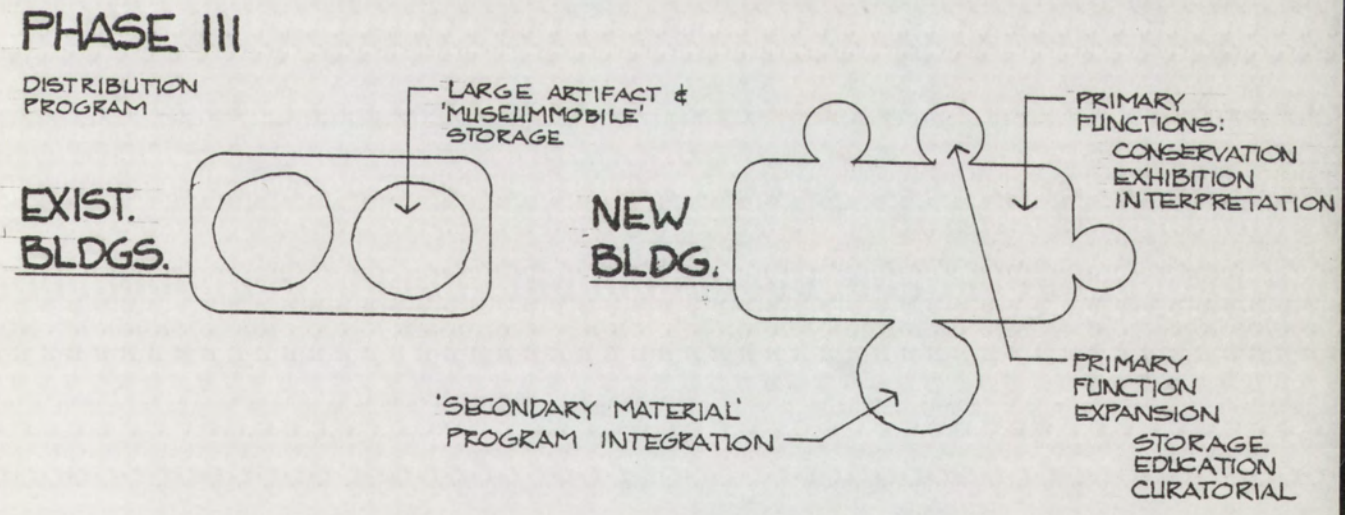


FIGURE 18 - CONCEPTUAL EXPANSION OF
ROLES AND SPACE OF BUILDINGS



NEEDS

Tare Area

In clarifying the Museum's rough estimate of square foot needs, it was found that storage and exhibit total assumed the inclusion of movement space which is usually treated as tare area.* Since movement space is included, a low tare figure will be used for the above areas. To cover wall thickness, circulation to the spaces, mechanical and maintenance areas, a tare figure of 10% was applied. For the remaining spaces a 30% figure will be added.

Accepting the fact that $3,050,000 is the total budget, calculations are needed to establish how far these funds will go. Approximately 65% ($1,982,500) of the total should cover actual construction costs. The remaining 35% ($1,067,500) should cover exhibits, movable equipment, professional fees, contingencies and administrative costs as well as the cost of escalation. Using the Museum's estimate of 40,000 square feet, an analysis can be made to determine if needs balance with budget.

Exhibits	13,500 S.F. + 10% tare area	=	14,850 S.F.
Storage	13,500 S.F. + 10% tare area	=	14,850 S.F.
Other	13,000 S.F. + 30% tare area	=	16,900 S.F.
Total Gross Area			46,600 S.F.

A. Building Cost

Gross Area = 46,600 S.F.

*Tare area: All area not included in the net assignable square feet (N.A.S.F.). This would include: non-programmed spaces, mechanical, maintenance, wall thickness, "phantom" corridors and covered outside areas.

Building Cost (con't.)

$40/S.F. average building cost

46,600 S.F. X $40/S.F.	=		1,864,000
B. Fixed Equipment			
1% of A	=	18,640	
Solar equipment in addition to the above. 1/7 of gross area equals collector area. 6657 X $30/S.F.	=	199,710	
			218,350
C. Site Development			
10% of A			186,400
D. Total Construction Budget			$2,268,750

The calculations above reveal that the Museum's goal of 40,000 sq. ft. is not in balance with the funding available. To balance, the Museum must decrease the cost per square foot or decrease the area of the building. Although $40 a square foot is the average for museums, it is low in comparison with other public buildings. Thus, a decrease in area would insure a balanced budget.

Presently, the Museum's collections are contained in approximately two thousand square feet. Acquisition for the first five years will focus on artifacts for the permanent exhibit, as well as secondary material to support it. The author feels it is feasible to decrease the amount of storage now and plan for its expansion in the future. A decrease of five thousand square feet will balance the budget.

PRELIMINARY SPACE ALLOCATIONS

Offices		
Director	144	
Executive Secretary	144	
Clerk Typist	100	
Conference Room	212	
Office Storage	144	
Public Relations	120	
Curator of Education	144	
Curator of Exhibits	120	
Curator of History	120	
Registrar	120	
Historical Society	220	
		1,588
Exhibit Material Areas		
Collection Storage*	13,500	
Loading Dock	144	
Receiving Unpacking	576	
Recording Examination	864	
Staging/Temporary Storage	1,152	
Photography	288	
Conservation Lab	144	
Carpentry Shop	864	
Projection Transmission	144	
		17,676
Public Areas		
Reception/Orientation/Lounge	2,128	
Restrooms	400	
Library	1,152	
Lunchroom Kitchen	288	
Auditorium	1,728	
Special Exhibit/meeting rooms	1,152	
Sales	388	
Exhibition Area*	13,500	
		20,736
Total Net Assignable Square Feet		40,000

*Includes interior movement space.

REVISED SPACE ALLOCATIONS*

Collections Storage

Preliminary allocation	13,500 S.F.	
Subtract from storage	5,000 S.F.	
	8,500 S.F. + 10% tare	= 9,350 S.F.
Exhibition Area	13,500 S.F. + 10% tare	=14,850 S.F.
Offices	1,588 S.F. + 30% tare	= 2,064 S.F.
Exhibit material area	4,176 S.F. + 30% tare	= 4,177 S.F.
Public Areas	7,236 S.F. + 30% tare	= 9,406 S.F.
		39,847 S.F.

*See section titled tare area.

SPACE NEEDS AND ALLOCATIONS

OFFICES

AREA: Director's Office

SQ. FT.

DESCRIPTION:

Function: A private, comfortable office with natural light (task light with natural light; windows should provide for view relief as well) and informal meeting area.

No. of People: 1 to 5

Type: Non-security/separated office spaces.

ENVIRONMENTAL CONDITIONS:

Noise: In a quiet zone

Light: Office task light--natural light with view relief.

Temperature: Office work temperature and humidity.

AREA TYPE AND RELATIONSHIPS:

- All visitors must be received by the Executive Secretary.
- Convenient to conference room and clerk-typist.

FIXED EQUIPMENT:

Tack type wall surfaces

Shelves

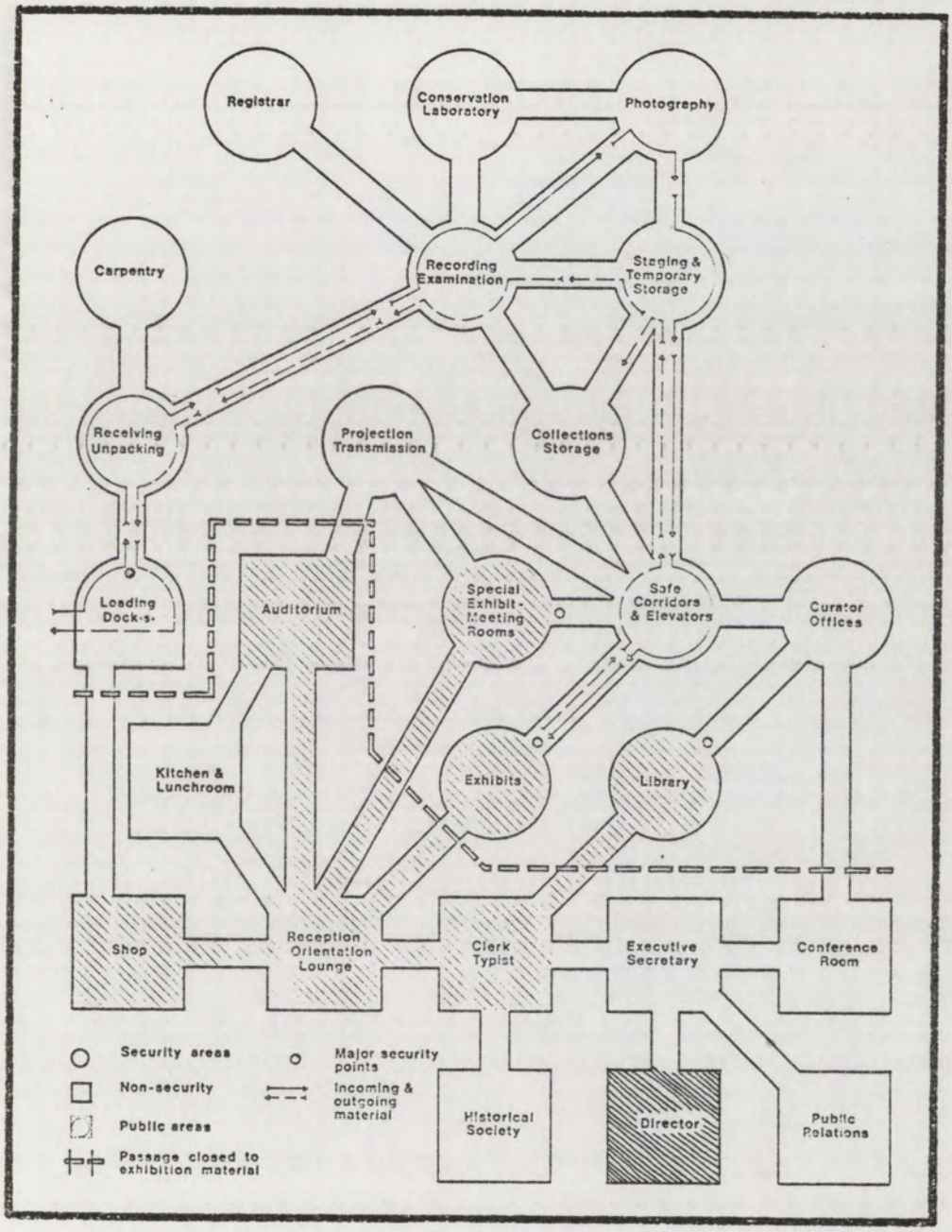
MOVABLE EQUIPMENT:

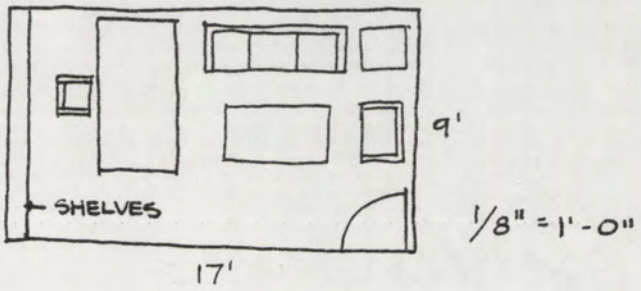
Desk, shelves, pinboard type wall surface (one wall), low table and chairs.

RELATED INFORMATION:

Prospective donors, city officials, staff members of associated museums and public organizations will interact with Director.

FIGURE 19 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: DIRECTOR'S OFFICE





AREA: Executive Secretary

SQ. FT.: 144

DESCRIPTION:

Function: Open, comfortable, receiving area where public wait for appointments with the museum staff in general.

Priority: Essential

No. of People: 5

Type: Non-security/compartmentalized

ENVIRONMENTAL CONDITIONS:

Noise: In a quiet zone

Light: Office task light--natural light with view relief.

Temperature: Office work temperature and humidity.

AREA TYPE AND RELATIONSHIPS:

- Relates immediately with Director's office.
- Convenient to conference rooms and clerk-typist.

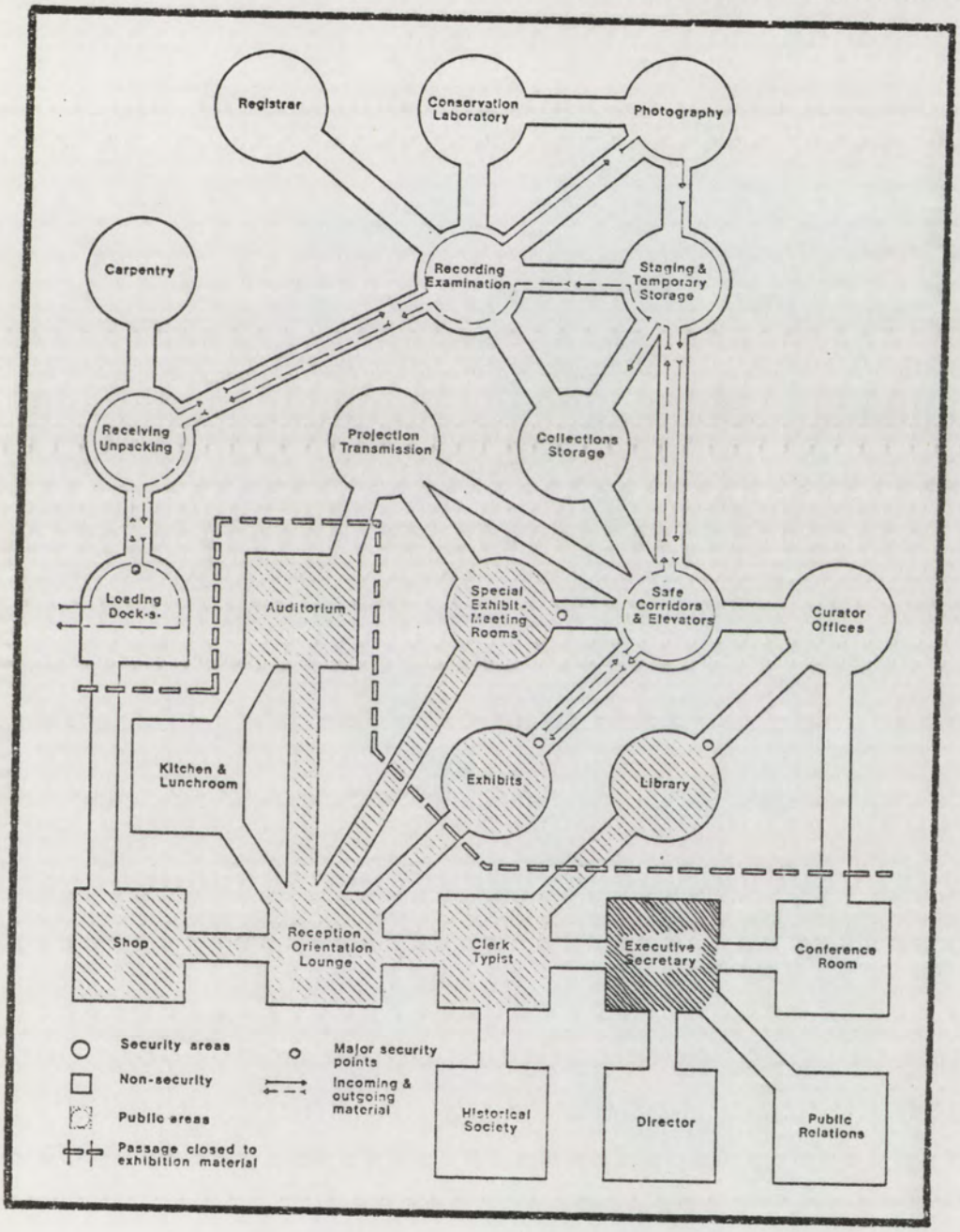
MOVABLE EQUIPMENT:

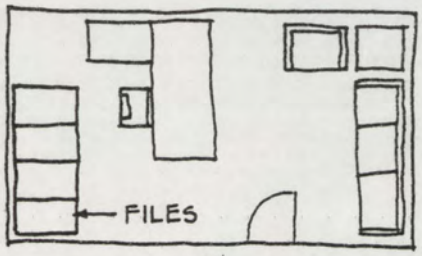
4 legal-size filing cabinets, coffee machine alcove, sofa and chairs, desk and typewriter.

RELATED INFORMATION:

Executive Secretary will take groups to conference.

FIGURE 20 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: EXECUTIVE SECRETARY'S OFFICE





AREA: Clerk-Typist

SQ. FT.: 100

DESCRIPTION:

Function

No.of People: 1

Type: Non-security/integrated

ENVIRONMENTAL CONDITIONS:

Noise: In a quiet zone

Light: Office task light--natural light with view relief.

Temperature: Office work temperature and humidity

Other: Security point

AREA TYPE AND RELATIONSHIPS:

- Relates immediately to library
- Convenient to curator offices, and office storage and executive secretary

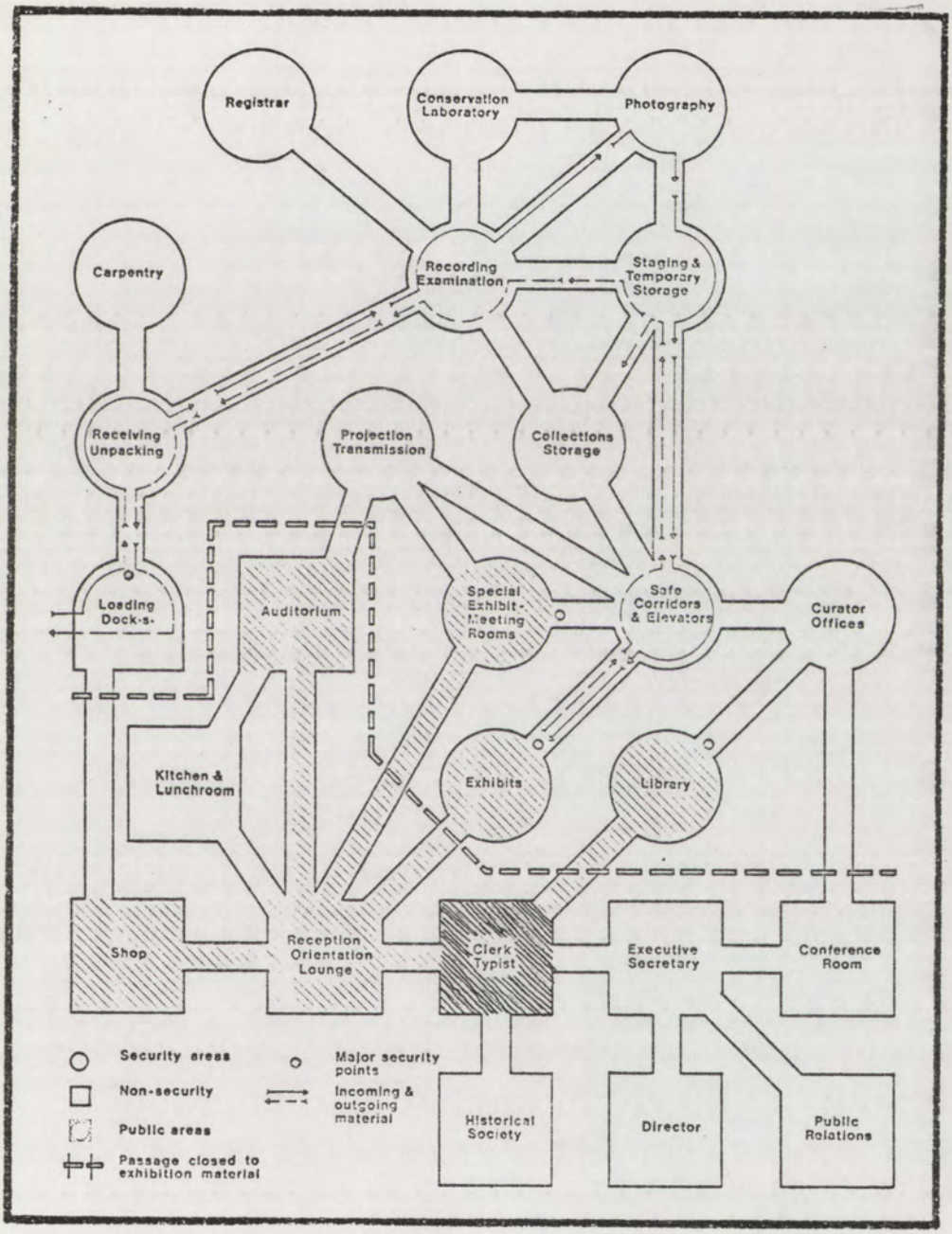
MOVABLE EQUIPMENT:

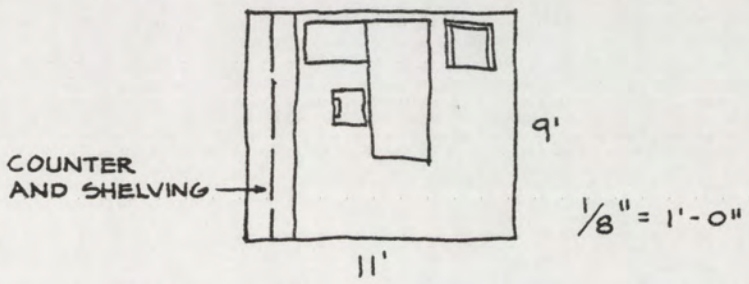
Desk, typewriter,
counter and shelving
1 chair

RELATED INFORMATION:

The clerk-typist will be in charge of library and receiving persons having business with curators.

FIGURE 21 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: CLERK TYPIST'S OFFICE





AREA: Conference Room

SQ. FT.: 212

DESCRIPTION:

Function: A very comfortable, light meeting room for staff use.

No. of People: 8

Type: Compartmentalized/non-security.

ENVIRONMENTAL CONDITIONS:

Noise: In a quiet zone

Light: Since this area is not a full-time use area, it need not have light; if it does, it should be controllable.

Temperature: Work area temperature and humidity.

AREA TYPE AND RELATIONSHIPS:

- Relates conveniently to executive secretary and office areas.

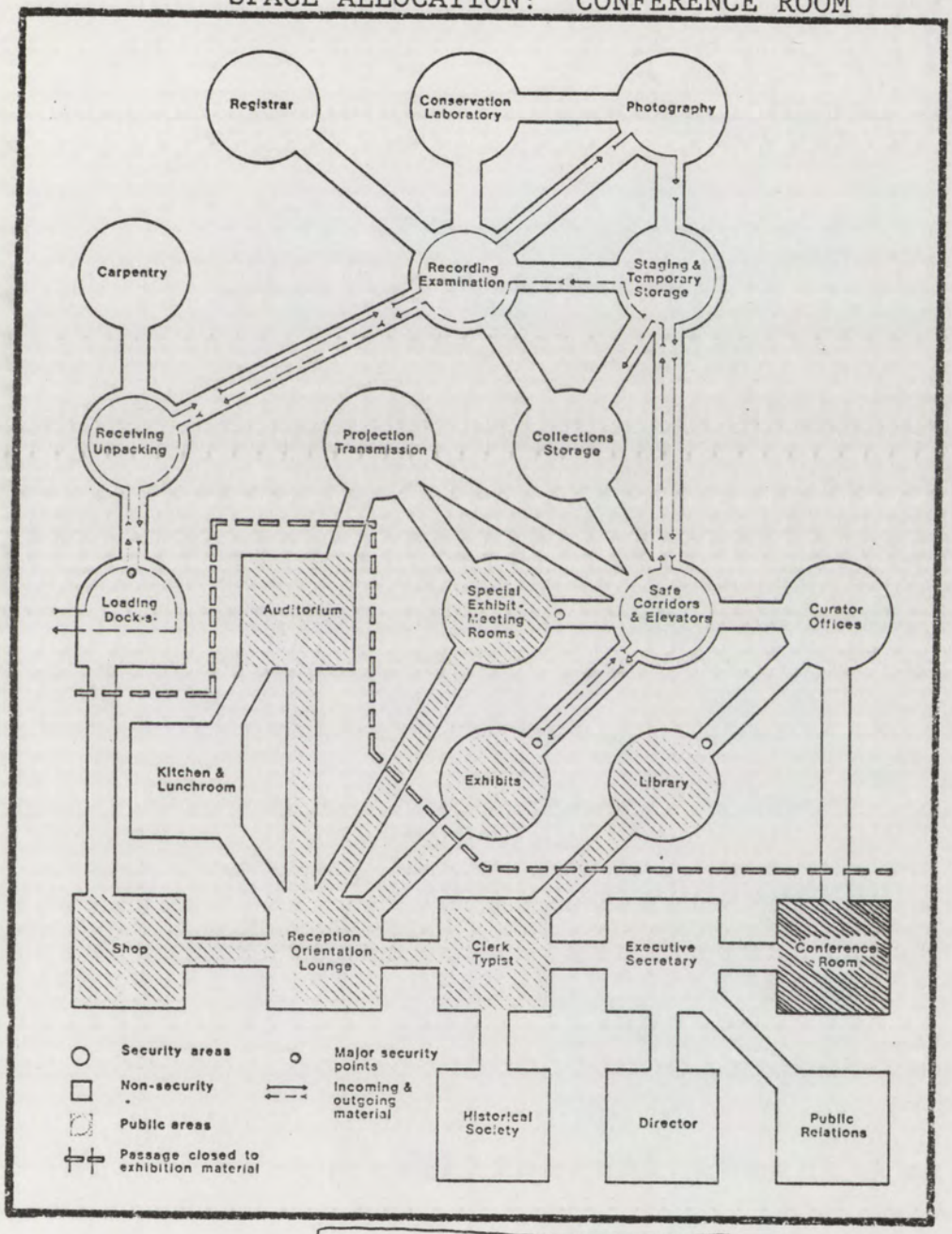
MOVABLE EQUIPMENT:

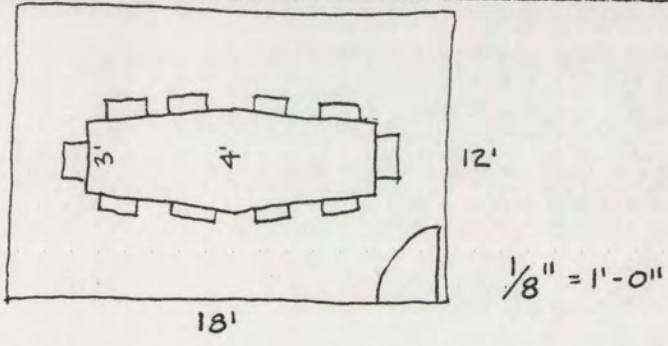
Table and chairs for 10.

RELATED INFORMATION:

Possibly could be the area where curators interact with public.

FIGURE 22 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: CONFERENCE ROOM





AREA: Office Storage

SQ. FT.: 144

DESCRIPTION:

Function: A storage space for materials used in office related work.

Type: Non-security/integrated.

ENVIRONMENTAL CONDITIONS:

Noise: Office copier

Light: General lighting

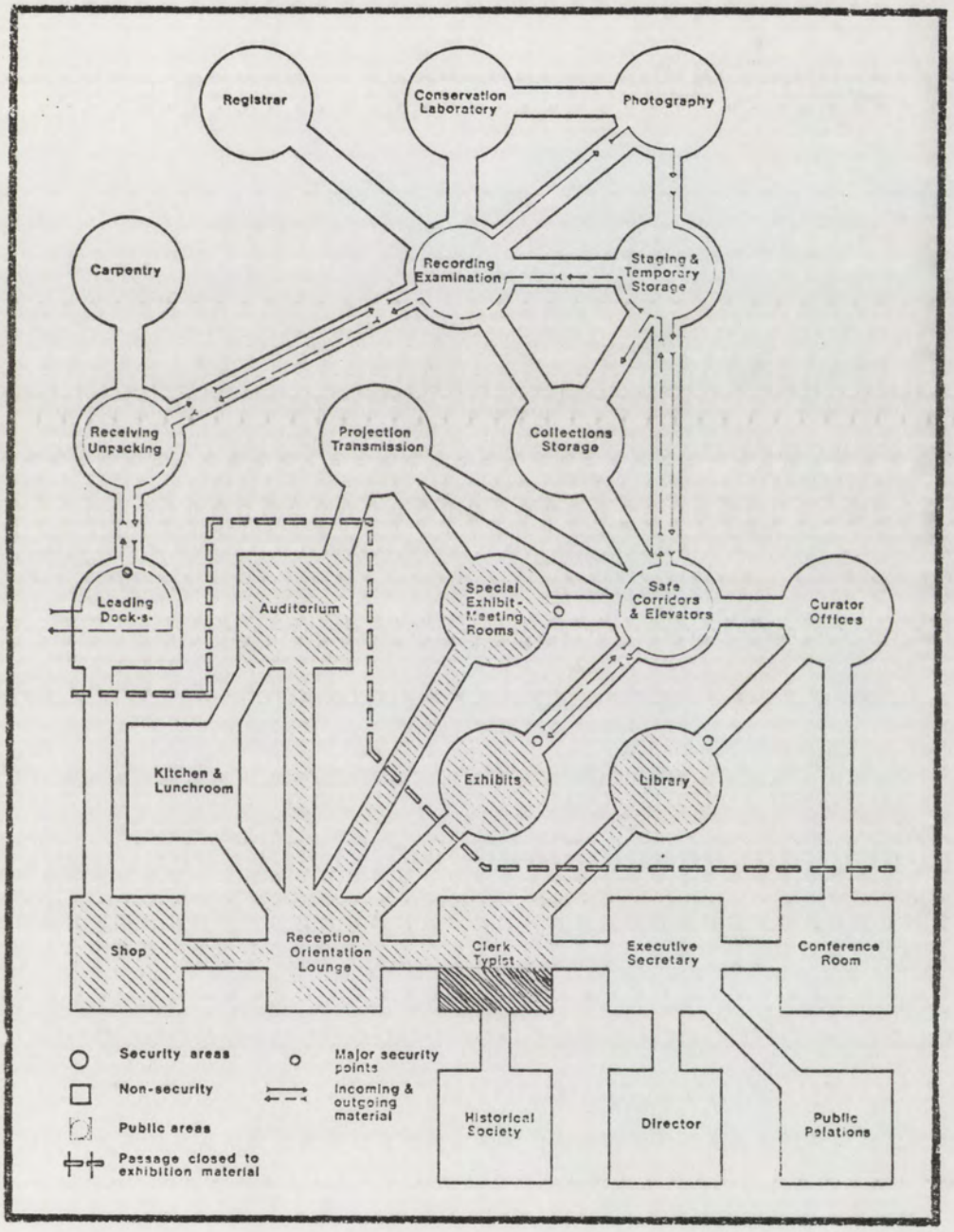
AREA TYPE AND RELATIONSHIPS

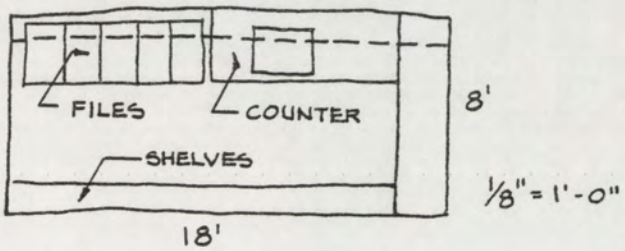
- Relates to office areas.

MOVABLE EQUIPMENT:

Copy machine,
adjustable shelving,
file cabinets.

FIGURE 23 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: OFFICE STORAGE





AREA: Public Relations

SQ. FT.: 120

DESCRIPTION:

Function: An extra office for expansion of administrative or curatorial office area.

No. of People: 1

Type: Non-security/integrated

ENVIRONMENTAL CONDITIONS:

Noise: In a quiet zone

Light: Office task light--natural light with view relief.

Temperature: Office work temperature and humidity.

AREA TYPE AND RELATIONSHIPS:

- Relates to administrative and curatorial office areas.

- Relates conveniently to conference room.

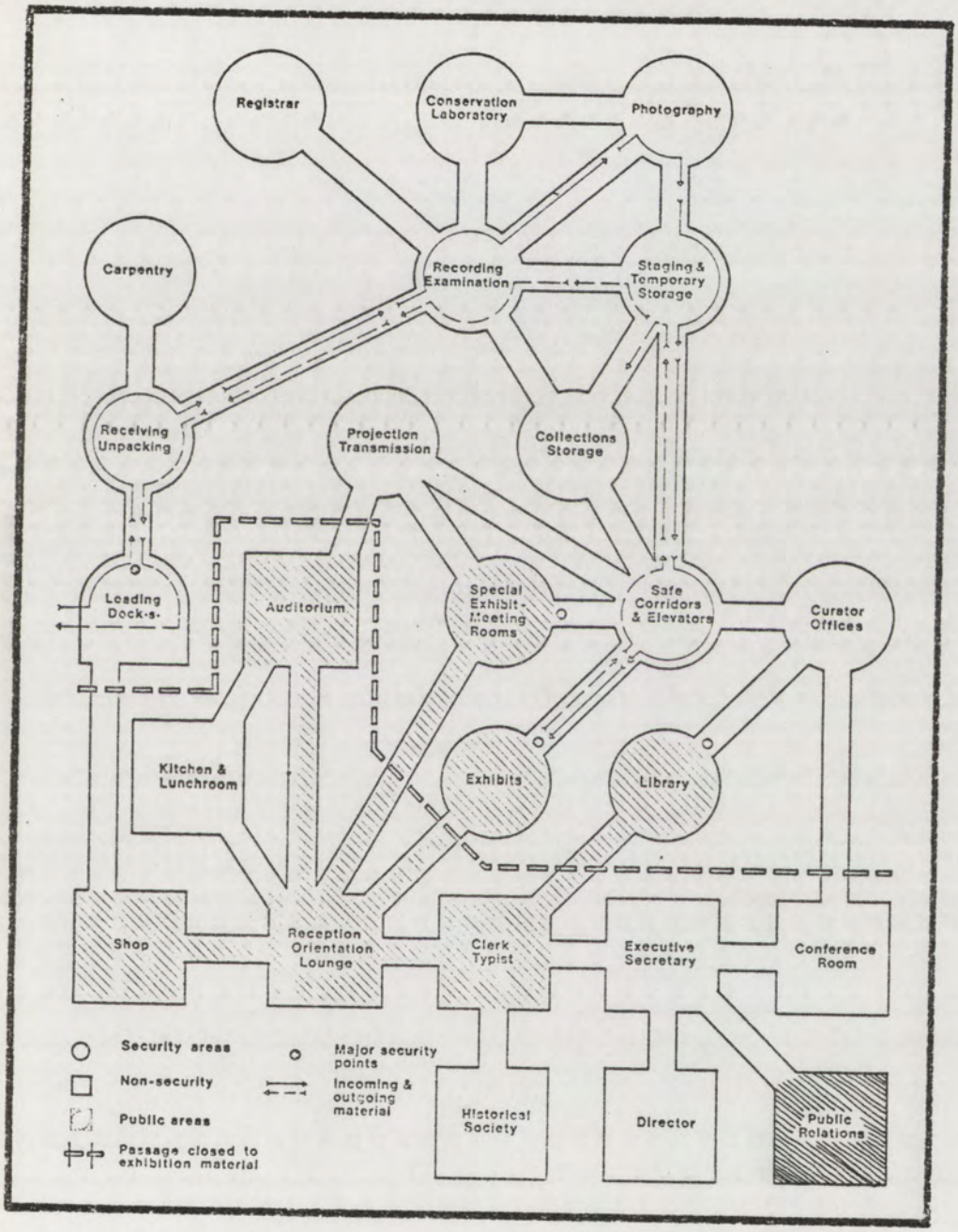
MOVABLE EQUIPMENT:

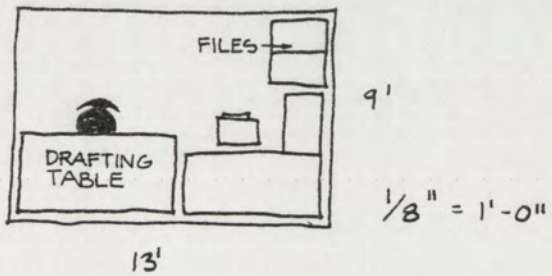
Desk, typewriter, drafting table and layout table.

RELATED INFORMATION:

Public relations is responsible for working with radio, T.V., and publications.

FIGURE 24 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: PUBLIC RELATIONS





AREA: Curator of History

SQ. FT.: 120

DESCRIPTION:

Function: Light, comfortable, efficient office space.

No. of People: 1

Type: Security/integrated.

ENVIRONMENTAL CONDITIONS:

Noise: Quiet zone

Light: Office task light--natural light with view relief.

Temperature: Work area temperature and humidity.

AREA TYPE AND RELATIONSHIPS:

- Relates directly to collection storage, staging area and clerk-typist.

- Relates conveniently to conference room.

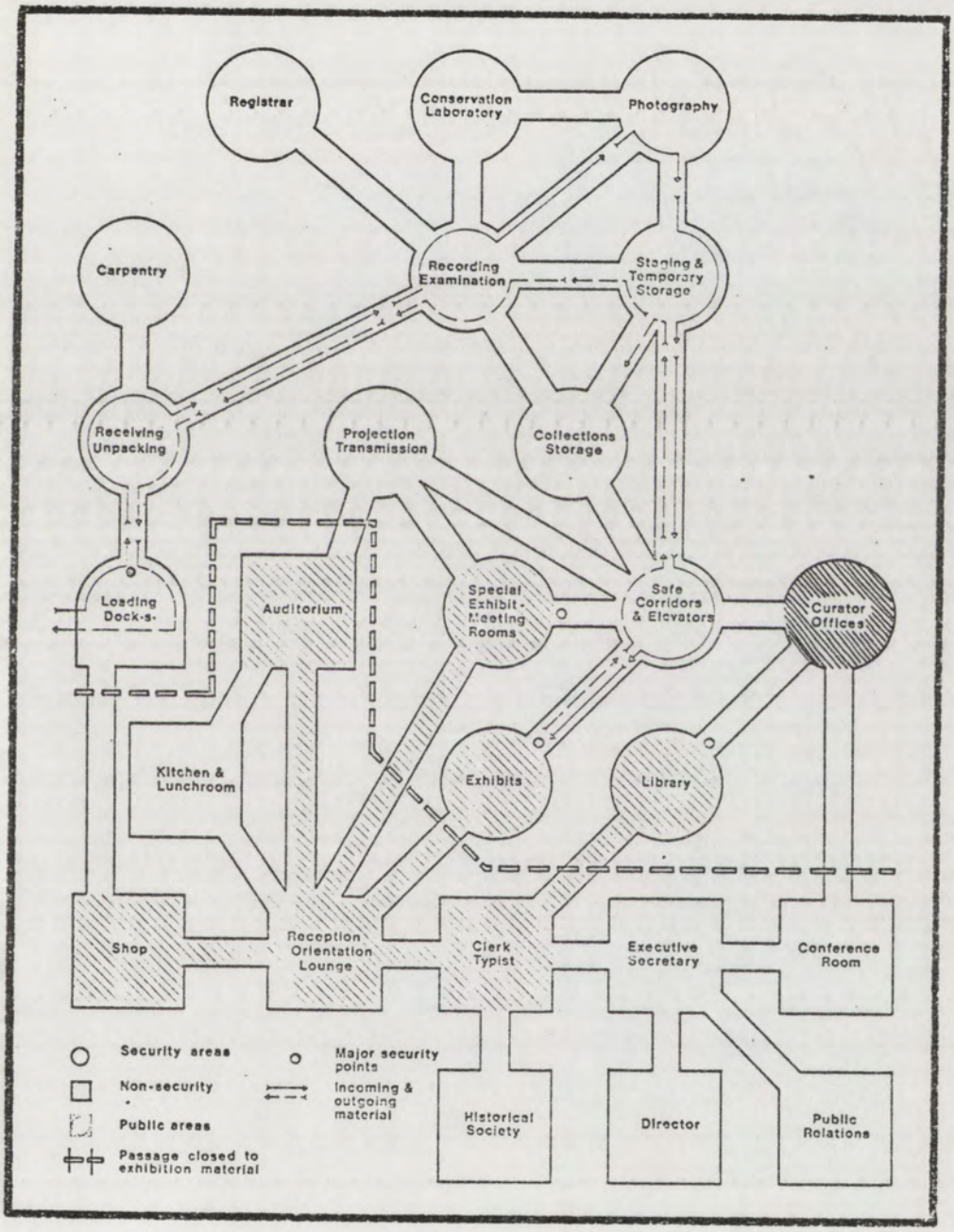
MOVABLE EQUIPMENT:

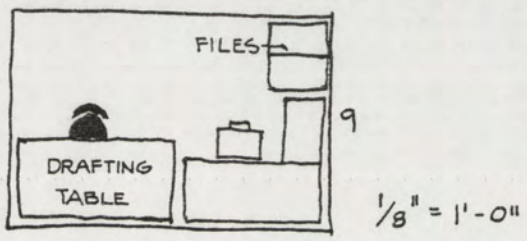
Desk, typewriter, drafting table, file cabinets.

RELATED INFORMATION:

Artifacts may be stored temporarily in curatorial offices.

FIGURE 25 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: CURATOR OF EDUCATION'S OFFICE





13

AREA: Curator of Education

SQ. FT.: 144

DESCRIPTION:

Function: Curator in charge of education programs--coordinating docent organization, school programs, etc.

Type: Security/integrated.

ENVIRONMENTAL CONDITIONS:

Noise: Needs quiet private area sometimes.

Light: Office task light--natural light with view relief.

Temperature: Work area temperature and humidity.

AREA TYPE AND RELATIONSHIPS:

- Relate conveniently to clerk-typist.
- Relate conveniently to conference room and library for meetings and research and collection storage.

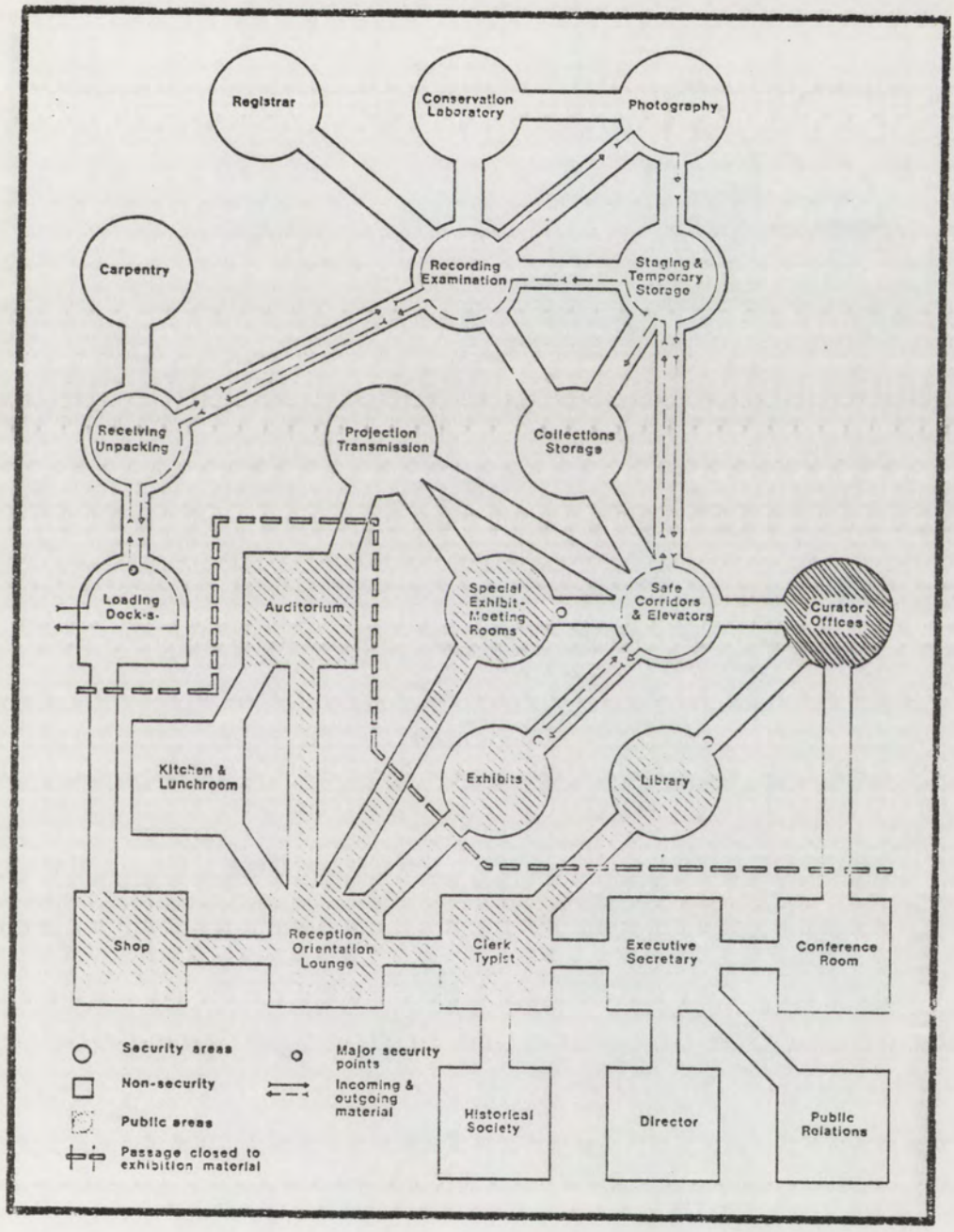
FIXED EQUIPMENT:

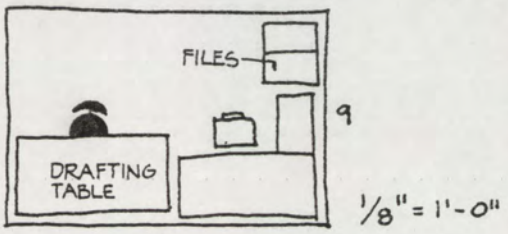
Pinboard and chalkboard walls, shelves. Informal sitting area, docent storage.

MOVABLE EQUIPEMNT:

Desk with typewriter.

FIGURE 26 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: CURATOR OF EXHIBITS OFFICE





13

AREA: Curator of Exhibits/Art

SQ. FT.: 120

DESCRIPTION:

Function: Light, comfortable, efficient office space for research and drawing of exhibit designs.

No. of People: One, possible two in future.

Type: Security/integrated.

ENVIRONMENTAL CONDITIONS:

Noise: Quiet zone.

Light: Office task light--natural light with view relief.

Temperature: Office working temperature and humidity

AREA TYPE AND RELATIONSHIPS:

- Relate conveniently to staging area and collection storage.
- Relate conveniently to conference room and library for meetings and research.

FIXED EQUIPMENT:

Shelving, pinboard-type wall surfaces, chalkboard surfaces, flat storage cabinets for design drawings.

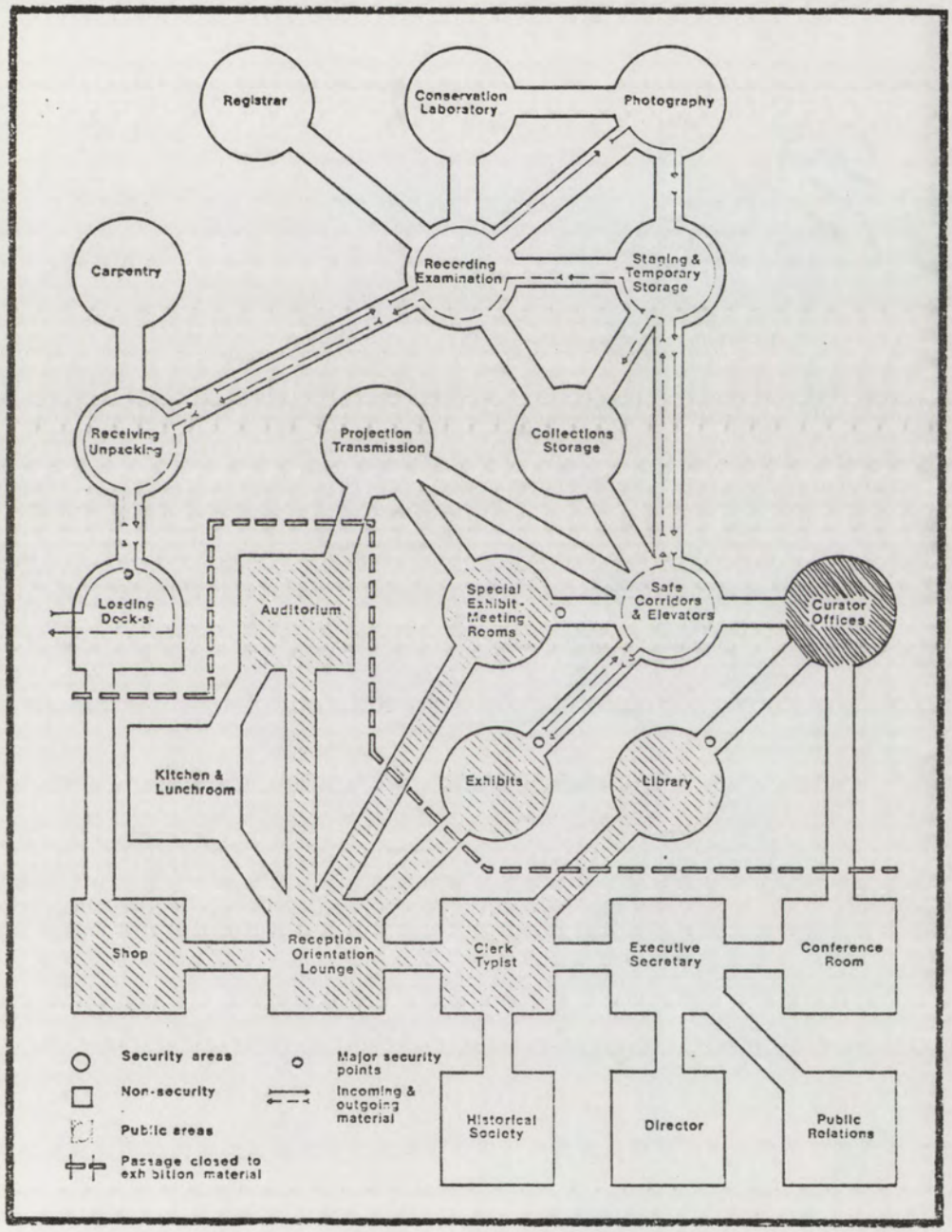
MOVABLE EQUIPMENT:

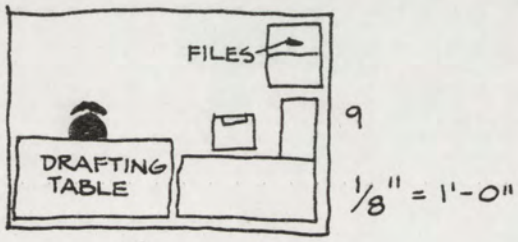
Desk with typewriter, drafting table, layout table, filing cabinets.

RELATED INFORMATION:

Most design work will be for temporary art type shows or competitions (of the community) once the permanent exhibit is in place.

FIGURE 27 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: CURATOR OF HISTORY'S OFFICE





13

AREA: Registrar

SQ. FT.: 120

DESCRIPTION:

Function: Light, comfortable, efficient office space for recording incoming and outgoing material.

No. of People: 1

Type: Security/integrated.

ENVIRONMENTAL CONDITIONS:

Noise: Quiet zone

Light: Office task light--natural light with view relief

Temperature: Work area temperature and humidity

AREA TYPE AND RELATIONSHIPS:

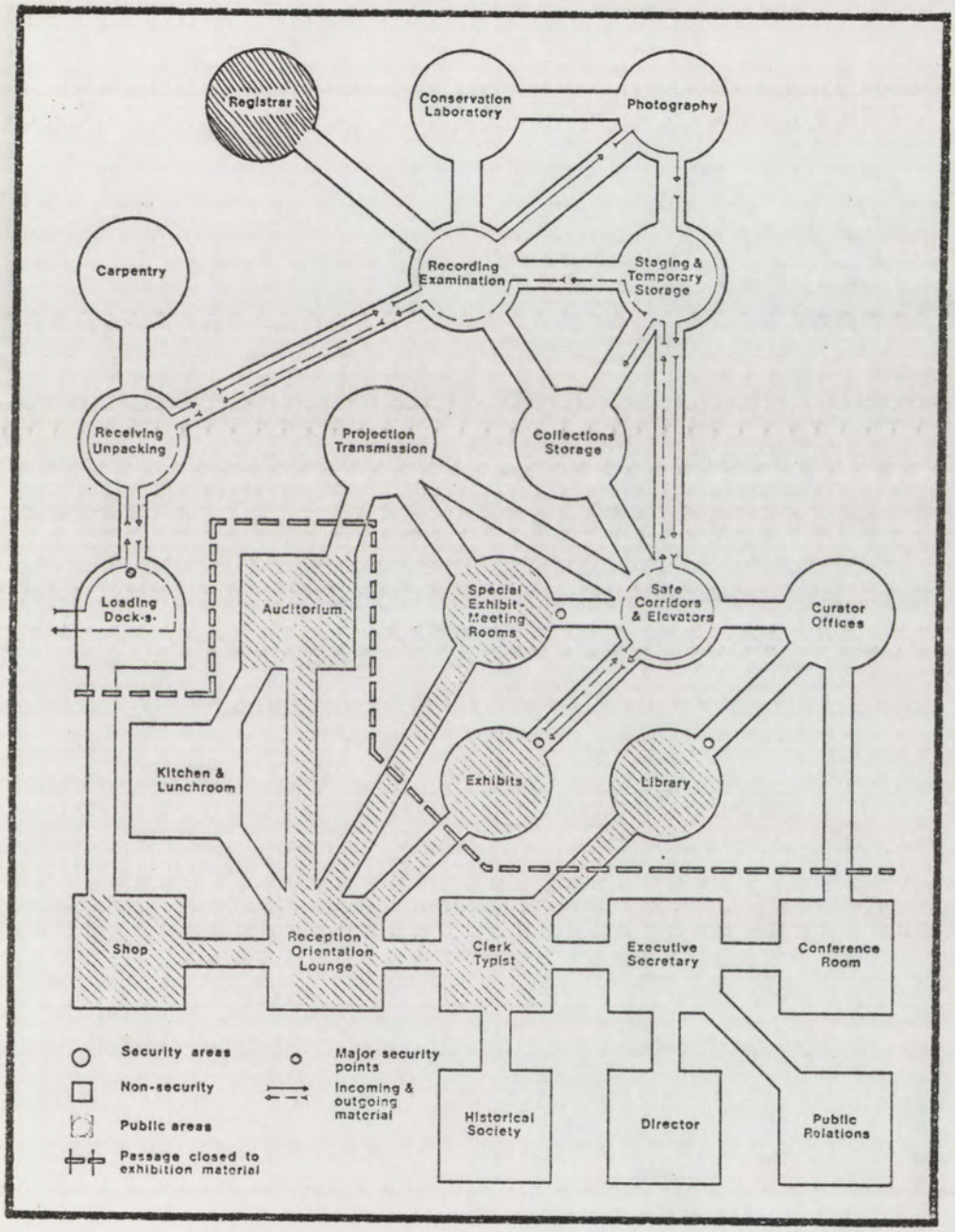
- Relates immediately to recording examination area and collection storage.

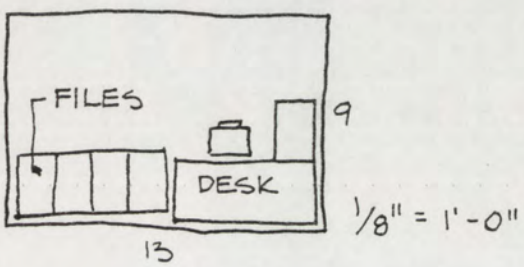
- Convenient to conference room and clerk-typist.

RELATED INFORMATION:

Registrar accepts deliveries, inspects for damage, routes items to conservation/lab and photography, marks items, identifies them, and catalogs record of item on computer and card catalogs.

FIGURE 28 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: REGISTRAR'S OFFICE





AREA: Historical Society

SQ. FT.: 220

DESCRIPTION:

Function: Light, comfortable, efficient office space.

No. of People: 2

Type: Non-security/integrated

ENVIRONMENTAL CONDITIONS:

Noise: Quiet zone

Light: Office task light--natural light with view relief.

Temperature: Work area temperature and humidity

AREA TYPE AND RELATIONSHIPS:

- Convenient to executive secretary.

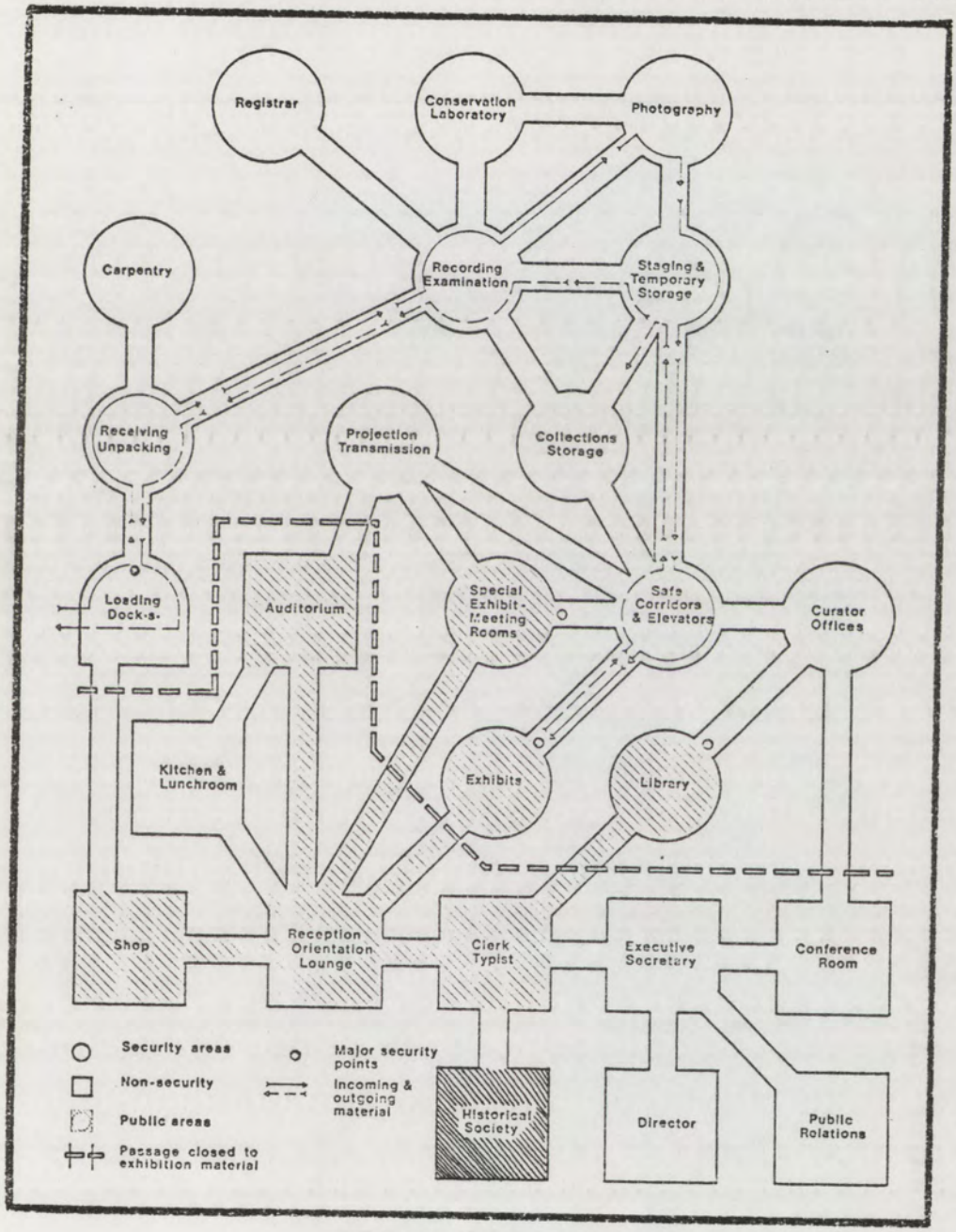
FIXED EQUIPMENT:

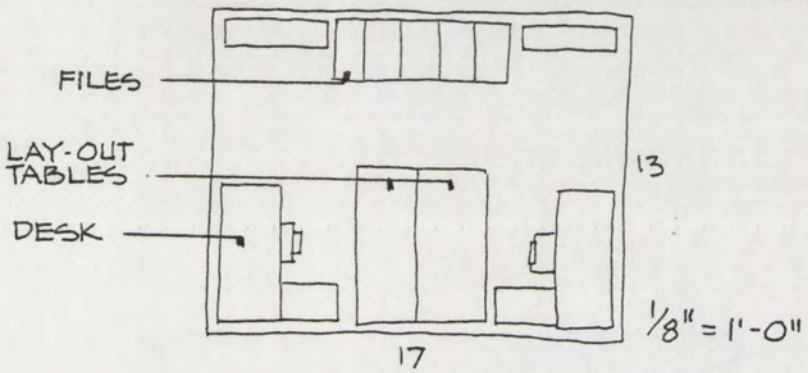
Shelves, filing cabinets.

MOVABLE EQUIPMENT:

Desks, typewriters, layout tables.

FIGURE 29 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: HISTORICAL SOCIETY OFFICE





SPACE NEEDS AND ALLOCATIONS

EXHIBIT MATERIAL AREAS

AREA: Collections Storage

SQ. FT.: 8,500

DESCRIPTION:

Function: Area for the storage and maintenance of the Museum's collections of 3-dimensional specimens and artifacts.

Other: Will be broken down into areas of atmospheric control or material size. Wood, metal, ceramics, fabrics.

Type: Security/integrated.

ENVIRONMENTAL CONDITIONS:

Light: Windowless space

Humidity: Varies with collection type (wood, textiles, metals, and ceramics).

Impurities: filtered air required.

Other: Smoke and heat-sensitive fire and burglar alarm.

AREA TYPE AND RELATIONSHIPS:

- Relates immediately to staging area, recording examination and freight elevator.

- Relates immediately to curator offices.

FIXED EQUIPMENT:

Will contain existing vault.

MOVABLE EQUIPMENT:

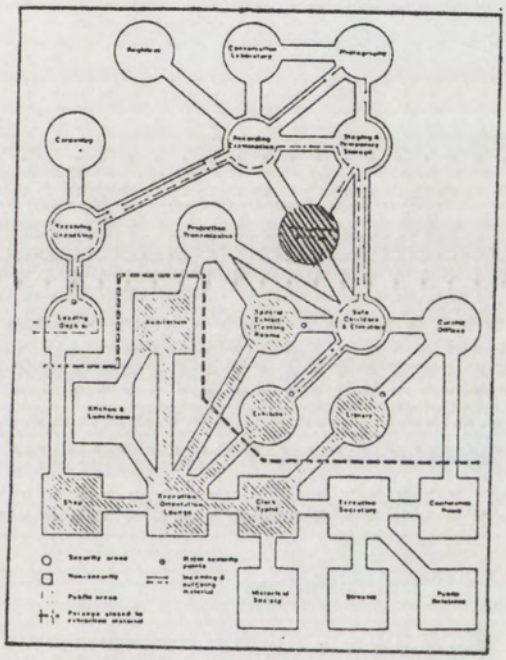
Adjustable shelving of different sizes.

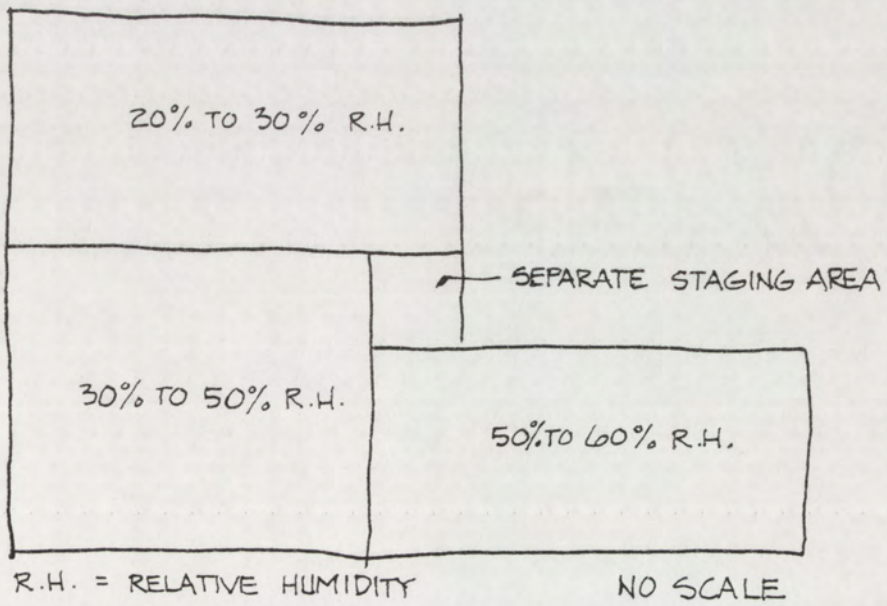
RELATED INFORMATION:

The selection of the correct piece for every exhibit calls for a separate staging area at the collections area.

Since this is a windowless area, thought must be given to fire exits for employees.

FIGURE 30 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: COLLECTION STORAGE





AREA: Loading Dock

SQ. FT.: 144

DESCRIPTION:

Function: Loading and unloading area for museum material with possible future museomobile capabilities.

Type: Security

ENVIRONMENTAL CONDITIONS:

Noise: Noisy area

Light: General lighting

Impurities: An overhang is essential for protection of museum materials.

Other: Security checkpoint.

AREA TYPE AND RELATIONSHIPS:

- Related to receiving area, convenient to freight elevator, staging area.

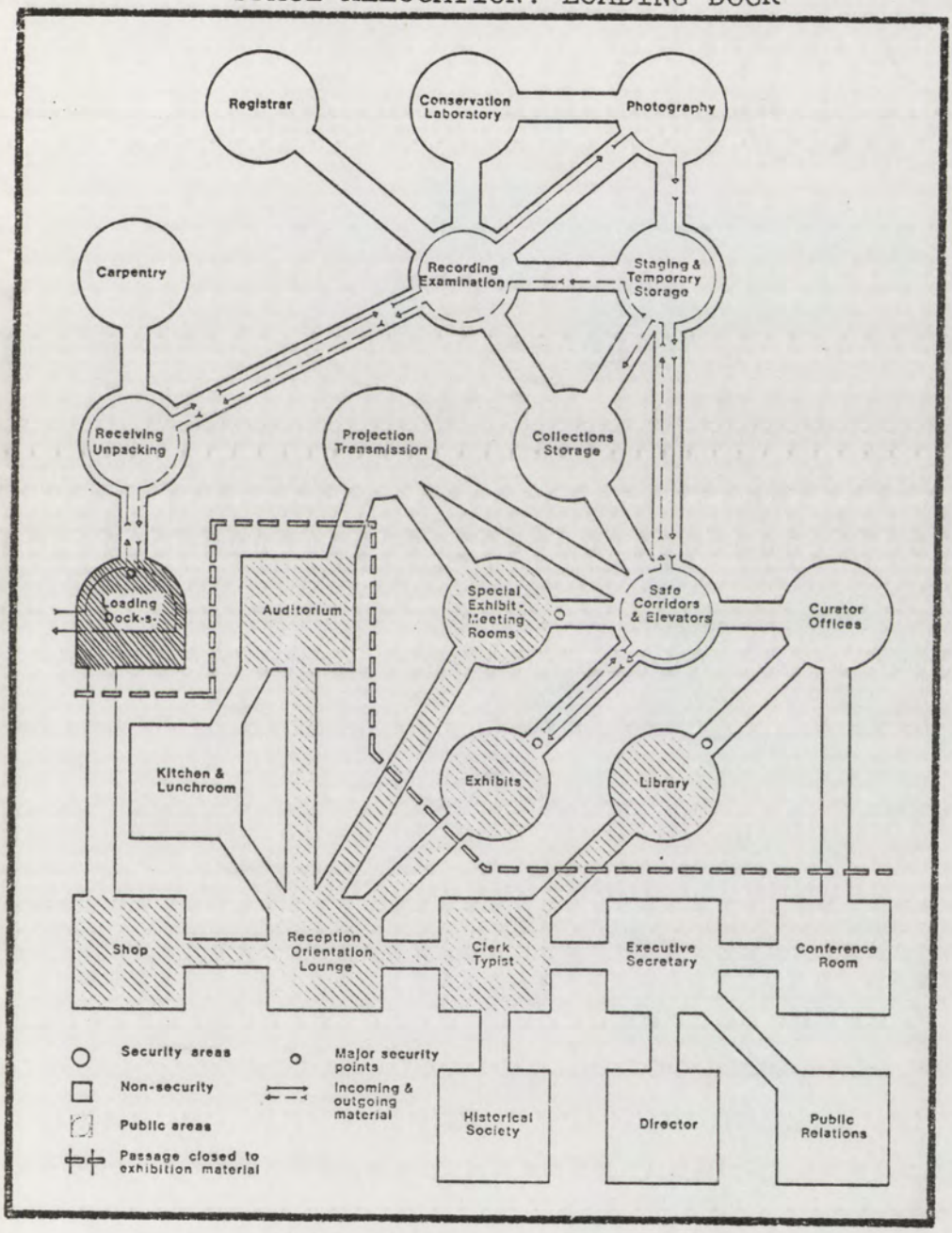
FIXED EQUIPMENT:

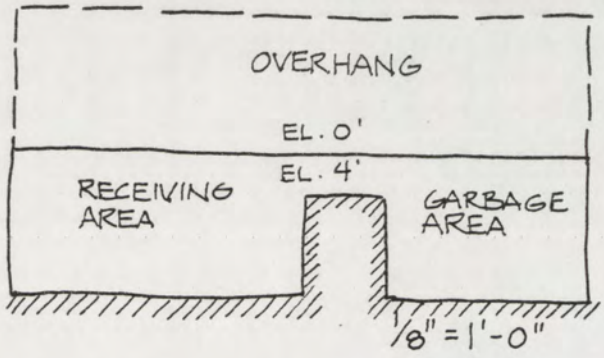
Ramp and loading dock, large doors with good seal closure.

RELATED INFORMATION:

Trash area should not relate to this area if possible.
May include a temporary fumigation enclosure.
Must have loading dock capabilities as well as a ramp for handtruck loading.

FIGURE 31 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: LOADING DOCK





AREA: Receiving/Unpacking

SQ. FT.: 576

DESCRIPTION:

Function: Serves as a storage area for incoming and outgoing materials that cannot be immediately moved. Pulls material out of traffic patterns around loading dock.

Type: Major checkpoint for security.

ENVIRONMENTAL CONDITIONS:

Light: General lighting

Impurities: Must have good closure between loading dock and receiving unpacking

AREA TYPE AND RELATIONSHIPS:

- Relates immediately to: recording and examination, shop, freight elevator, loading dock.

- Relates conveniently to conservation/lab.

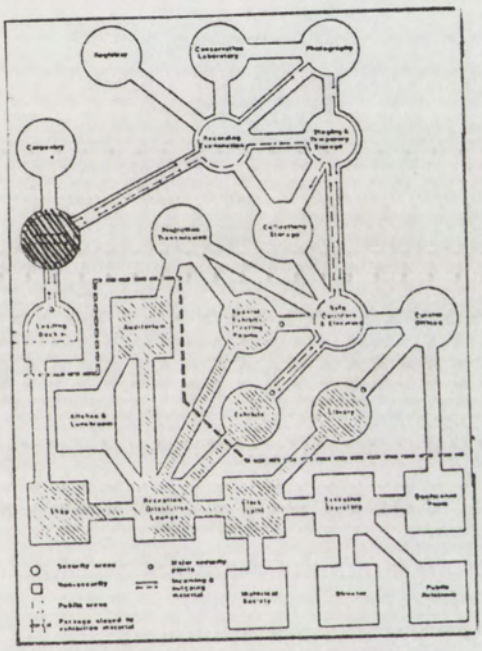
FIXED EQUIPMENT:

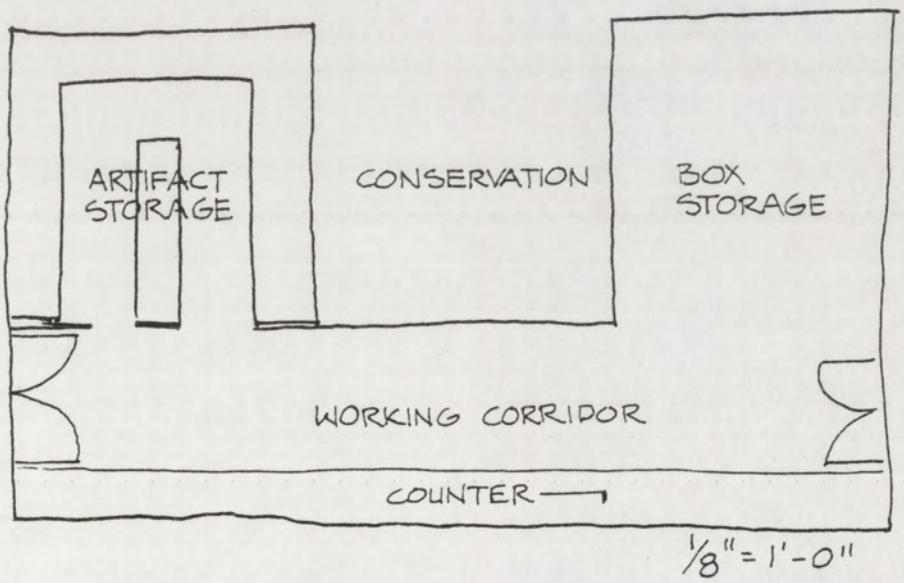
Counters and shelving

RELATED INFORMATION:

Material on arrival sometimes must go through a cleaning process before it can go into the staging area or collection storage.

FIGURE 32 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: RECEIVING UNPACKING





AREA: Recording Examination

SQ. FT.: 864

DESCRIPTION:

Function: Large work space for cataloging of incoming and outgoing material.

Priority: Essential

Type: Security/integrated

No. of People: 3-4

Time of Use: Off hours

Other: A high ceiling space for hanging new acquisitions

ENVIRONMENTAL CONDITIONS:

Light: Indirect natural and artificial

Temperature: Work area temperature and humidity.

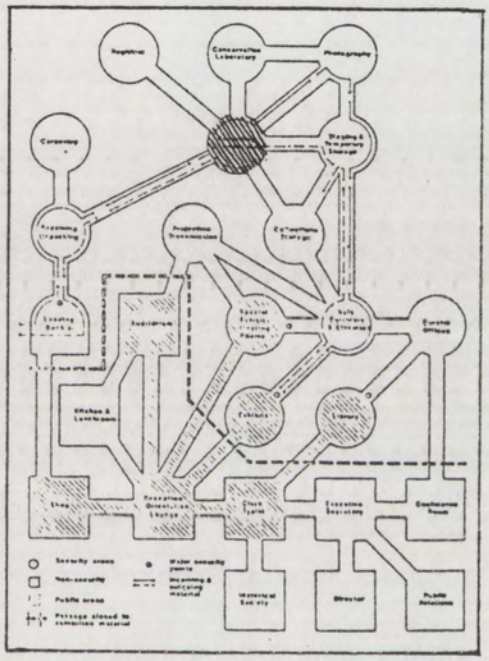
AREA TYPE AND RELATIONSHIPS:

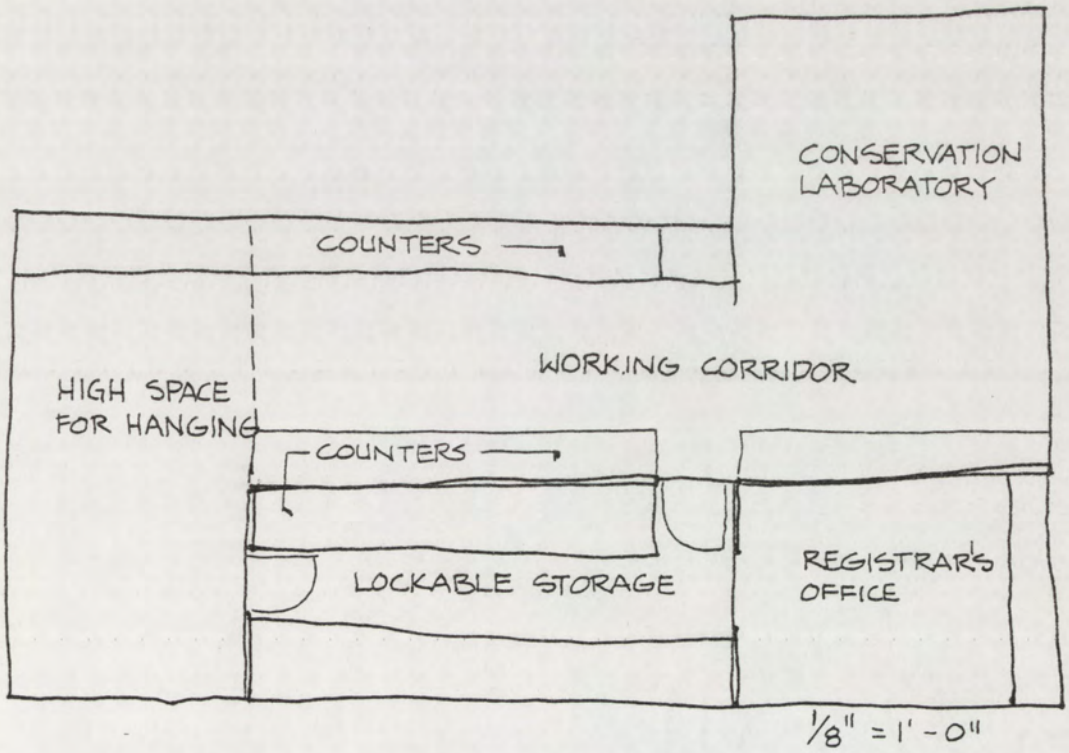
- Relates immediately to registrar's office and conservation lab.

MOVABLE EQUIPMENT:

Large layout tables.

FIGURE 33 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: RECORDING EXAMINATION





AREA: Staging/Temporary Storage

SQ. FT.: 1,152

DESCRIPTION:

Function: Spacious, efficient, well-lighted room where exhibit material meets exhibit enclosures and related art work.

Priority: May be broken down into smaller areas adjacent to particular collection storage.

No. of People: Curator of exhibits, registrar, photographer, carpenter.

Type: Security/integrated.

ENVIRONMENTAL CONDITIONS:

Noise: Work noises may be annoying to visitors.

Light: Natural light (controllable), in candescent and fluorescent.

Temperature: Temperature and humidity for collections

Impurities: Adequate ventilation important--good seal between painting area and carpentry shop.

AREA TYPE AND RELATIONSHIPS:

- Relate immediately to: dark room, exhibition spaces, carpenter shop, collection storage, elevator.

FIXED EQUIPMENT

Perimeter alcove: Exhibit collection storage (an area holding exhibit pieces as well as pieces not used for exhibit but stored with it), counters and storage for card stock (art work storage) and prop storage alcoves with storage for cases, panels, support poles, lighting fixtures--shelving at 3 ft. intervals vertically.

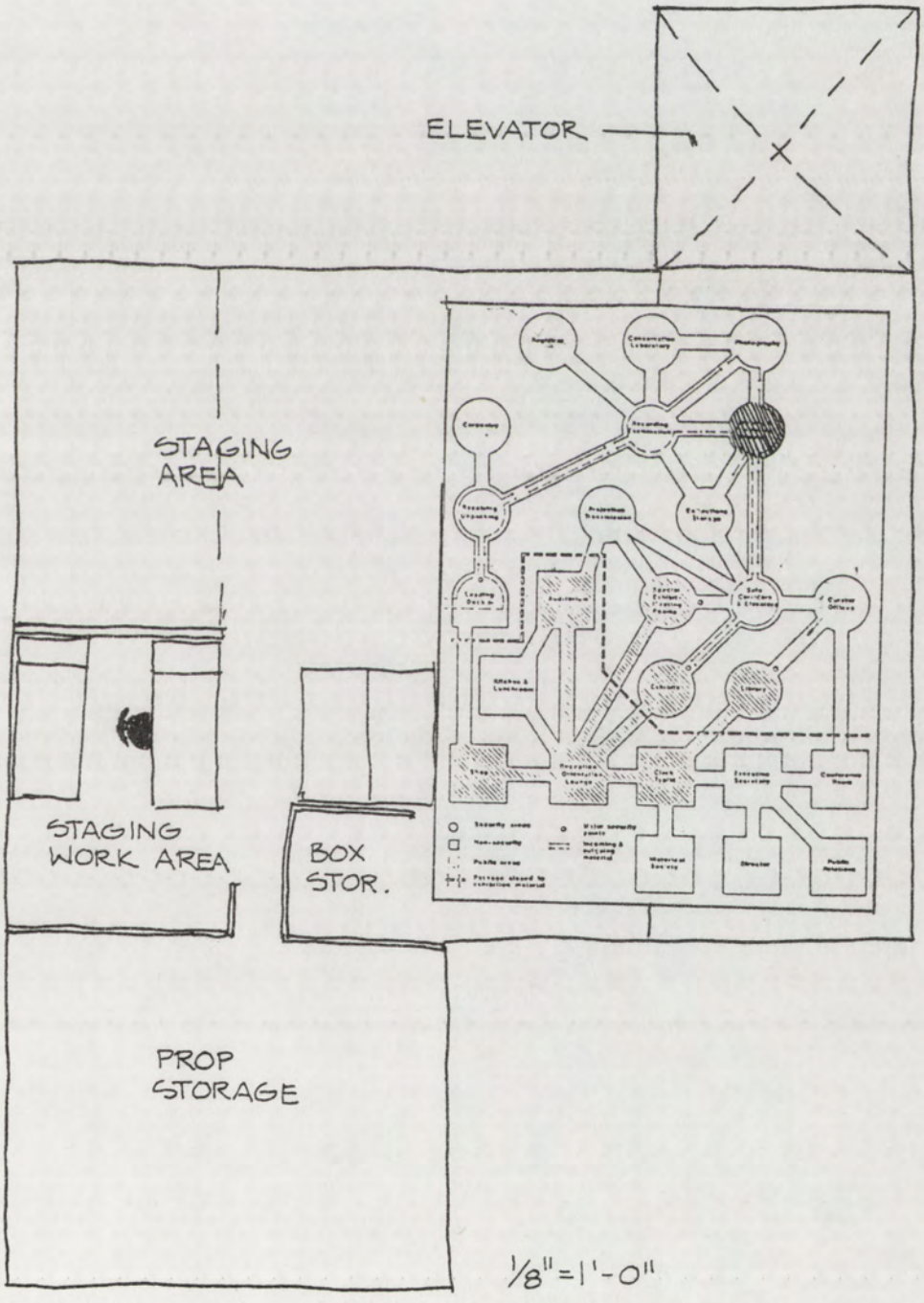
MOVABLE EQUIPMENT:

Large central tables, paper cutters dry mount press, light table, easel, sink and drainboard, drafting table, tools, etc.

RELATED INFORMATION:

The whole museum staff (as it is small) interact here, and join in the work. This area may be broken down into smaller areas adjacent to particular collection storage.

FIGURE 34 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: STAGING/TEMPORARY STORAGE



AREA: Dark Room

SQ. FT.: 288

DESCRIPTION:

Function: Processing photographs for in-house use and public orders.

No. of People: 2

Type: Security/integrated.

ENVIRONMENTAL CONDITIONS:

Typical dark room conditions

AREA TYPE AND RELATIONSHIPS:

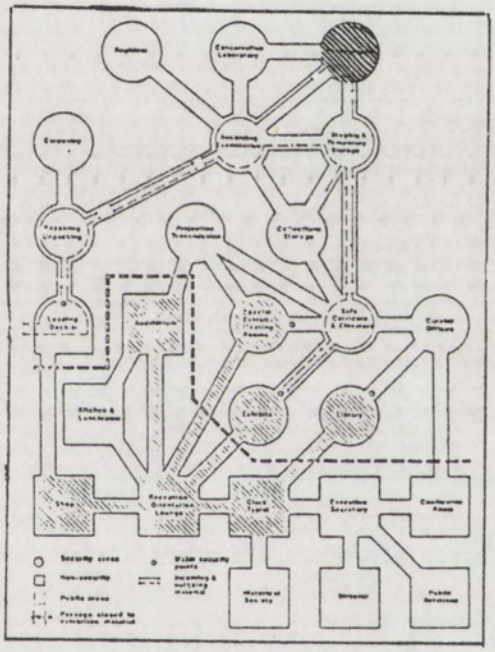
- Relates immediately to art work alcove of staging area.

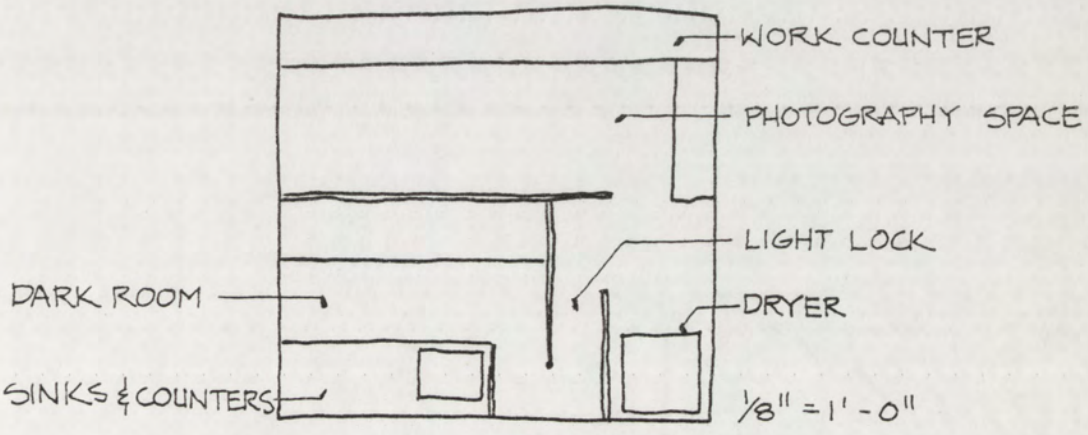
- Relates conveniently to library and photographic collection.

FIXED EQUIPMENT:

Normal dark room controls light access, etc.
Standard photographic processing equipment.

FIGURE 35 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: PHOTOGRAPHY





AREA: Conservation/Lab

SQ. FT.: 144

DESCRIPTION:

Function: Cleaning, fumigating, processing and studying material before it moves into other areas in the museum.

No. of People: 1 or 2

ENVIRONMENTAL CONDITIONS:

Light: General lighting

Temperature: Set for office type work

Humidity: Separate exhaust system

Impurities: Large grease traps in sinks--area should be sealable for fumigation if used as such.

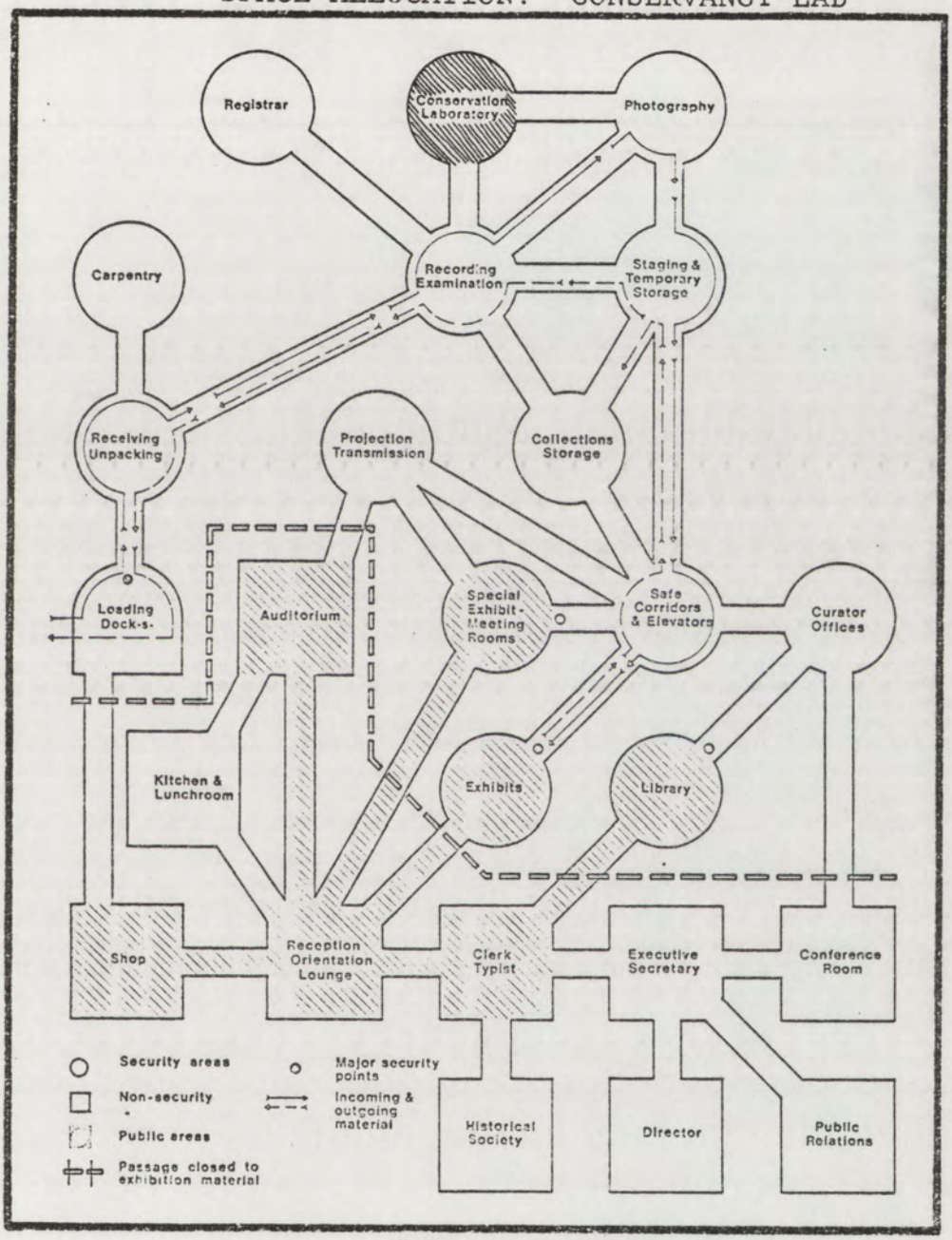
AREA TYPE AND RELATIONSHIPS:

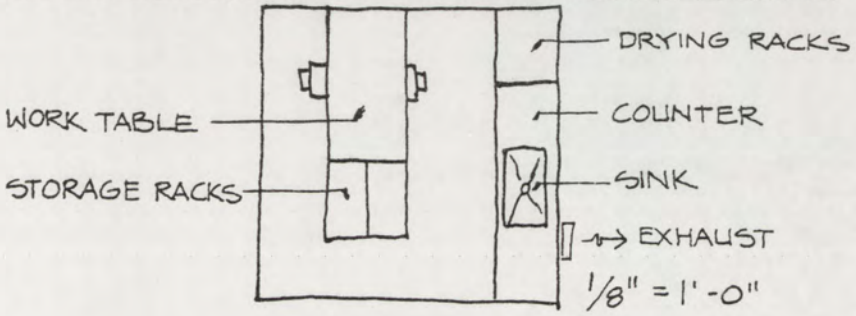
- Relates immediately to recording/examination and photography.

FIXED EQUIPMENT:

Counters and sinks, card catalogs, shelving

FIGURE 36 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: CONSERVANCY LAB





AREA: Carpentry Shop

SQ. FT.: 864

DESCRIPTION:

Function: Construction and repair facility

No. of People: 1, possibly 3.

Type: Security/compartmentalized.

ENVIRONMENTAL CONDITIONS:

Noise: Must be soundproof from exhibit areas, offices and teaching rooms.

Light: Good, general lighting for shop, incandescent and fluorescent for paint booth.

Impurities: Dust exhaust and paint booth exhaust.

Others: Ceiling height--15 ft. minimum.

AREA TYPE AND RELATIONSHIPS:

- Relate immediately to: freight elevator, freight supply entry and conveniently to staging area.

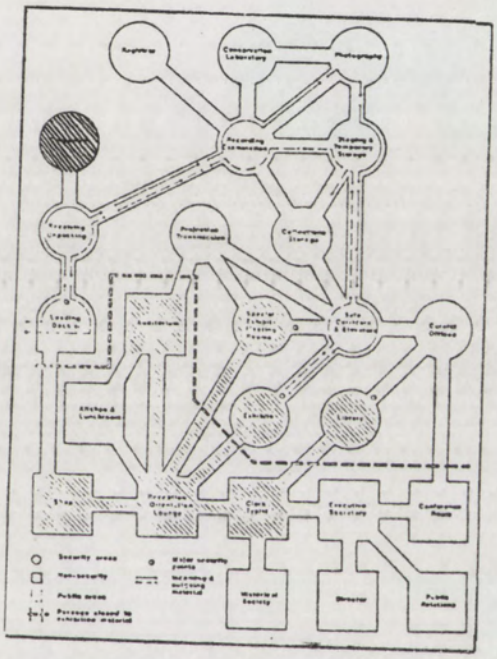
FIXED EQUIPMENT:

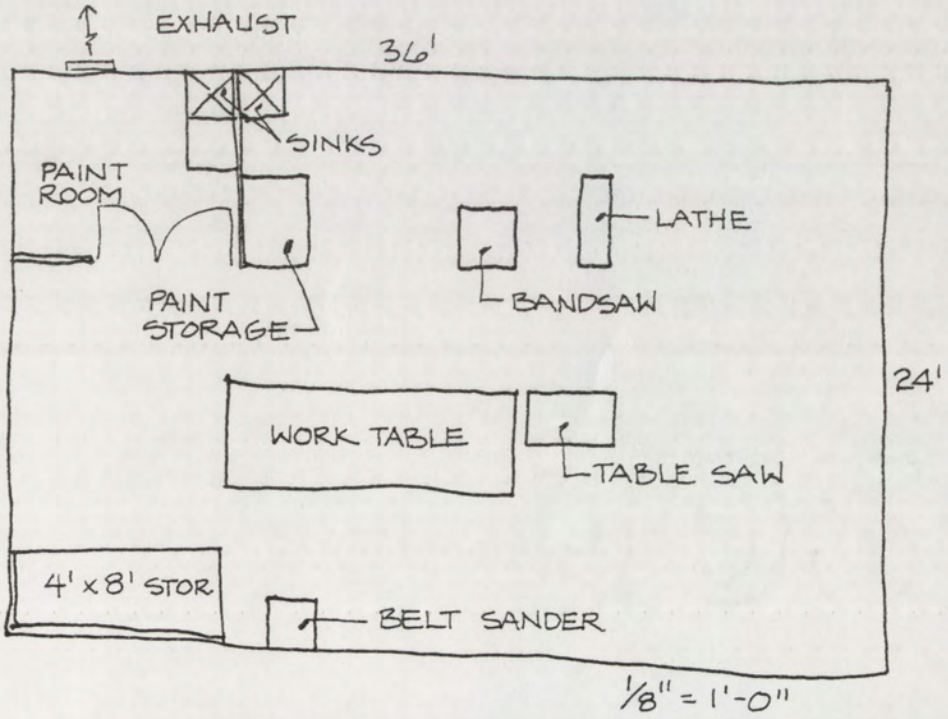
Sink, work benches with storage over and under lumber storage, electrical alcove, paint booth.

MOVABLE EQUIPMETN:

4 X 12 assembly bench, table saw, drill press, joiner, band saw, grinder, power hacksaw and lathe. Exhaust system.

FIGURE 37 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: CARPENTRY SHOP





AREA: Projection/Transmission

SQ. FT.: May vary to accomodate--144 sq. ft.

DESCRIPTION:

Function: Control room and maintenance area for projection equipment serves auditorium and special exhibit/meeting rooms, and transmission of recordings to exhibit areas.

No. of People: 1

Other: May be rear projection or direct projection. May be one area or split.

ENVIRONMENTAL CONDITIONS:

Noise: Sound transmission through this area may be a problem.

Light: Low directional or work space lighting.

Temperature: Temperature control

Humidity: Controlled

Impurities: Controlled and well-ventilated.

AREA TYPE AND RELATIONSHIPS:

- Convenient to slide, film, and tape storage.

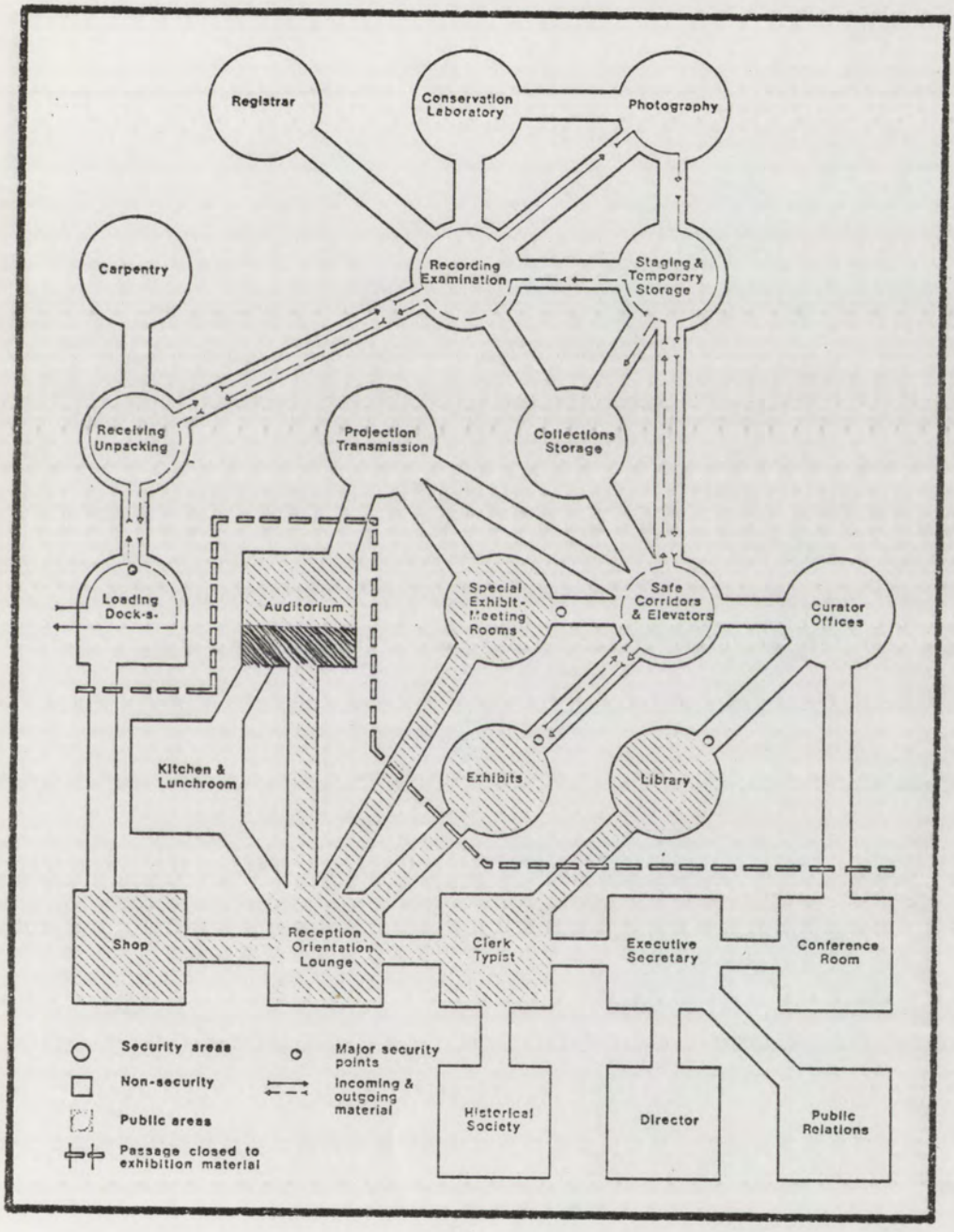
FIXED EQUIPMENT:

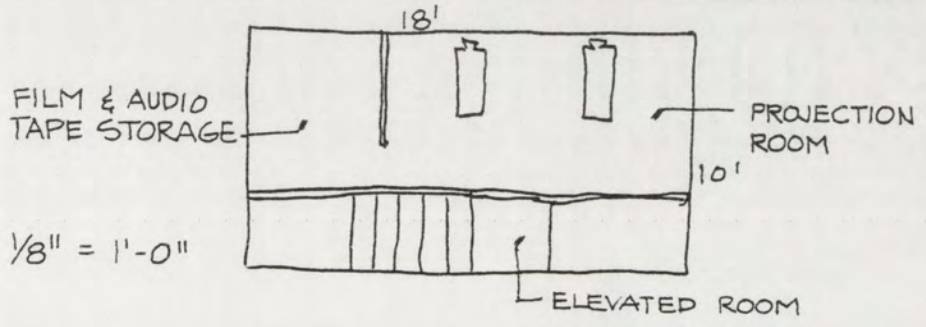
Tables for equipment storage for extra bulbs - splicer.

MOVABLE EQUIPMENT:

Slide projectors and movie projectors, tape decks.

FIGURE 38 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: PROJECTION TRANSMISSION





SPACE NEEDS AND ALLOCATIONS

PUBLIC AREAS

AREA: Reception/Orientation/Lounge SQ. FT.: 2,182

DESCRIPTION:

Function: To provide a proper welcome and orientation to different areas in the Museum.

No. of People: Receptionist, guard, docent at counter and groups up to 60 people daily, receptions up to 200 people.

Time of Use: Should be able to close off and secure other areas from this point.

Other: Lounge, coat room guard and docent station located here.

Type: Non-security.

ENVIRONMENTAL CONDITIONS:

Noise: Tends to be a noisy area.

Light: General light, artificial or natural, but must provide a comfortable light level change from the exterior to the interior.

Temperature: Entry locks should be provided for energy conservation.

Impurities: Entry should provide for minimal transfer of dust and blowing sand from exterior.

AREA TYPE AND RELATIONSHIPS:

- To lower responsibilities of museum staff volunteer manning shop can greet visitors.
- Should relate immediately to permanent exhibit areas, stairs, elevator, sales lounge, and auditorium.
- convenient to restrooms, coat room, kitchen area.

FIXED EQUIPMENT:

Sales counter and receiving/information desk, turnstiles, water fountain, phone, coat room.

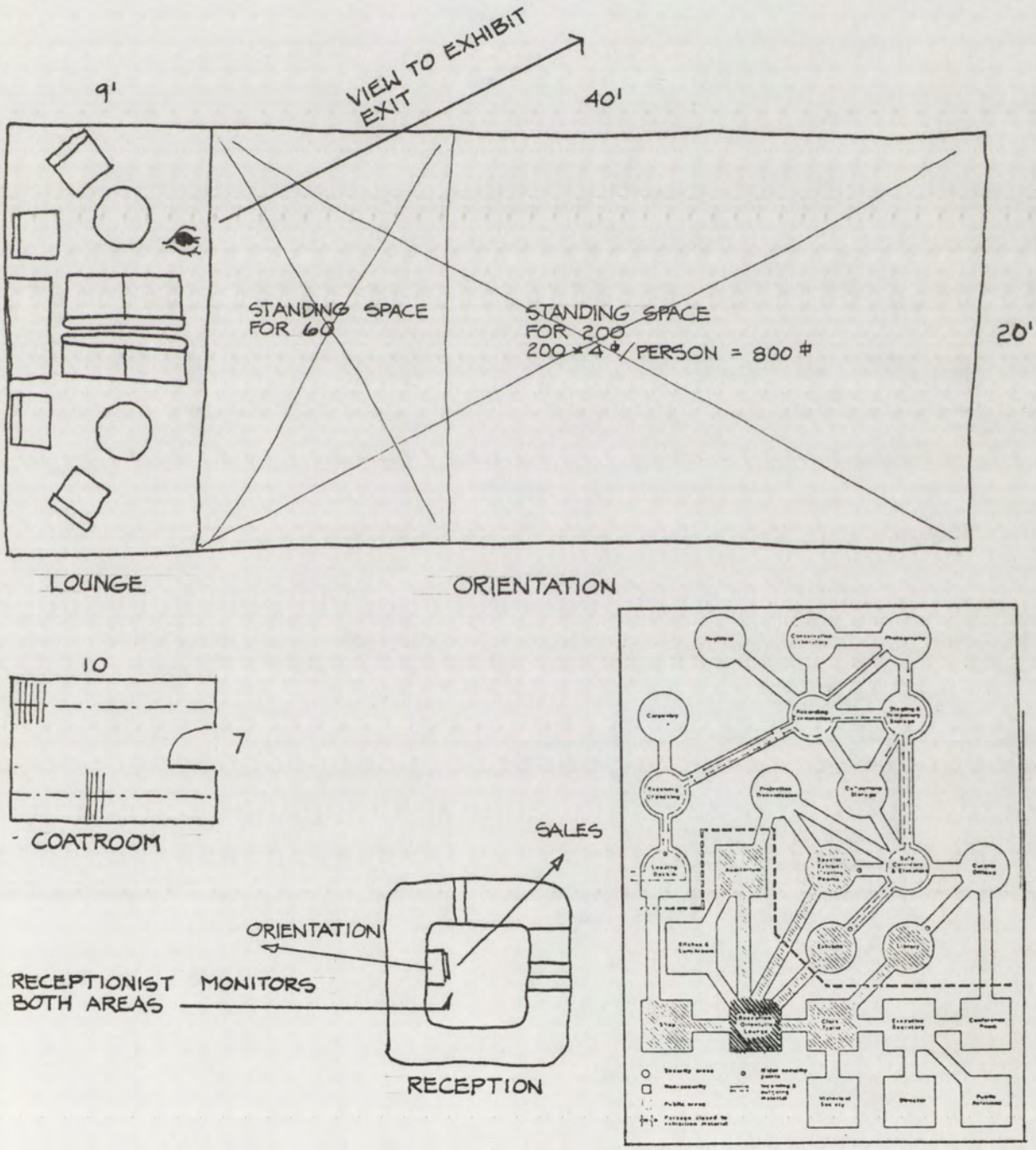
MOVABLE EQUIPMENT:

Lounge seating for 8 people in view of exhibit exit.

RELATED INFORMATION:

- Other lounge areas should be integrated into exhibit area.
- For group (children) control, sitting surfaces should be considered.
- Sales should be encountered on leaving the Museum--receiving desk on entering.
- Sales should be secondary to the information function.
- Docents will meet groups here.

FIGURE 39 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: RECEPTION/ORIENTATION/LOUNGE



AREA: Toilets

SQ. FT.: 400

DESCRIPTION:

Function: Restrooms for entire complex.

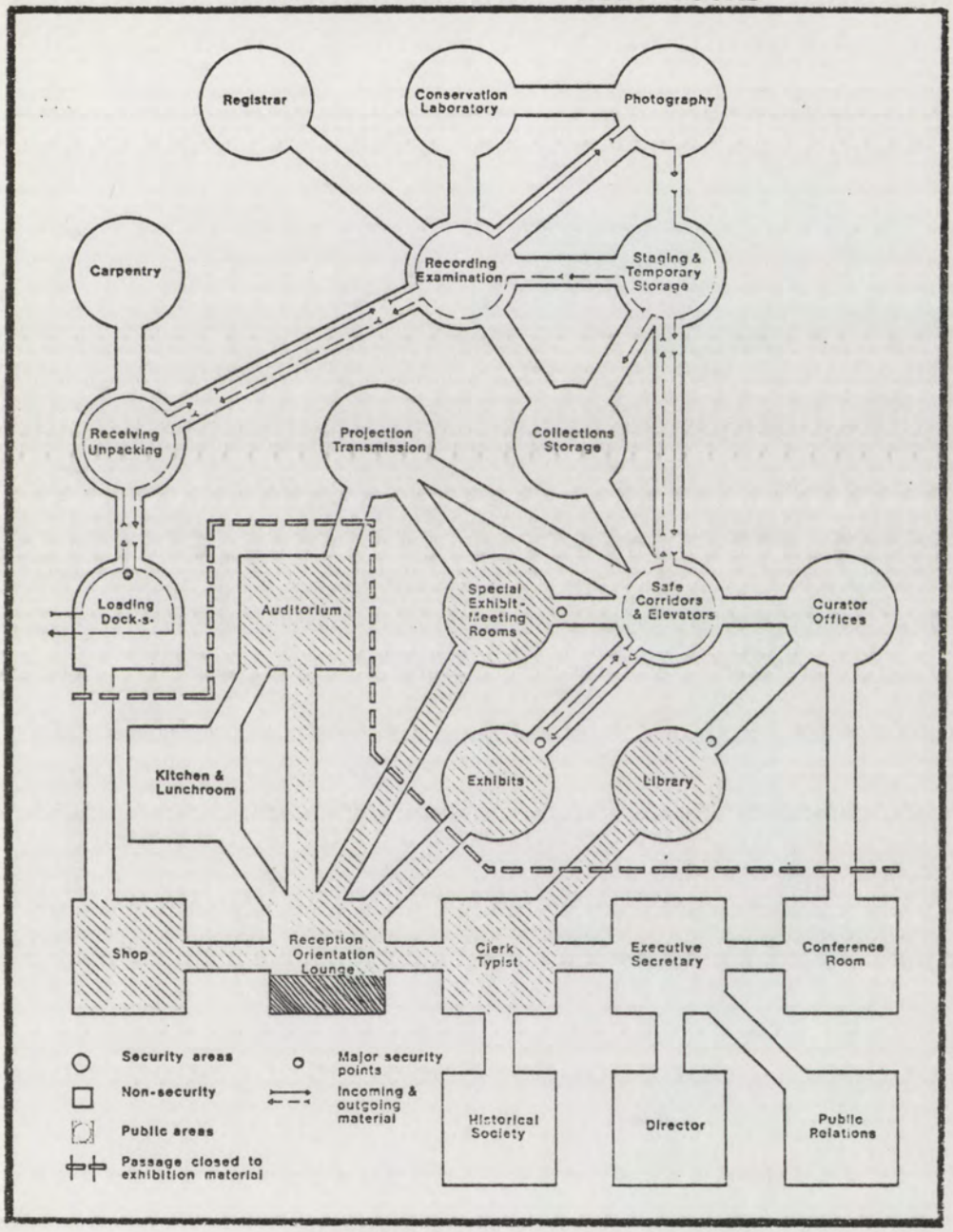
ENVIRONMENTAL CONDITIONS:

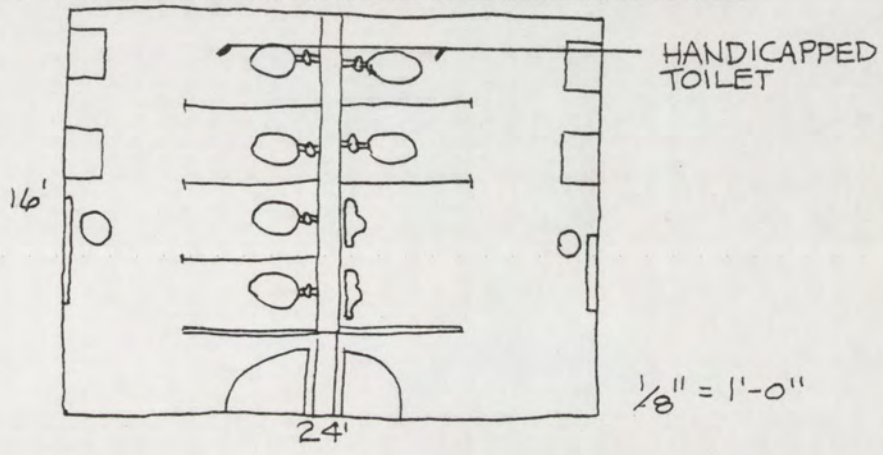
Noise: Water flushing--sound protection.

AREA TYPE AND RELATIONSHIPS:

- Relates to orientation areas and reception.

FIGURE 40 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: REST ROOMS





AREA: Library/Study Storage

SQ. FT.: 1,152

DESCRIPTION:

Function: A small staff library used for: storage of reference material and interaction area between public and curatorial staff.

An interim use for staff in future, area may be used as an expansion area for secondary material used in expanded education functions.

Other: Floor loads are high in this area. Study alcove with desk and light for scholars to study.

Type: Security/integrated.

ENVIRONMENTAL CONDITIONS:

Light: Natural and good general lighting.

Temperature: General atmospheric conditions for library--separate conditions for film and slide storage.

AREA TYPE AND RELATIONSHIPS:

- Related immediately to curatorial offices and clerk-typist.

MOVABLE EQUIPMENT:

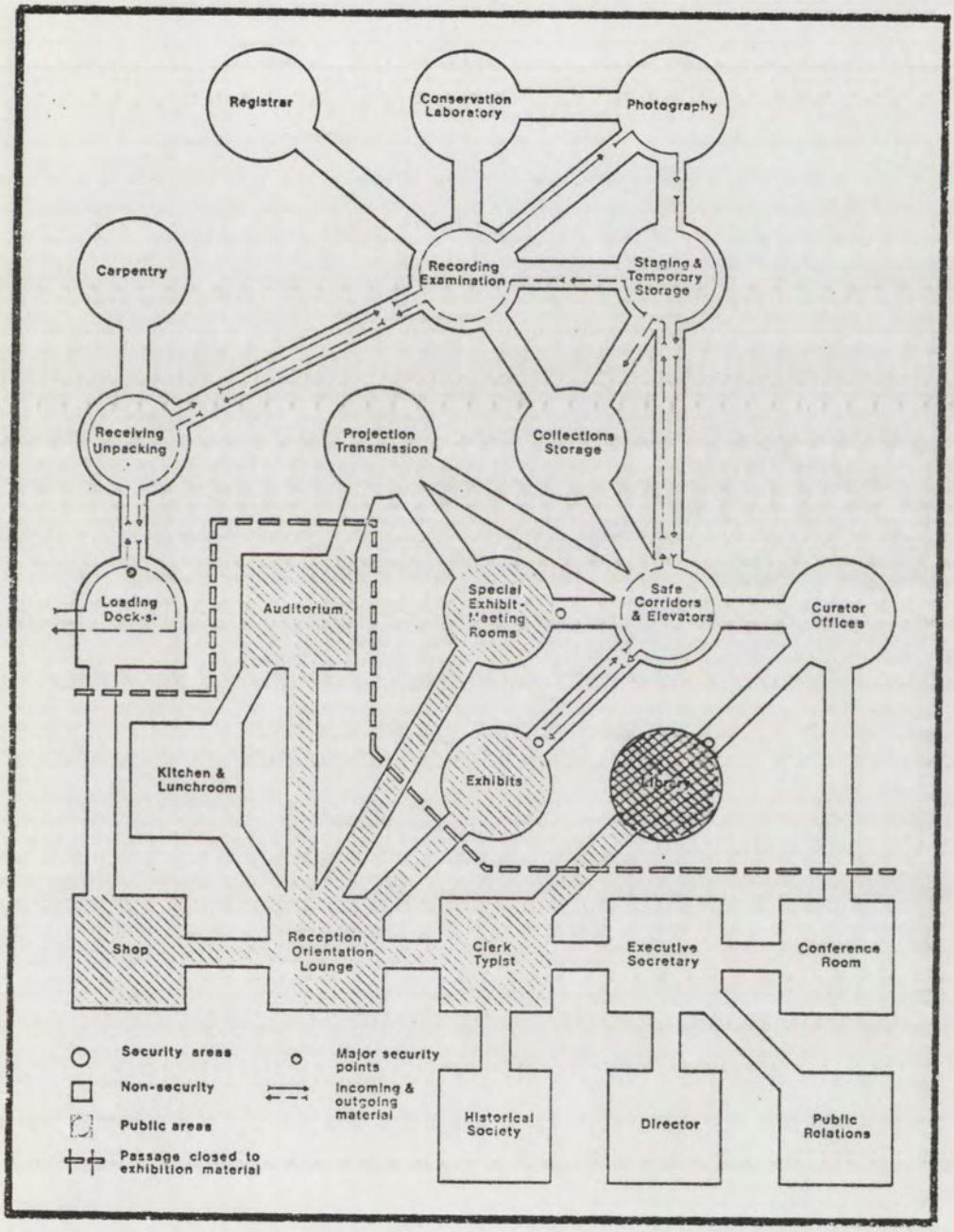
Shelving for books as well as secondary material.

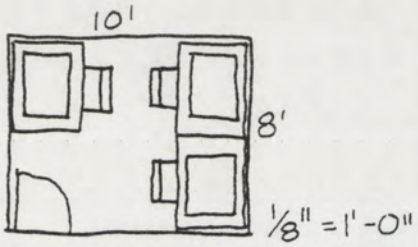
RELATED INFORMATION:

Scholars interested in particular material need a place to study - curators will pull a piece from the collection and let the scholar study it in a secure area.

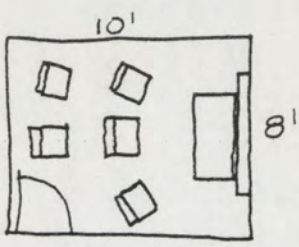
Visitors check out secondary material for use in library or in meeting rooms (i.e., video cassettes, tapes, microfiche, microfilm).

FIGURE 41a - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: SPECIAL STUDY SPACES



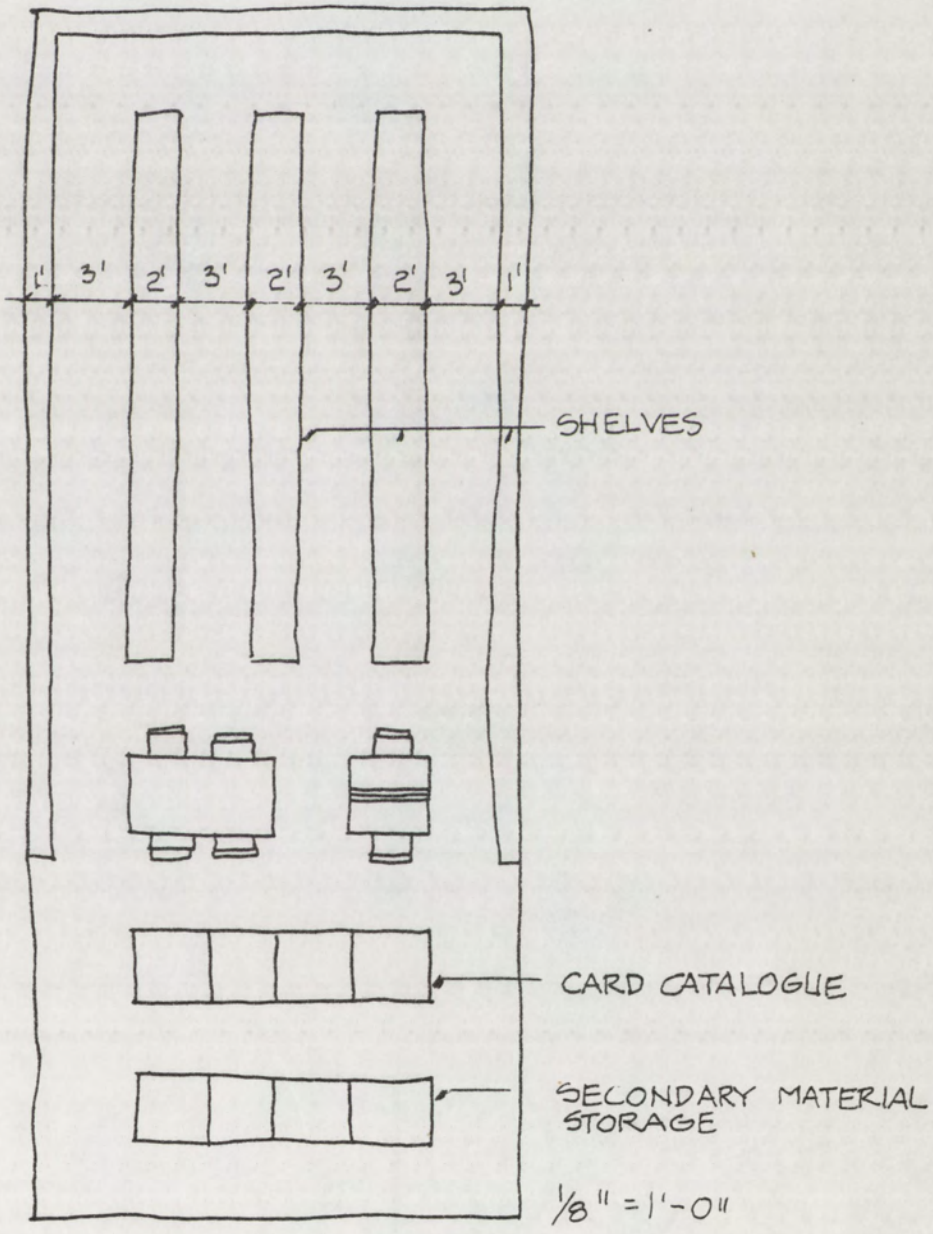


MICROFILM/LISTENING RM.



MOVIE/VIDEO ROOM

FIGURE 41b - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: LIBRARY



AREA: Kitchen/Lunchroom

SQ. FT.: 288

DESCRIPTION:

Function: Kitchen for staff and volunteers to prepare food and drink for reception and own lunches.

Expansion: Basic kitchen with ability to expand.

ENVIRONMENTAL CONDITIONS:

Noise: Noisy area

Light: Natural light

Other: Kitchen exhaust

AREA TYPE AND RELATIONSHIPS:

- Must be convenient to lounge area and auditorium for group functions.
- Expansion will be in the form of an eating area served by vending machines, etc.

FIXED EQUIPMENT:

Cabinets top and bottom, sink, dishwasher and oven.

Storage

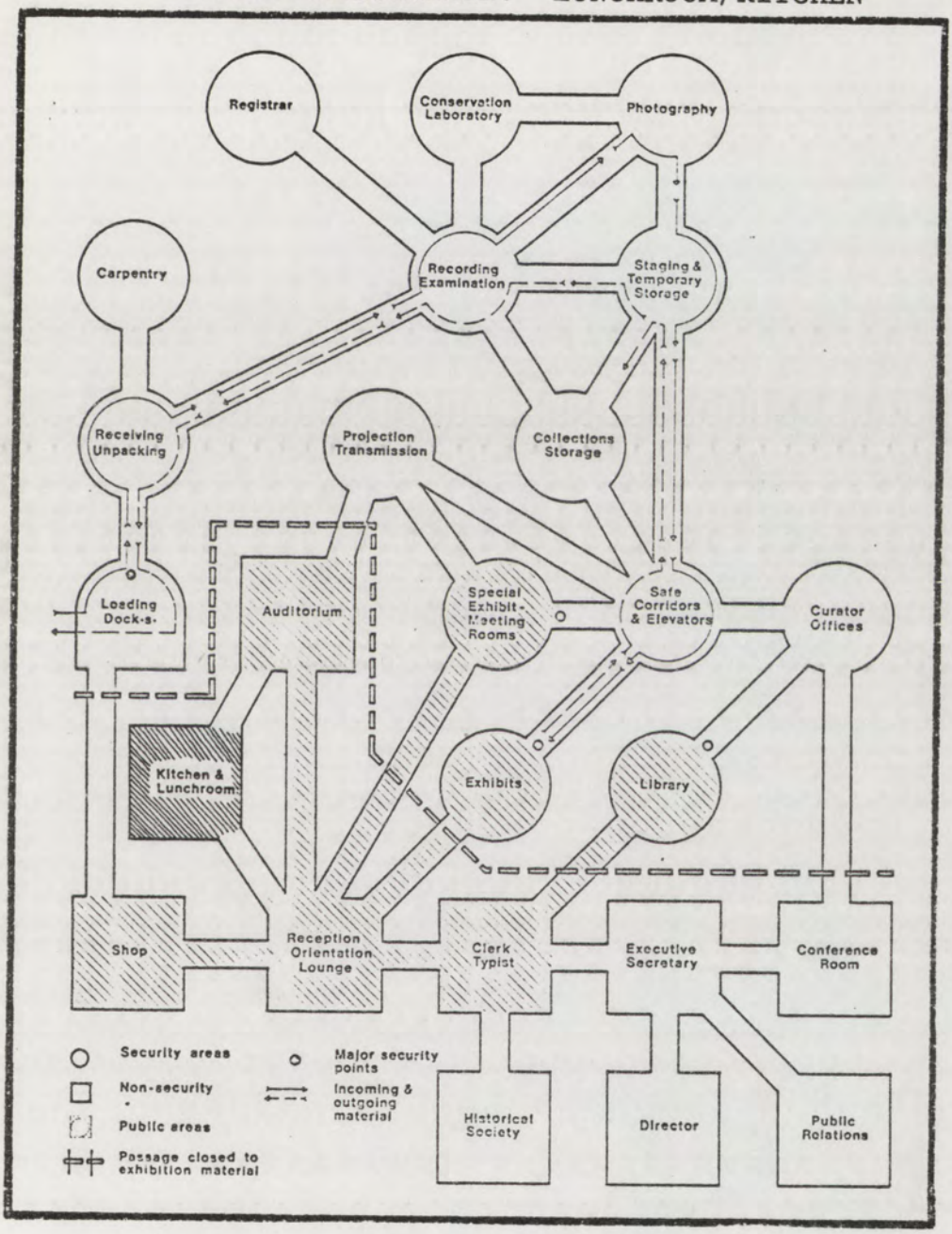
MOVABLE EQUIPMENT:

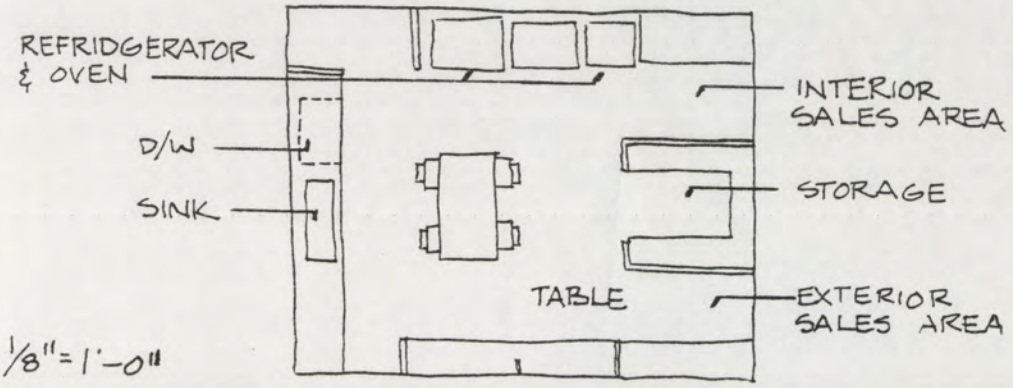
Small table with 4 chairs.

RELATED INFORMATION:

Possible future expansion, possible revenue-producing area.

FIGURE 42 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: LUNCHROOM/KITCHEN





AREA: Auditorium

SQ. FT.: 1,728

DESCRIPTION:

Function: Lectures, films, conferences, receptions

No. of People: 150 to 200

Time of Use: Able to be separated from exhibit functions for off-hour use.

ENVIRONMENTAL CONDITIONS:

Noise: Lectures and films may distract other visitors.

Light: Lighting for general auditorium use and wall washers for temporary exhibits.

Other: No windows or have complete control over natural light.

AREA TYPE AND RELATIONSHIPS:

- Relate immediately to flow pattern to temporary exhibit and kitchen.

- Relate immediately to lounge as an extension.

FIXED EQUIPMENT:

Wall system for temporary art exhibit, ceiling grid for hanging panels.

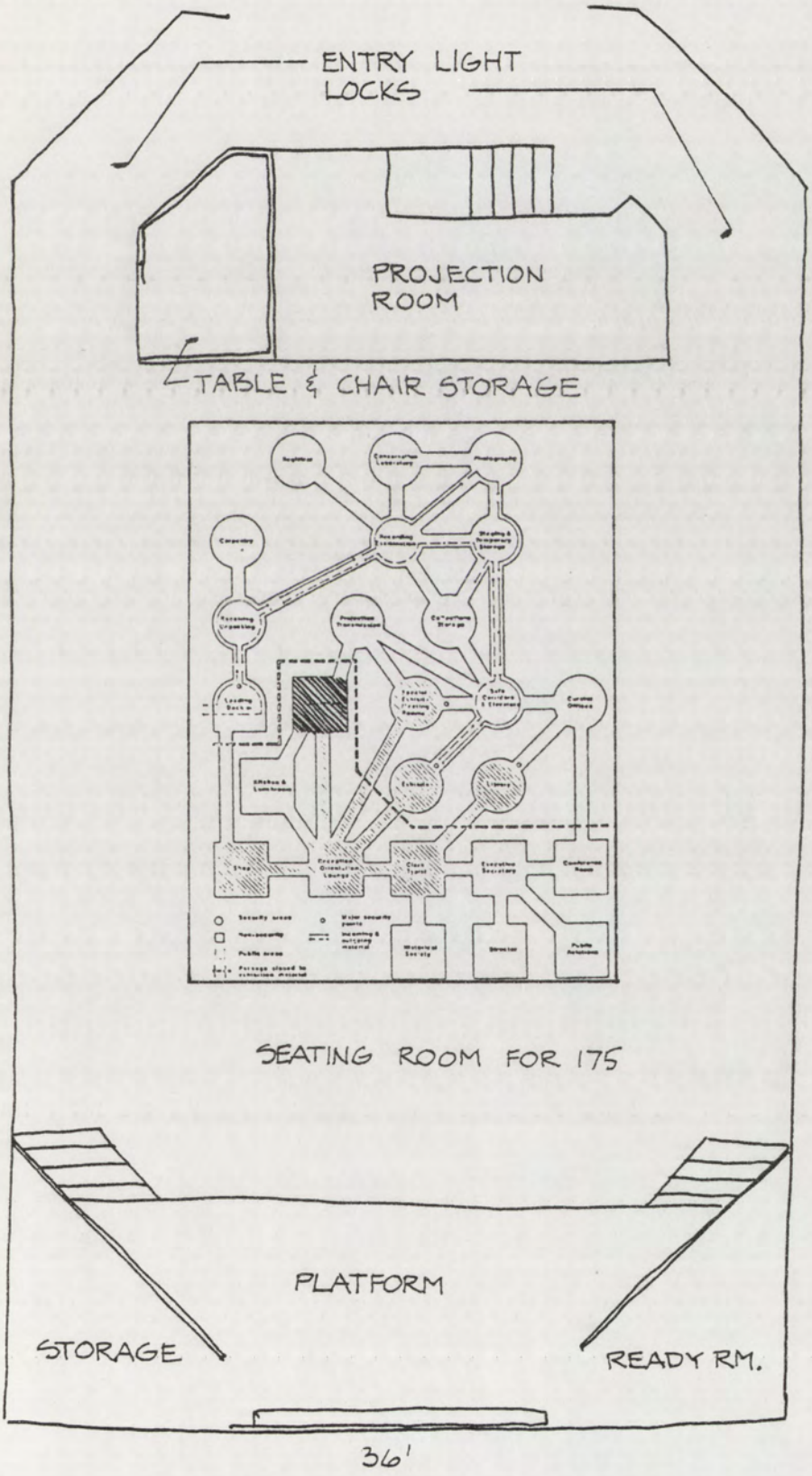
MOVABLE EQUIPMENT:

Chairs for 200 and 10 tables, movie screen.

RELATED INFORMATION:

As a possible temporary exhibit space, it must relate (in flow pattern) to temporary exhibit area.

FIGURE 43 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: AUDITORIUM



AREA: Special exhibit/Meeting rooms SQ. FT.: 1,152

DESCRIPTION:

Function: This area will be used as a short-term, specialized exhibit area and for special group meetings at beginning and end of tour run by teachers or docents.

Expansion: Possible expansion of a private staff area for extension material.

No. of People: 1 group of 60 children or 70 docents.

Time of use: Off-hours for docent meetings.

Other: May be one large space divisible into 2 or 3 separate spaces--one audio/visual, one practical work-related adjacent to an outdoor space.

ENVIRONMENTAL CONDITIONS:

Noise: Both sub-functions will be noisy.

Light: Flexible lighting for exhibits, general lighting for meetings.

Temperature: As a possible work area for young children, temperature control would help.

Impurities: As it has an exit to the exterior, control of dust and dirt is imperative.

Other: Should be carpeted so children can sit on floor. Should be appealing to both children and adults as a meeting area.

AREA TYPE AND RELATIONSHIPS:

- Should relate immediately to exhibit flow.
- Convenient to staging area.
- Must be able to close off from exhibit area for changes or off-hour meetings.
- Projection room could integrate with auditorium.
- Should relate directly to docent storage and chair storage.
- Should relate to an exterior court.

FIXED EQUIPMENT:

Sink and work bench for children.

Storage for props, movie/slide screen.

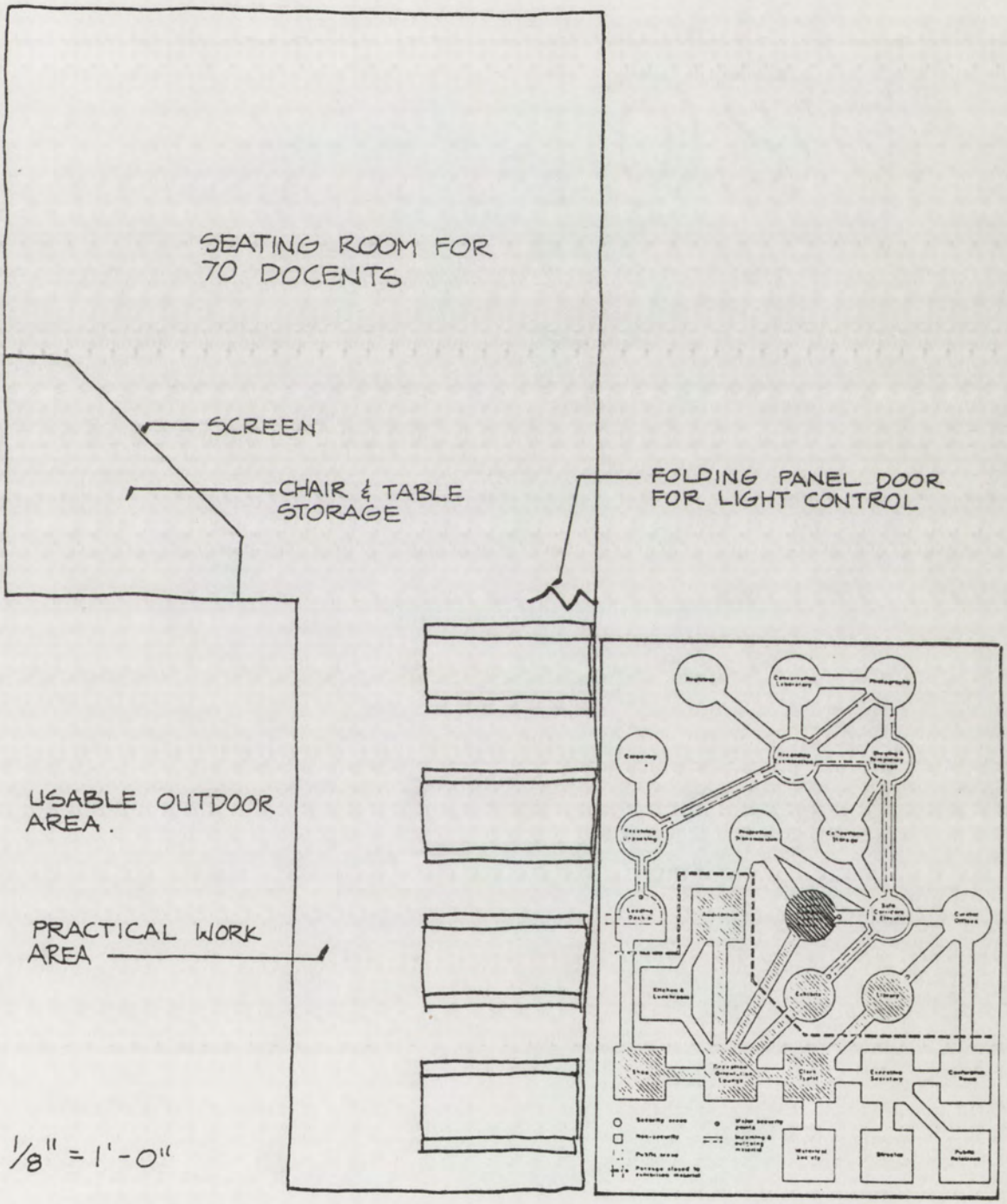
MOVABLE EQUIPMENT:

Chairs and tables for adults (removable--could co-ordinate with auditorium storage).

RELATED INFORMATION:

As an educating area run by volunteers and only supervised by staff, this area should provide an environment where the volunteer is recognized and given the best!

FIGURE 44 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: SPECIAL EXHIBIT/MEETING ROOMS



AREA: Sales

SQ. FT.: 388

DESCRIPTION:

Function: Museum shop area run by volunteers. Sales are related to exhibits as an area of distribution of information as well as material items.

Expansion: Expansion possibilities.

No. of People: 1 cashier/receptionist.

Other: Storage for shop goods should be included. Initially, shop supervisor may have to second for receptionist. Layout of circulation for visitors and supervision.

ENVIRONMENTAL CONDITIONS:

Noise: Noisy area.

Light: Natural or artificial.

Humidity: Work area temperature and humidity.

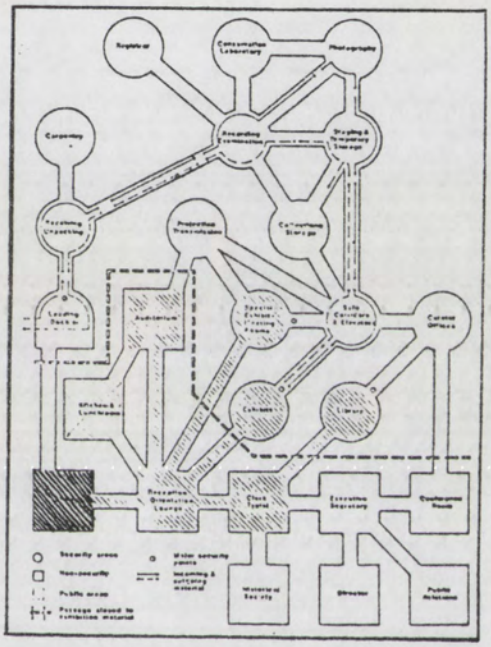
AREA TYPE AND RELATIONSHIPS:

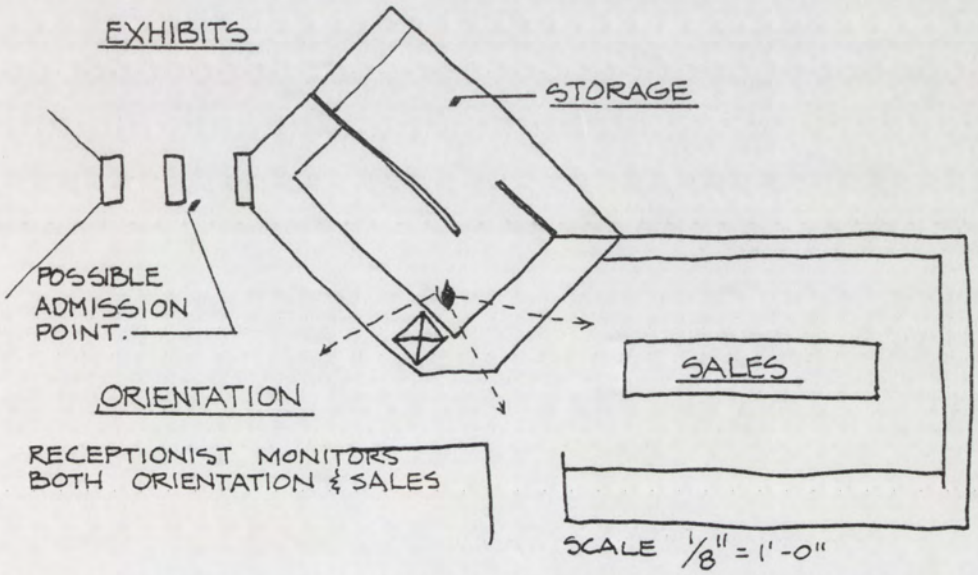
- Relates immediately to existing visitors, receptionist station, sales storage.

FIXED EQUIPMENT:

Sales desk.

FIGURE 45 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE ALLOCATION: SALES





AREA: Conceptual Exhibit

SQ. FT.: 500

DESCRIPTION:

Function: Presentation of 20th century subjects relating to historical collections as well as temporary exhibits. A keynote space which exposes the choices of activities.

No. of People: Groups of 25 to 60.

Other: Must have ability to easily change methods of presentation.

Type: Security

ENVIRONMENTAL CONDITIONS:

Light: Area lighting for staff work--floor and ceiling power for lighting and individual displays.

Temperature: 65° - 70°

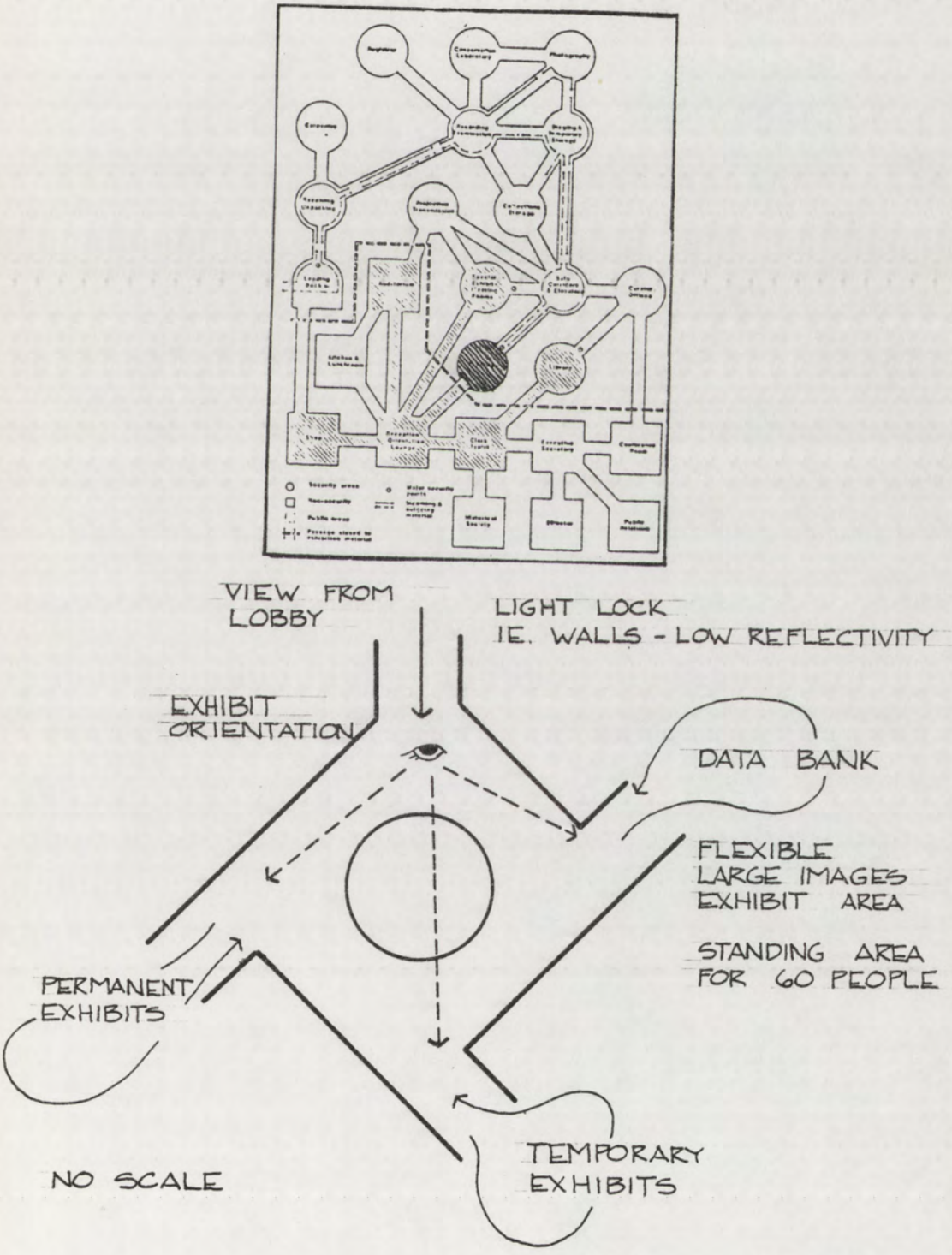
Heating ventilating system should be on a grid relating to the lighting module.

Humidity: 40% humidity

AREA TYPE AND RELATIONSHIPS:

- Relate immediately to orientation and exhibit entry.
- Convenient to staging area.

FIGURE 46 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM
AND SPACE ALLOCATION: CONCEPTUAL EXHIBIT



AREA: Temporary Exhibit

SQ. FT.: 4,000

DESCRIPTION:

Function: Presentation of short-term exhibits in history, science and art.

No. of People: Groups of 25 to 60.

Other: Must have ability to easily change methods of presentation.

ENVIRONMENTAL CONDITIONS:

Noise: A flexible sound system on both floor and ceiling with a public address system--this area may be noisy.

Light: Area lighting for staff work--floor and ceiling power for lighting and individual displays.

Temperature: Heating ventilating system should be a grid relating to the lighting module at a maximum of 400 sq. ft. module.

Humidity: Temperature 65° - 70°, humidity 40%.

Impurities: Locks between this area and orientation area.

AREA TYPE AND RELATIONSHIPS:

- Relate immediately to special exhibit area, orientation area and staging area.

FIXED EQUIPMENT:

Large doors into staging area.

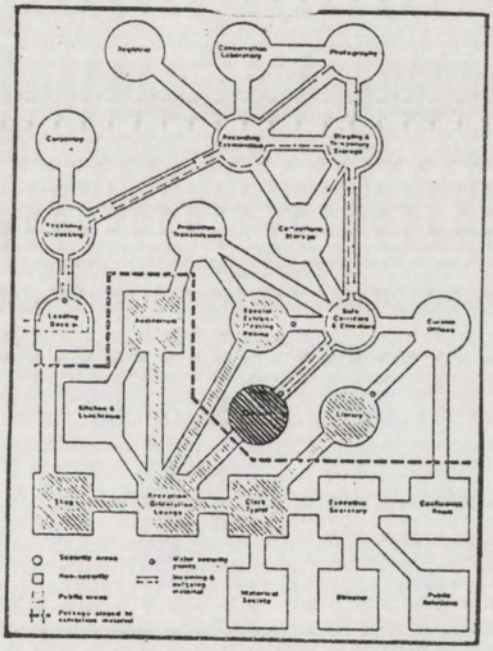
MOVABLE EQUIPMENT:

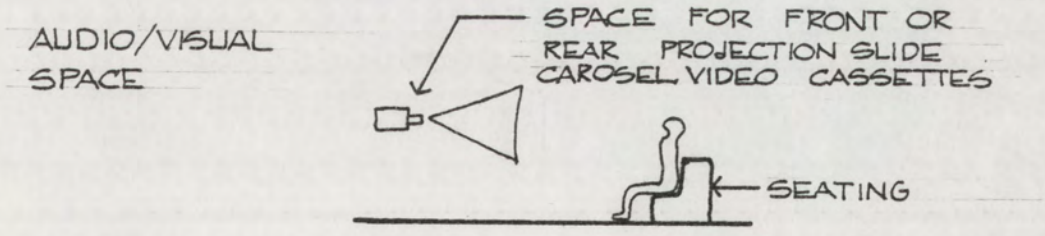
Panels for 2-dimensional presentations (storage).

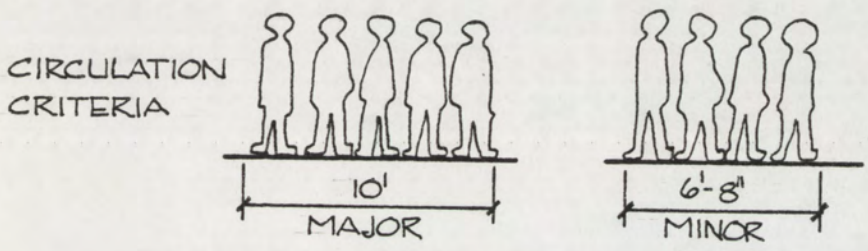
RELATED INFORMATION:

In the past, much of the Museum's activities have been on this short-term exhibit type. This area will relate to the returning visitor.

FIGURE 47 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE NEEDS: TEMPORARY EXHIBIT







AREA: Permanent Exhibit

SQ. FT.: 9,000

DESCRIPTION:

Function: Interpret the history of New Mexico in a series of meaningful related permanent exhibits.

Priority: Essential with possible expansion.

No. of People: Groups of 25 to 60.

Other: Large unbroken windowless area. Minimum clear span of 32 ft. Vertical clearance 16 ft. for some exhibits (i.e., reconstructed environments).

ENVIRONMENTAL CONDITIONS:

Noise: A flexible sound system on both floor and ceiling with a public address system.

Light: Area lighting for staff work--floor and ceiling power for lighting individual displays.

Temperature: Heating ventilating system should be on a grid relating to the lighting module at a maximum of 400 sq. ft./module.

Humidity: Temperature and humidity should be set for preservation.

AREA TYPE AND RELATIONSHIPS:

- Relate immediately to: special exhibit areas, orientation area, and staging area.

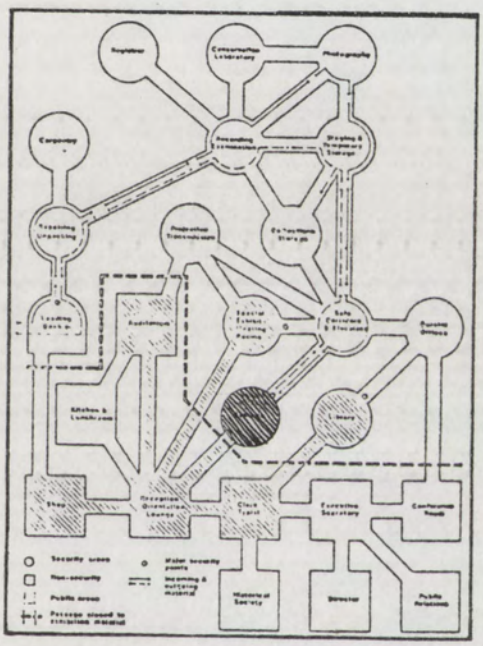
FIXED EQUIPMENT:

Large doors into staging area.

RELATED INFORMATION:

In the past, a small portion of the Museum's area was used for this purpose. This area will relate to the new visitor and groups and individuals returning with specific educational purposes. Exhibit material in this area will grow incrementally in the first 5 years.

FIGURE 48 - MUSEUM FUNCTION RELATIONSHIP DIAGRAM AND SPACE NEEDS: PERMANENT EXHIBIT



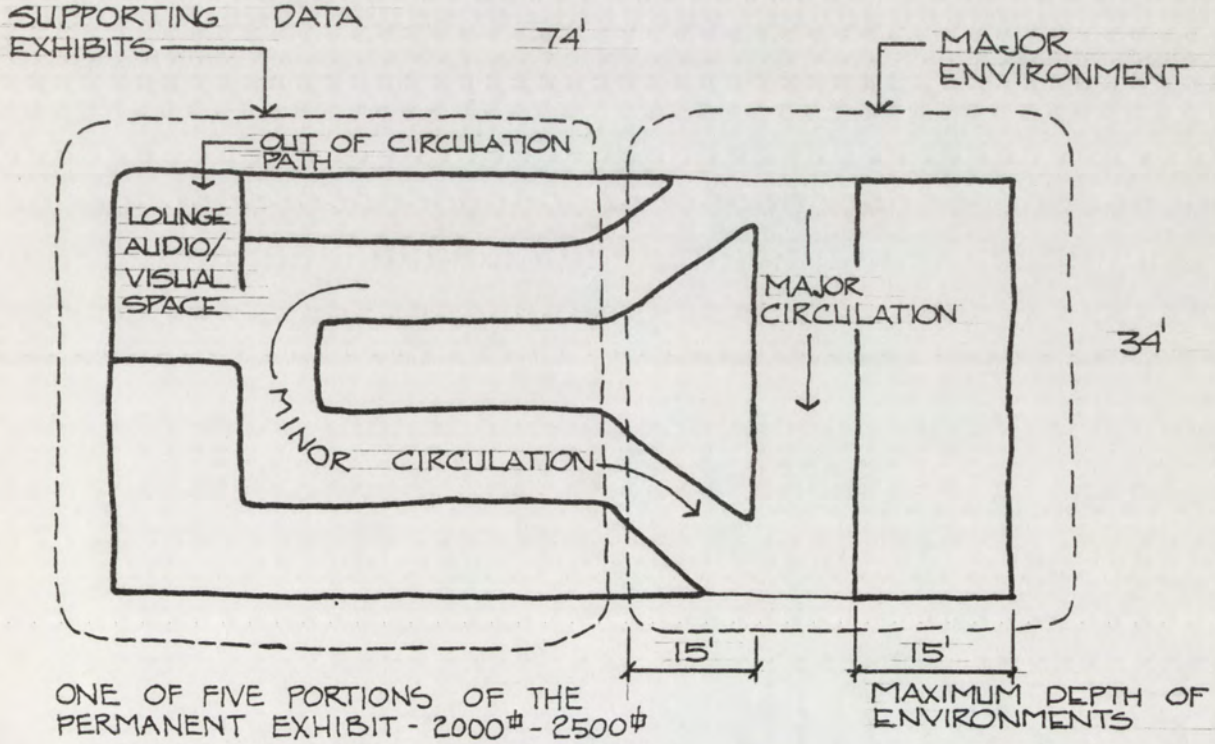
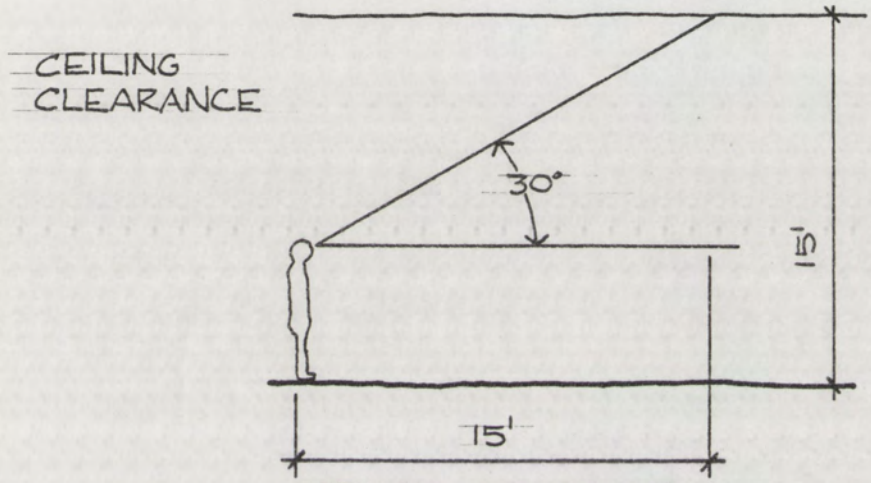
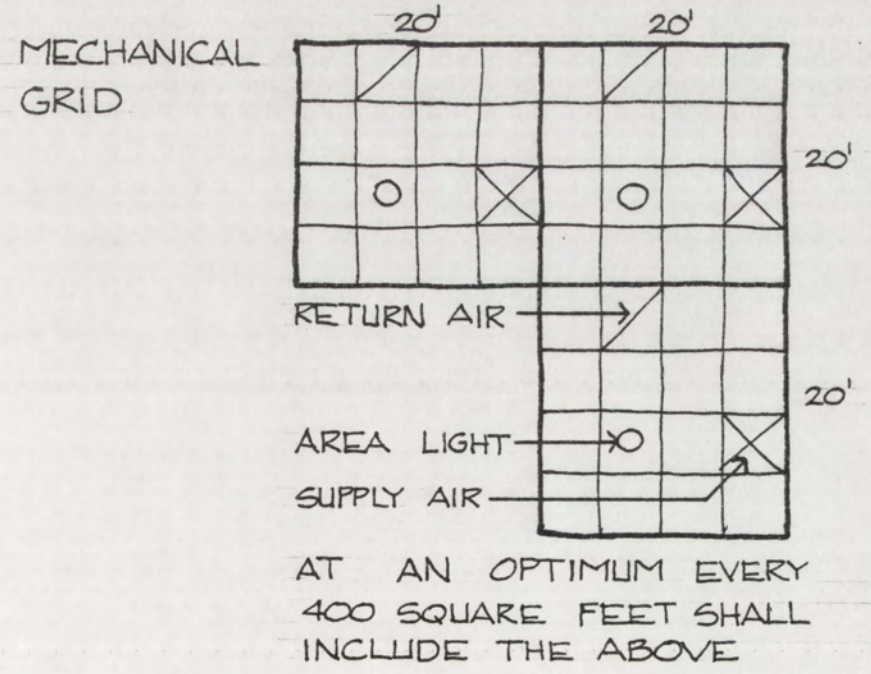


FIGURE 49 - EXHIBIT SPACE DESIGN CRITERIA





AREA: Exhibit Courtyard

SQ. FT.: 1,200 minimum

DESCRIPTION: Outdoor area

Function: For use of school groups, others for "hands-on type activities," dirty activities, and those relating to an exterior environment.

No. of People: 25.

Time of Use: Museum hours

Other: Possible security point.

ENVIRONMENTAL CONDITIONS:

Noise: Children activities may bother quiet activities.

Light: Natural with shaded areas.

Impurities: Environmental locks should be provided at exit and entry.

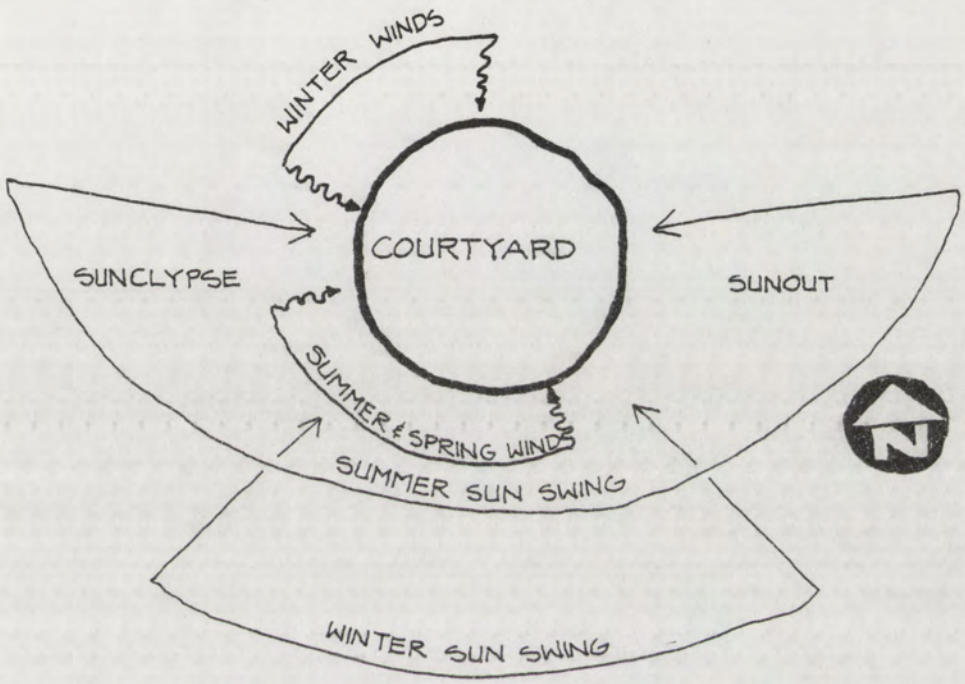
AREA TYPE AND RELATIONSHIPS:

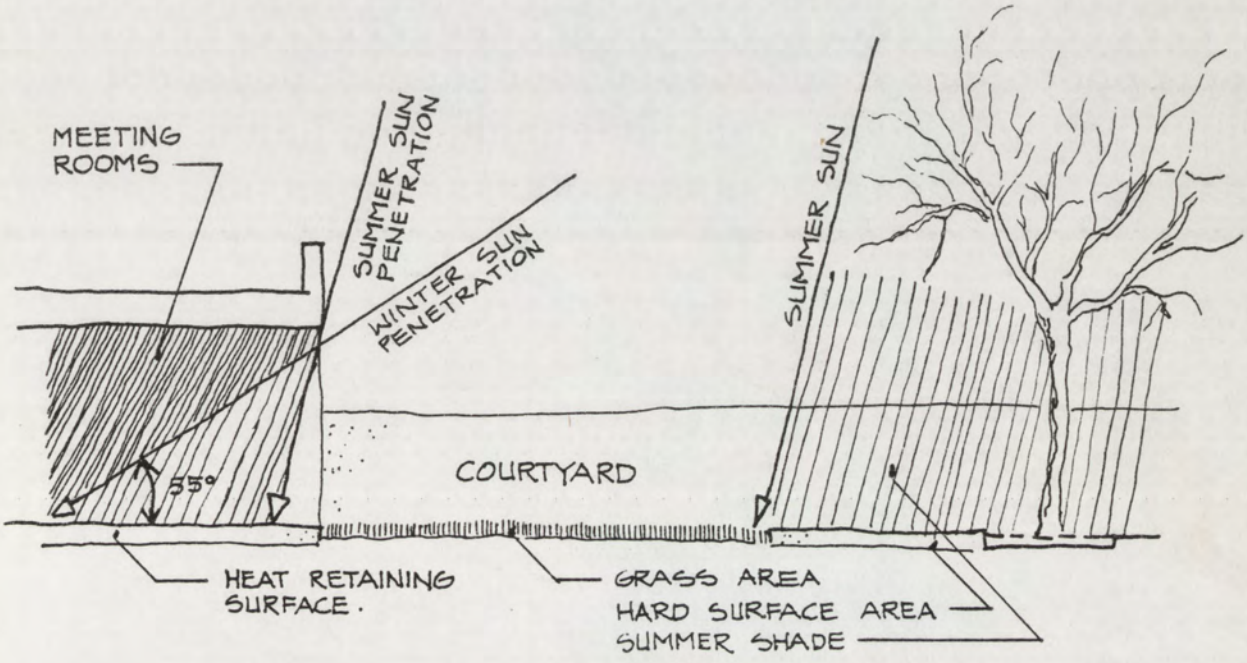
- Relates directly to meeting rooms.

RELATED INFORMATION:

- Visual distraction may be caused by other visitors.
- Should have exterior access.

FIGURE 50 - EXHIBIT COURTYARD SPECIAL CONSIDERATIONS





AREA: Parking

DESCRIPTION:

Function: Provides parking for both Old Town and Museum--probably paid parking. Bus parking for school groups (2).

No. of People: As many stalls as possible for visitors. Approximately 12 to 20 stalls for staff.

Other: Area will become major point of entry to Old Town (the 2nd largest parking area south of Old Town may be developed).

ENVIRONMENTAL CONDITIONS:

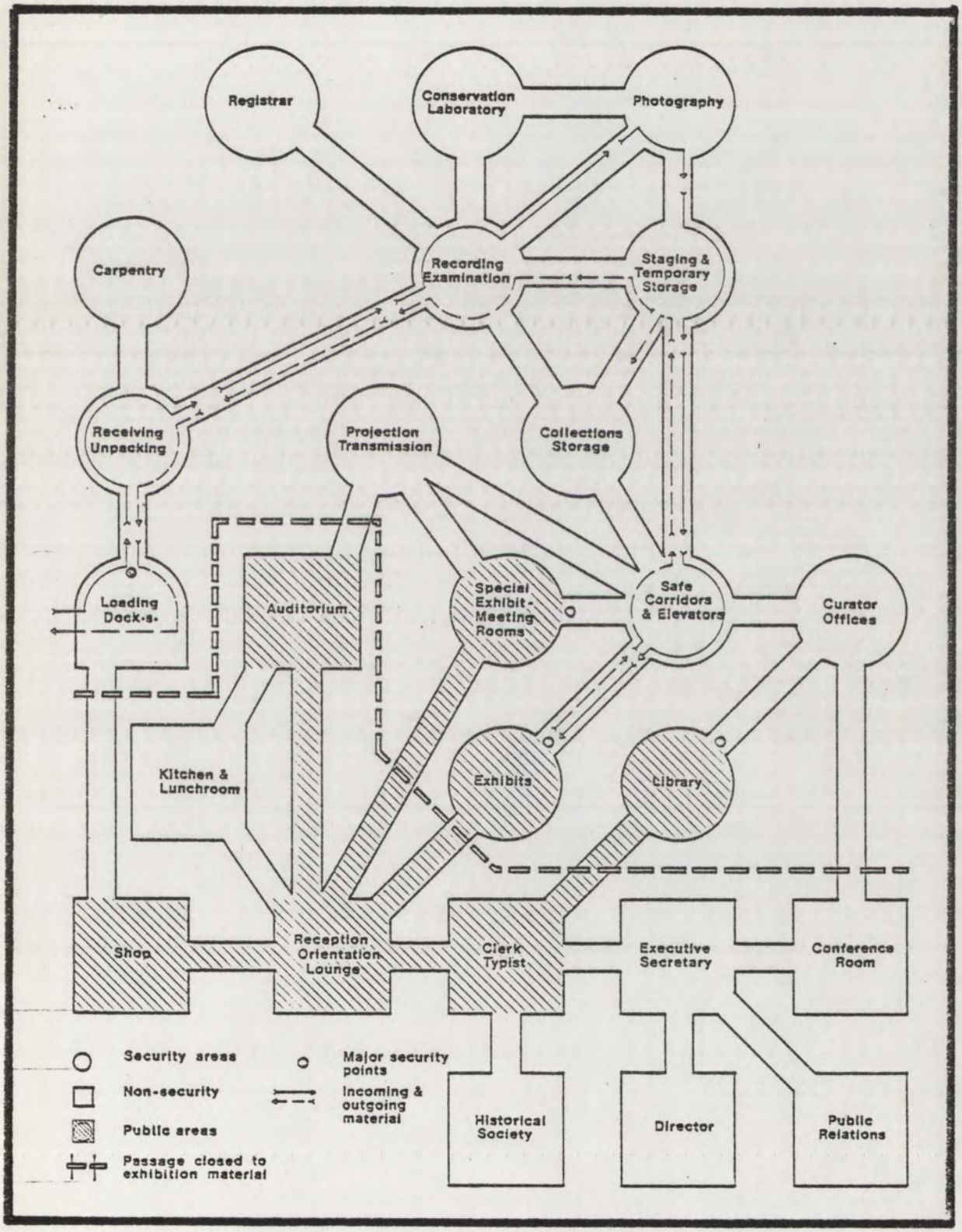
Light: Area lighting will be needed.

Other: Shaded walks will ease walking to and from car.

RELATED INFORMATION:

Entrances to Old Town and the Museum must be apparent.

FIGURE 51 - CONCEPTUAL BUBBLE DIAGRAM KEY SHOWING FUNCTIONAL RELATIONSHIPS



Economy

Cost Estimate Analysis

When "tare" area is added to the Museum's goal of 40,000 square feet, the budget does not balance with the needs. As stated earlier in the tare calculations, a decrease in storage area is preferred over a decrease in the cost per square foot. Forty dollars a square foot is average for museums, but low in comparison to other public buildings. The removal of five thousand square feet from the storage area will balance the budget.

Collection Storage			
Preliminary allocations	13,500 S.F.		
Subtract from storage	5,000 S.F.		
	8,500 S.F.	+10% tare =	9,350 S.F.
Exhibition Area	13,500 S.F.	+10% tare =	14,850 S.F.
Offices	1,588 S.F.	+30% tare =	2,064 S.F.
Exhibit Material Area	4,176 S.F.	+30% tare =	4,177 S.F.
Public Areas	7,236 S.F.	+30% tare =	9,406 S.F.
Total Gross Area			39,847 S.F.

A. Building Costs

39,847 S.F. X $40 $1,593,880

B. Fixed Equipment

1% of A = $ 15,938

Solar equipment in addition to the above 1/7 of gross area equals collector area. $30/S.F.X collector area gives approximate cost of solar system not included in $40/S.F.

B.	Fixed Equipment (con't.)		
	5692 S.F. X $30/S.F.	= $170,760	
	Total Fixed Equipment		$ 186,698
C.	Site Development		
	10% of A		159,388
D.	Total Construction		$1,939,966
E.	Movable Equipment		
	Exhibits (34% of gross = 13,500 S.F.)		
	$28 X 13,500 S.F. =		378,000
	Other areas (66% of gross = 26,347 S.F.)		
	5% of A = $79,694 = cost of equipment for total building		
	66% of $79,694 - cost of equipment for non-exhibit areas		52,598
F.	Professional Fees		
	8% of D		155,197
G.	Contingencies		
	10% of D		193,996
H.	Administration		
	1% of A		15,938
	Total Budget		$2,735,695
	10% Escalation		273,569
	Total Funding + Escalation		$3,009,264
	Total Funding		$3,050,000

Time

1976

J F M A M J J A S O N D

Time Table

Programming

Approval

Preliminary Design

Approval

Definitive Design

Approval

Work Draw. & Spec.

Owner Approval

City Approval

Bidding

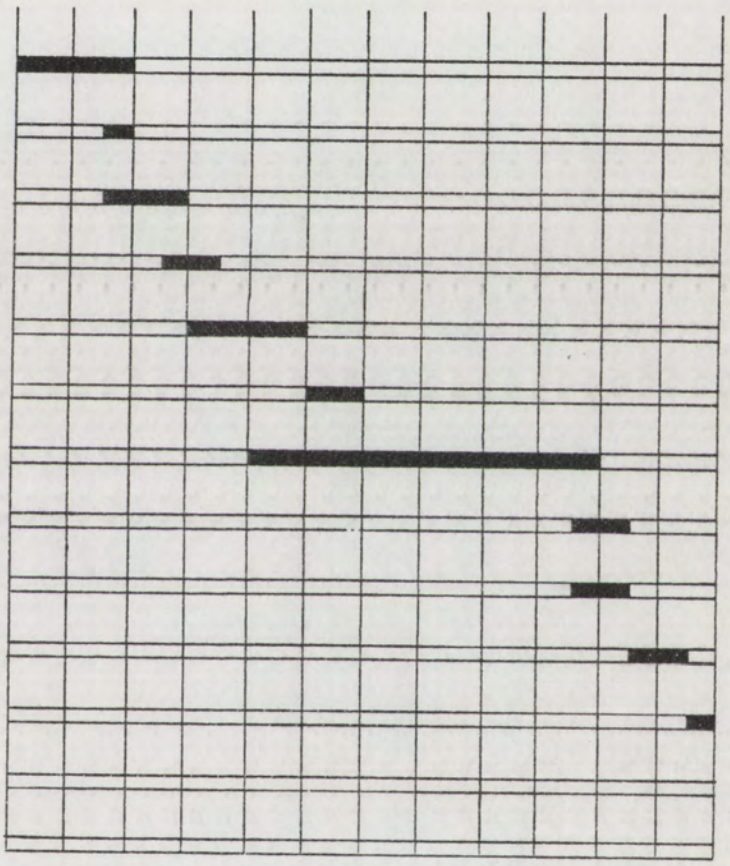
Approval

Construction

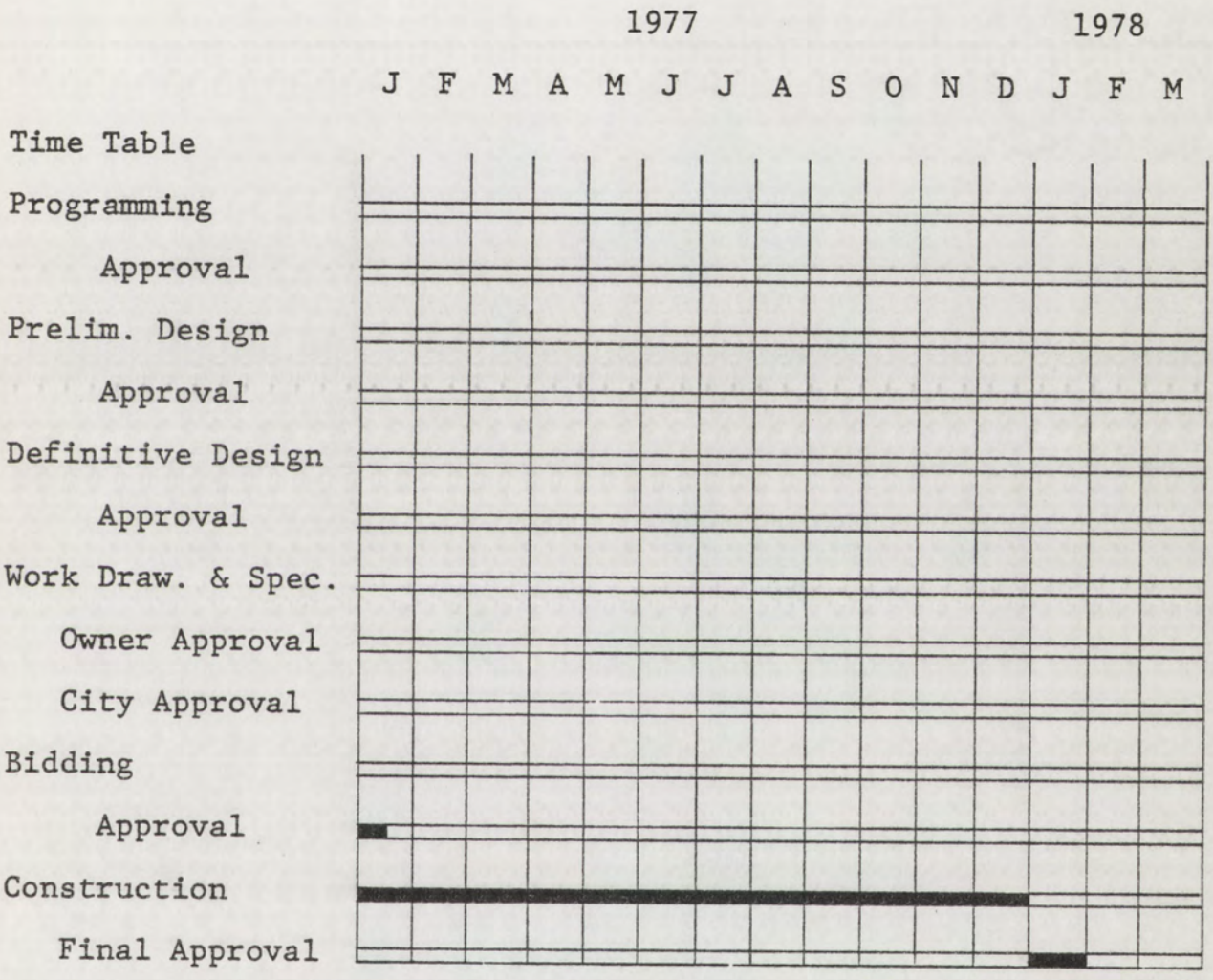
Final Approval

Post Construction
Examination
Feb.1978 to Feb.1979

Post Occupancy Eval.
February 1979



Time



Post Construction Examination
Feb.1978 to Feb.1979

Post Occupancy Eval.
February 1979

PROBLEM STATEMENT

It is the intention of the problem statement to focus on those building requirements which would be peculiar to this project. Factors which would apply to design of buildings in general would not be included in the problem statement. Individual factors discussed in previous sections are recognized; however, they have already been dealt with in more specific terms. The problem statement which follows reflects conditions which must be taken into account for the large scale design of the Museum of Albuquerque on the Old Town site.

Form

1. Vehicular access for visitors and service vehicles must be efficient with clear orientation for destination on or to the site. Use of residential streets must be discouraged to museum users. Major corridors should be used to serve the site.

2. Pedestrians must have a clear orientation in their movement. Entries to and from the museum should be clear with a sense of place at each intersection. Pedestrians should be able to travel to all major destination points along museum route without having to go too far out of their way. Old Town is an exciting experience as a result of scale changes during the walk. This feeling should be carried into the pedestrian plan for the museum.

There must be experiences for the pedestrian which will expose him to current or changing exhibits while walking

within the pedestrian area around the museum. These experiences will serve as stimulation for further involvement with the museum.

Exterior environment will have an impact upon orientation of windows, courtyards, and entries. This is a big building, yet it must be compatible with the Old Town scale.

Function

1. The building should allow the staff to conveniently perform several tasks. Museum of Albuquerque staff must be able to double up to monitor functioning areas. Where security is not critical, spaces should be able to function without constant staff surveillance.

2. Flow of visitors and flow of collections must be clearly separated.

Economy

Revenue-producing activities should be located on the pedestrian route. They should serve to attract passersby into the area.

Monies spent on space improvement should be evident so visitors and volunteers will feel good about the space and want to return.

The spaces must allow for some growth in staff as programs continue to expand. The design of the building itself should have few requirements for extra monitoring, thus the building design should never be the reason for

increasing the staff.

Timing

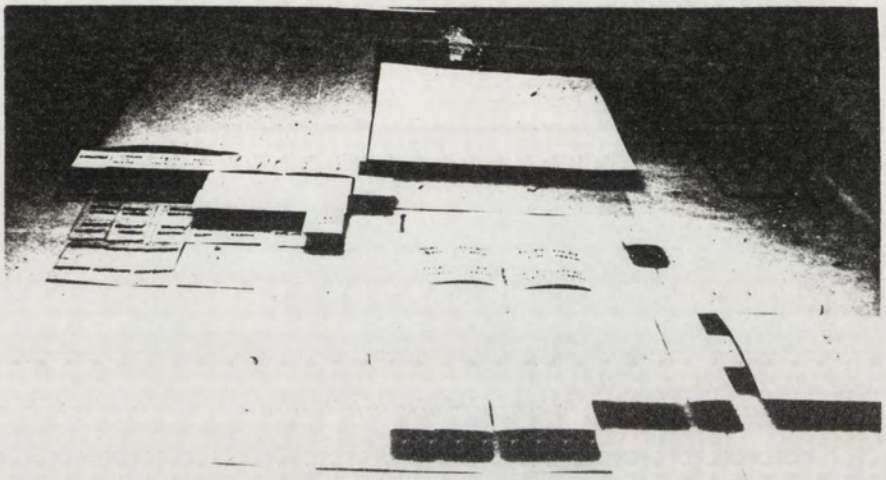
Expansion of the museum is inevitable with the development of a secondary materials collection. These materials will need space both for use and storage. This expansion must be considered in the overall site planning.

Some spaces within the building area may be used in off-hours. These spaces should need little security and should be attractive to passersby. Use of the areas by pedestrians, as well as organizations, will help to ensure their security.

PART IV

ARCHITECTURAL DESIGN

FIGURE 52 - 3-DIMENSIONAL SPACE WORK MODEL



In designing a building, the architect is always led to imagine the work as it is intended to look when finished, placing himself mentally in the position of a visitor who is examining it carefully and critically. Thus it is that he feels the future impressions that his design may make, the surprises that certain new and original solutions may reserve, the architectonic subtleties that the most sensitive will seek out and comprehend. And in the course of this effort of the imagination, the architect reviews the architectonic elements that he considers essential, endeavoring to ascertain whether his reasoning is sound, whether the material he proposes to use is suitable, whether the colors are harmonious, and whether the forms created are handsome and true. For this purpose he takes up an imaginary position in places where drawings are liable to be inexpressive, and strives to feel the volumes he is designing, in all their grandeur and proportion.

OSCAR NIEMEYER

FIGURE 53 - ADMINISTRATIVE OFFICES FLOW DIAGRAM

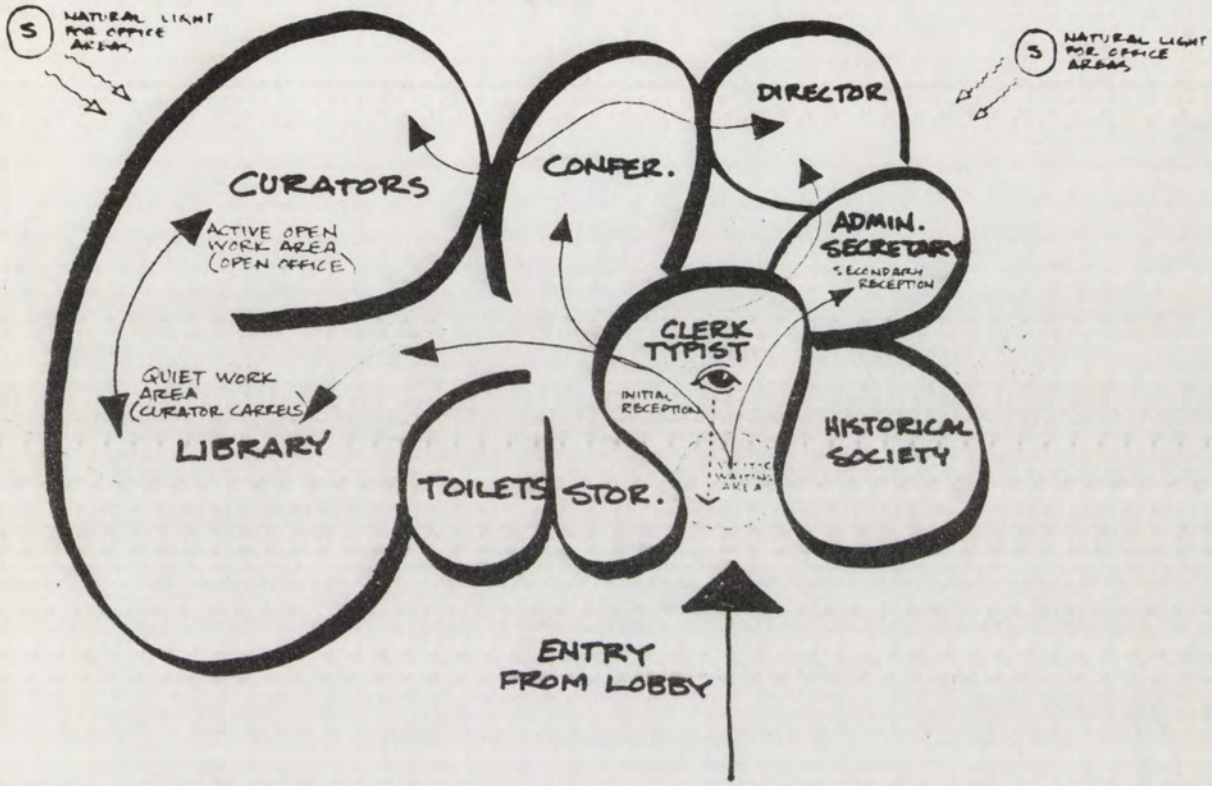


FIGURE 54 - EXAMPLE OF CURATOR WORK SPACE

FIGURE 55 - EXHIBIT MATERIAL AREAS FLOW DIAGRAM

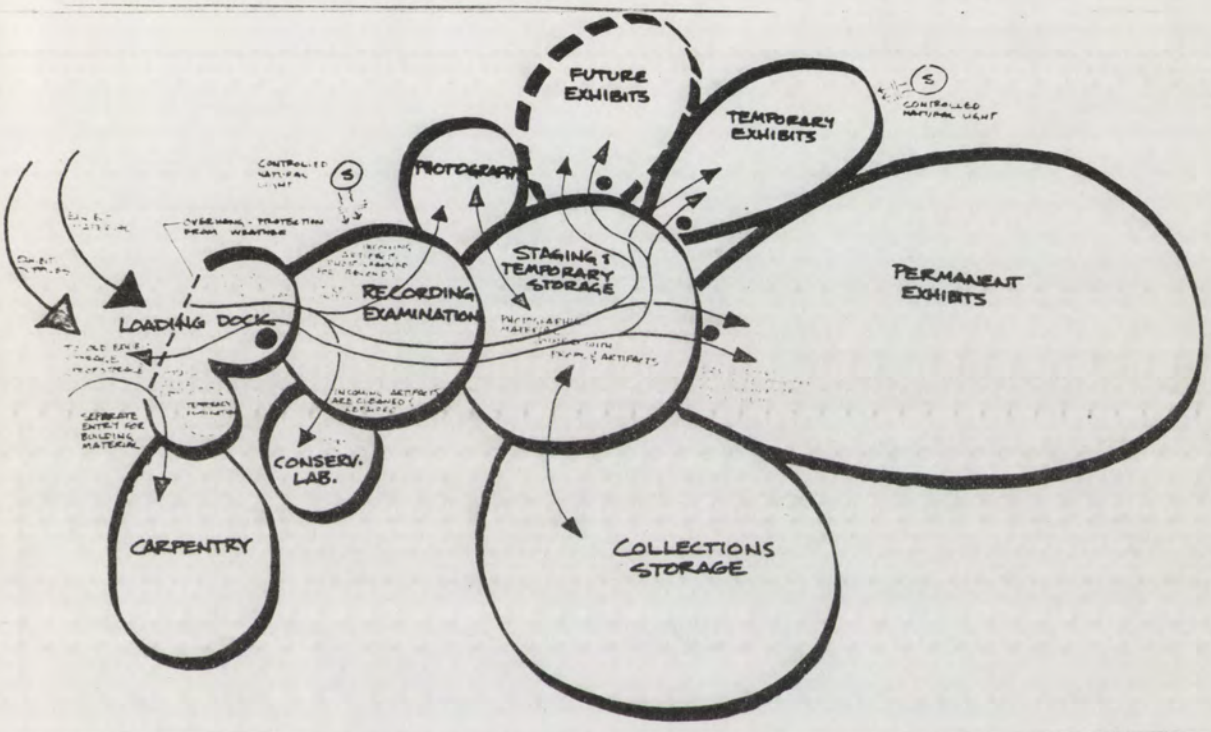


FIGURE 56 - EXAMPLE OF STORAGE TYPE

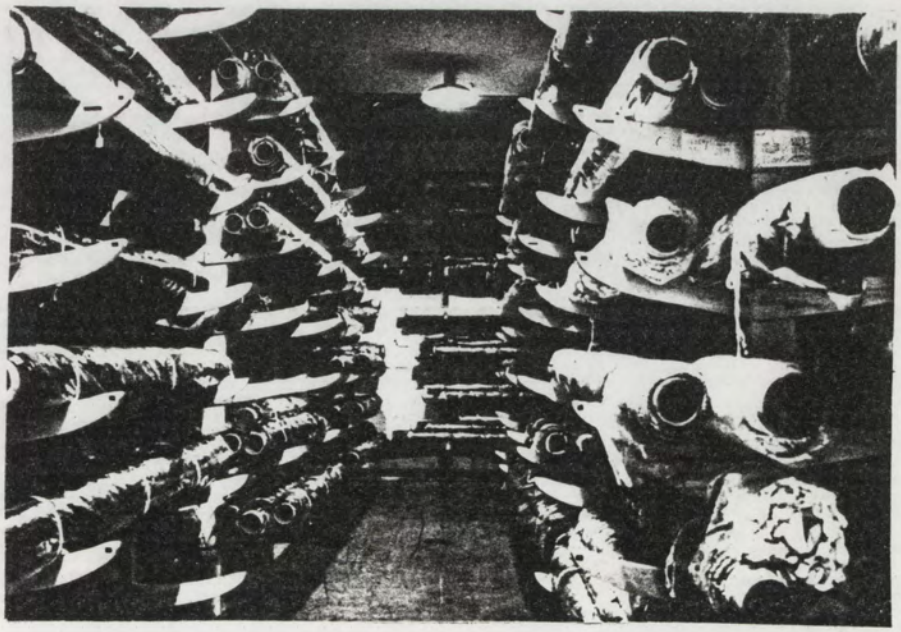


FIGURE 57 - PUBLIC AREA ENTRY FLOW DIAGRAM

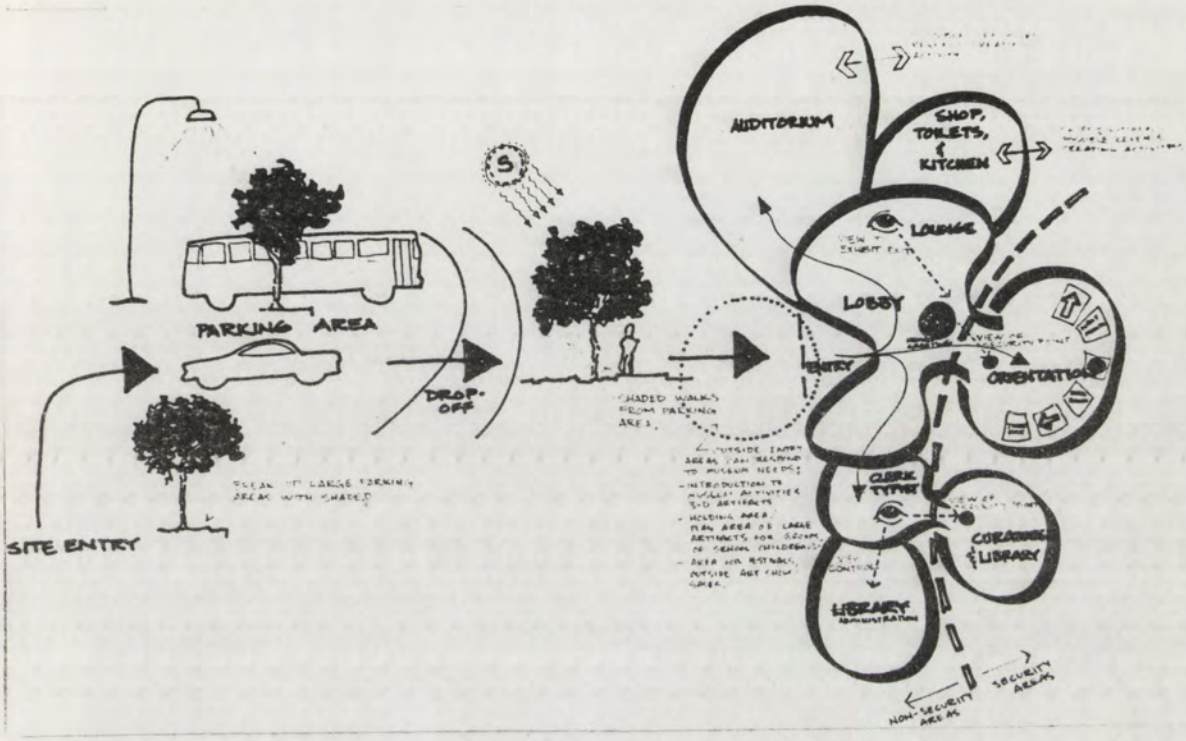


FIGURE 58 - OUTDOOR USE OF ARTIFACTS TO FURTHER VISITS

FIGURE 59 - PUBLIC AREA ORIENTATION FLOW DIAGRAM

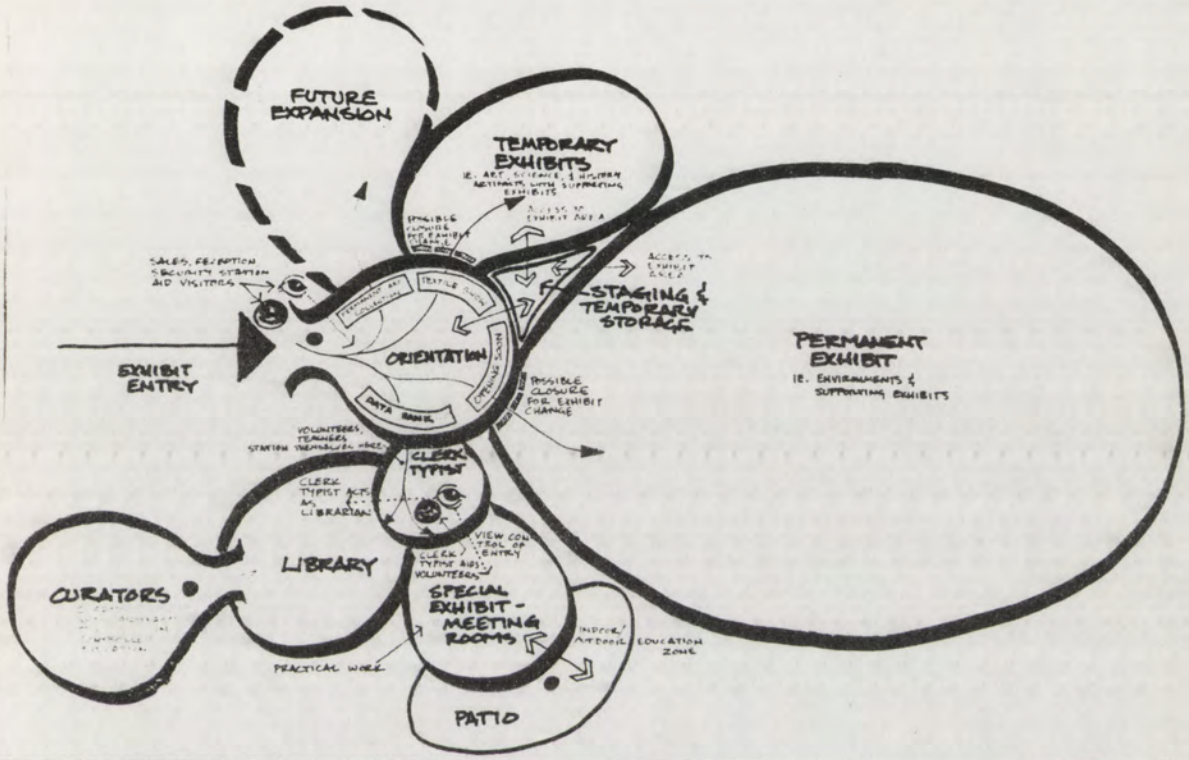


FIGURE 60

CIRCULATION PATTERN

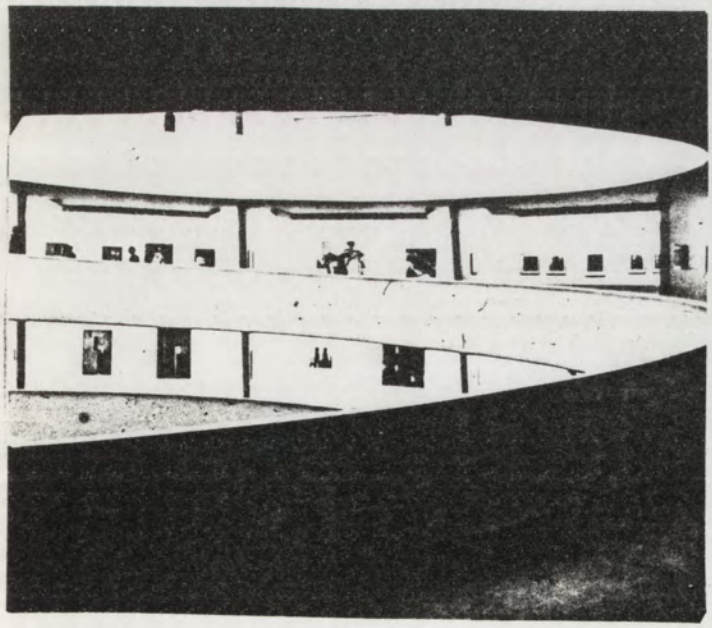


FIGURE 61

USE OF SECONDARY MATERIAL

FIGURE 62 - FLOW PATTERN WITH CLERK TYPIST AS CONTROL POINT

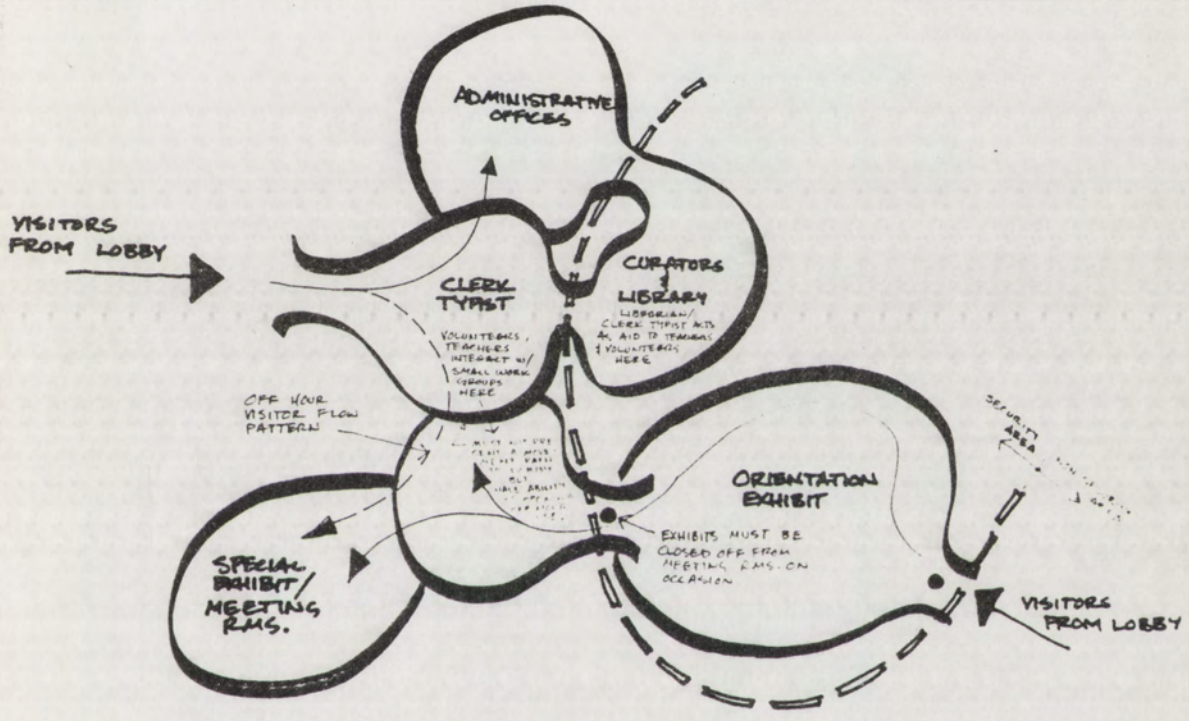


FIGURE 63 - SITE PLAN DESIGN PROPOSAL #1

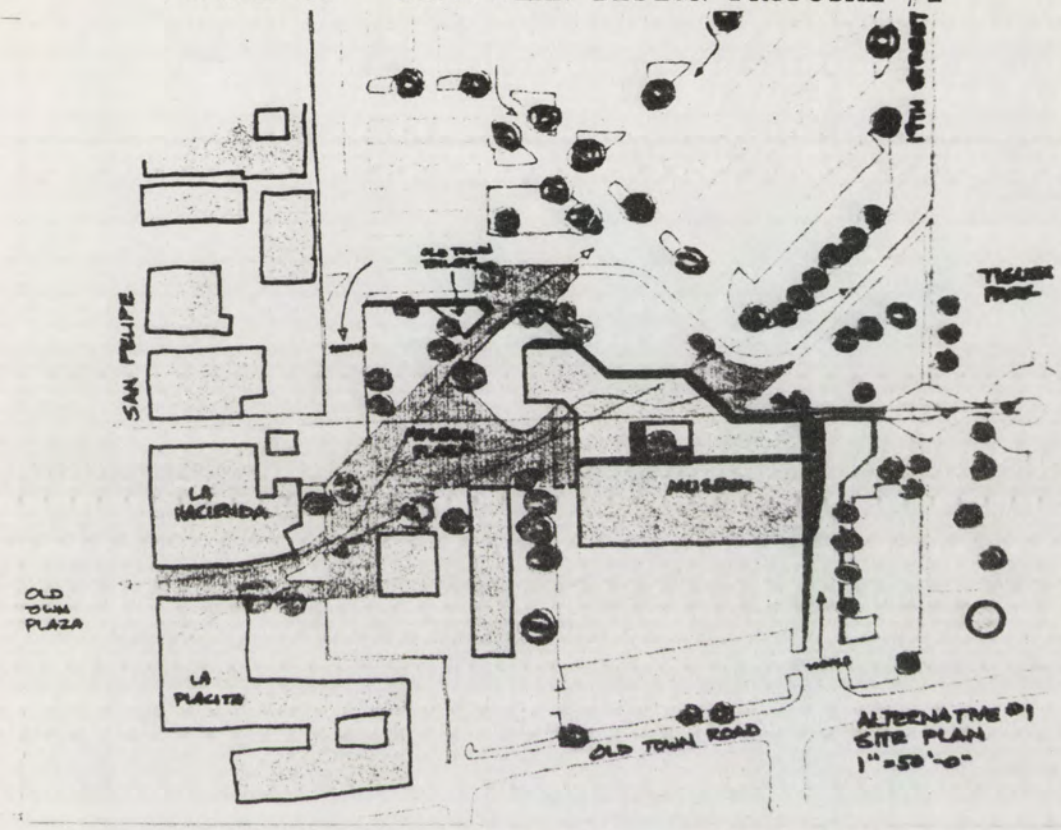


FIGURE 64 - SECTION DESIGN PROPOSAL #1

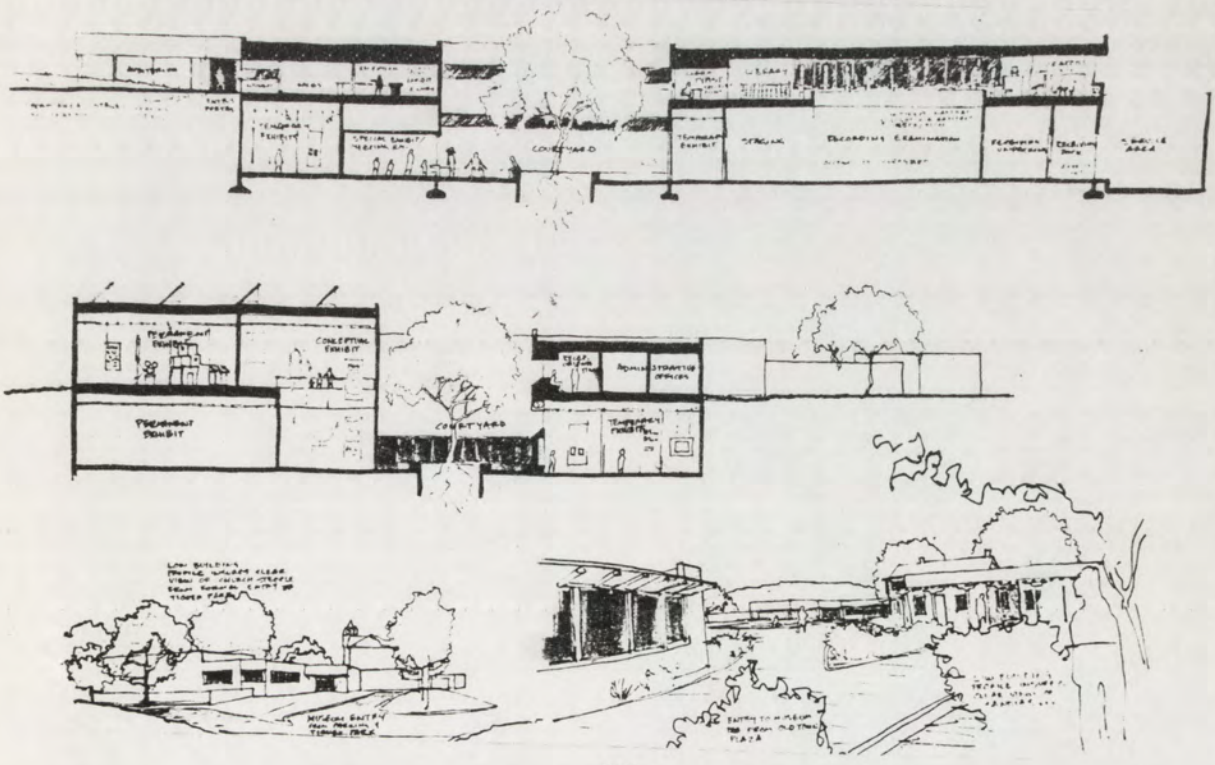


FIGURE 65 - SITE PLAN DESIGN PROPOSAL #2

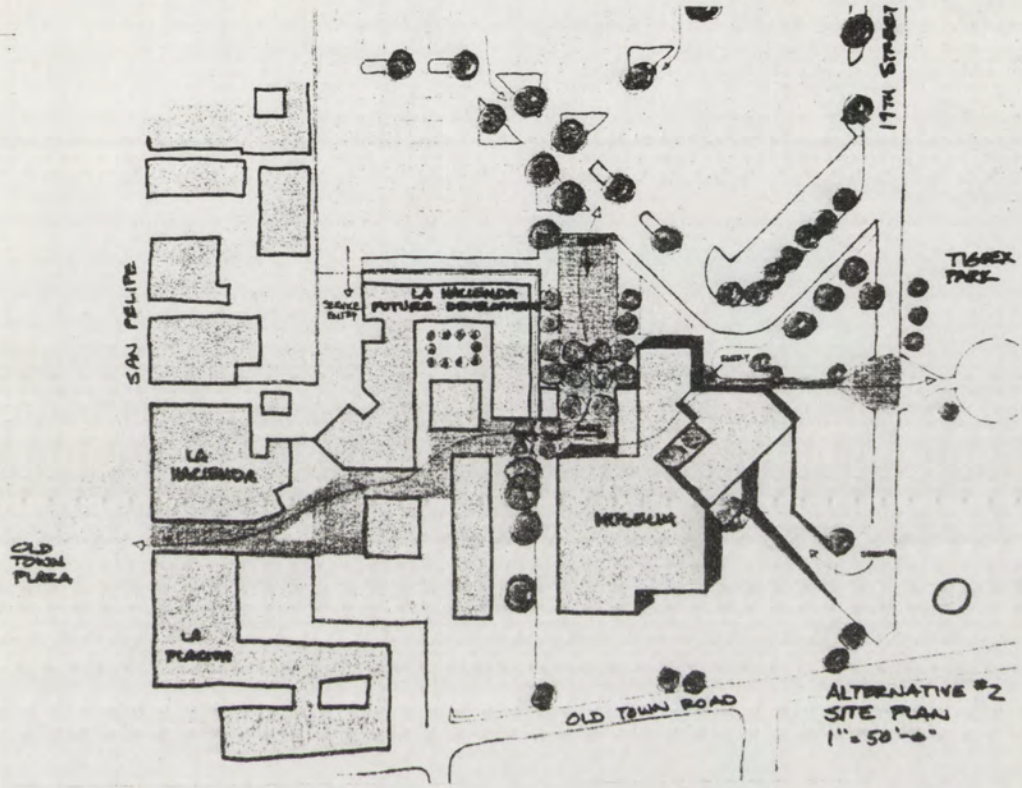
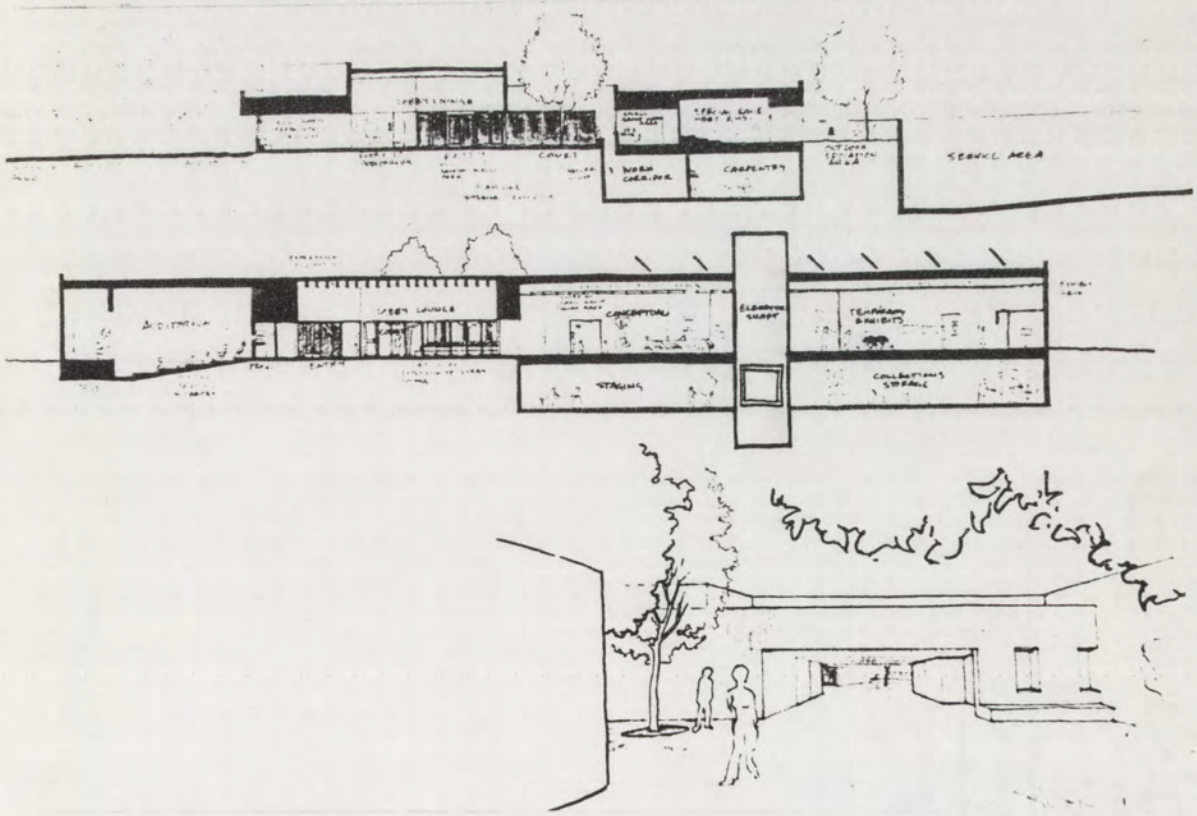


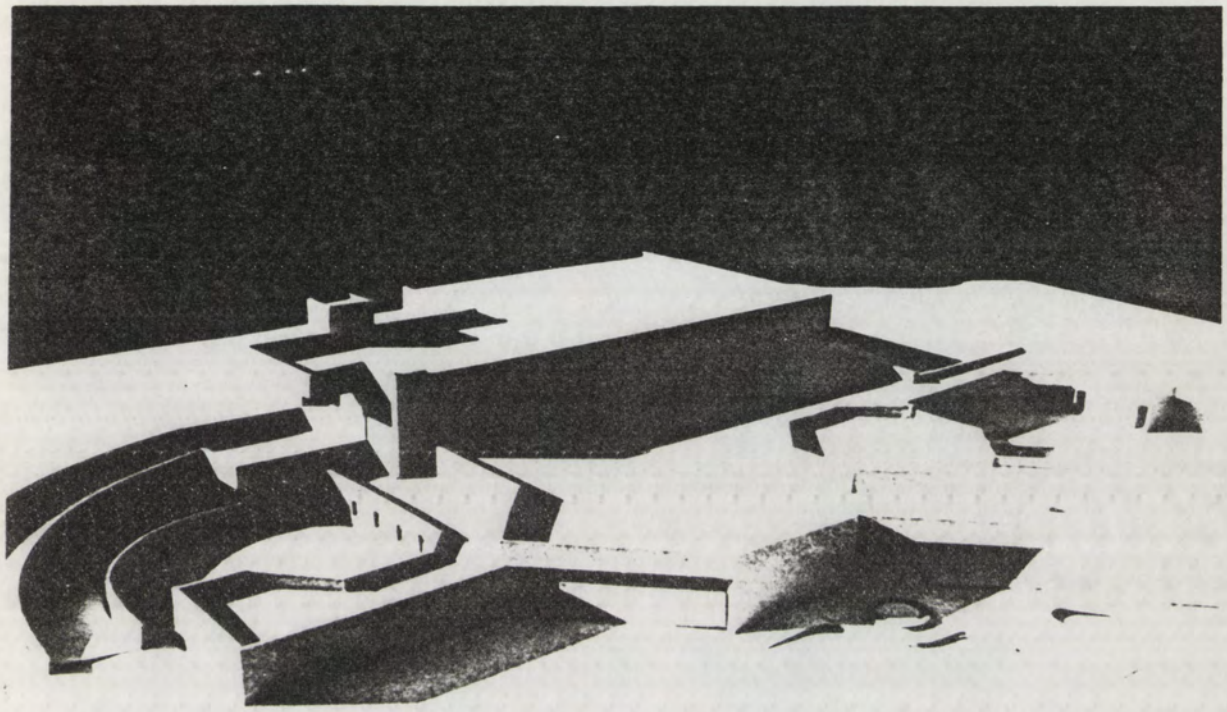
FIGURE 66 - SECTION DESIGN PROPOSAL #2



PART V

ARCHITECTURAL SOLUTION

FIGURE 67 - ARCHITECTURAL SOLUTION MODEL



Architecture . . . is the beautiful and serious game of space.

WILLEM DUDOK

FIGURE 68 - ARCHITECTURAL SOLUTION: SITE ANALYSIS

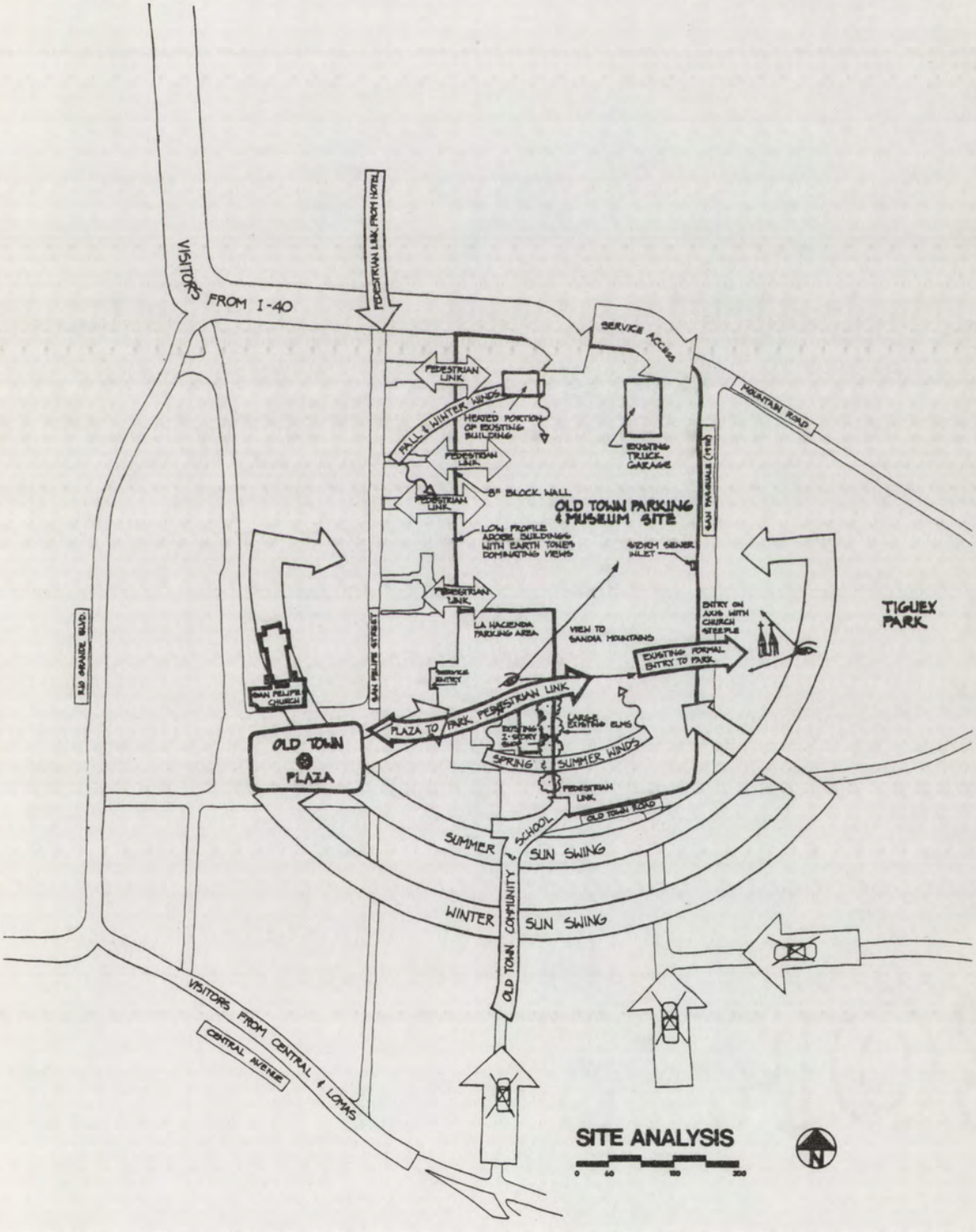


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FIGURE 69 - ARCHITECTURAL SOLUTION: SITE PLAN

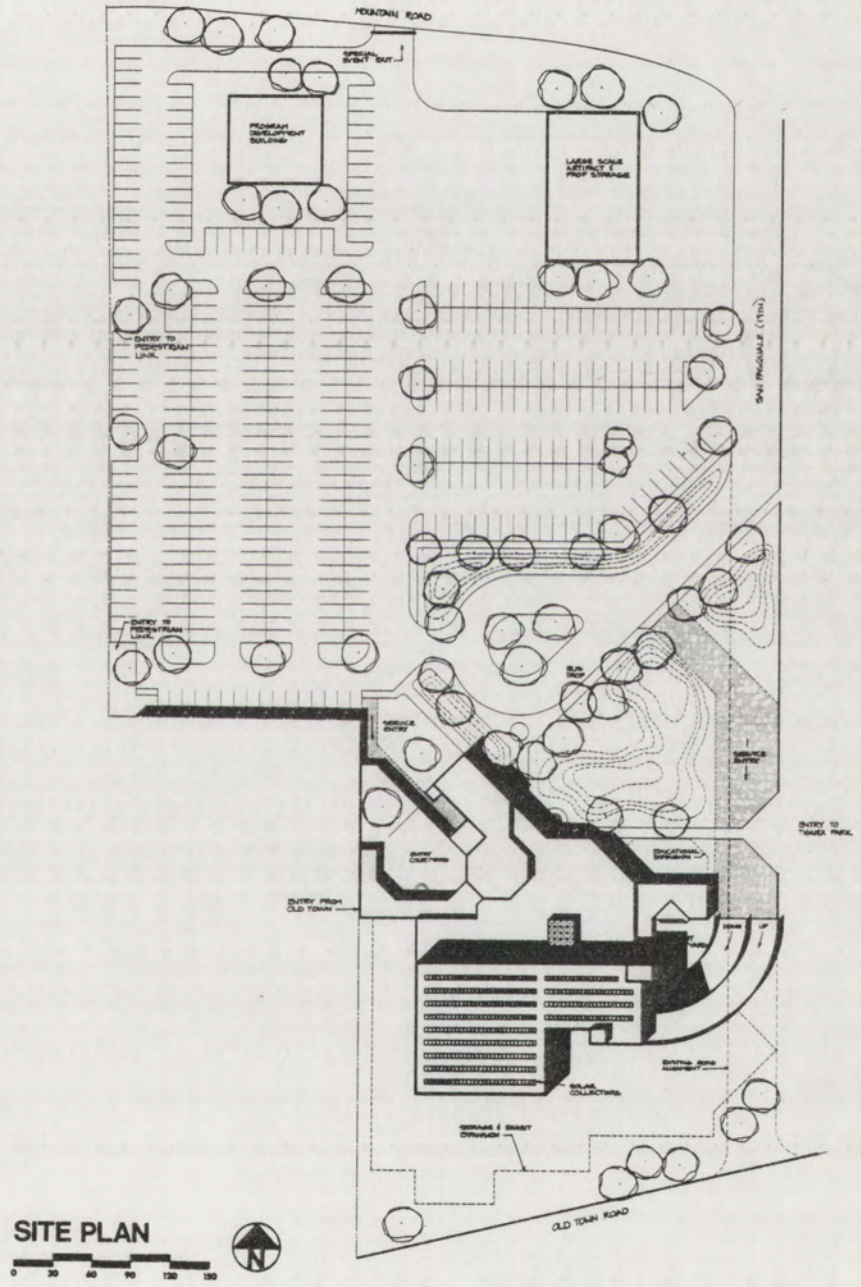

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FIGURE 70 - ARCHITECTURAL SOLUTION: LOWER LEVEL PROGRAM INTERPRETATION

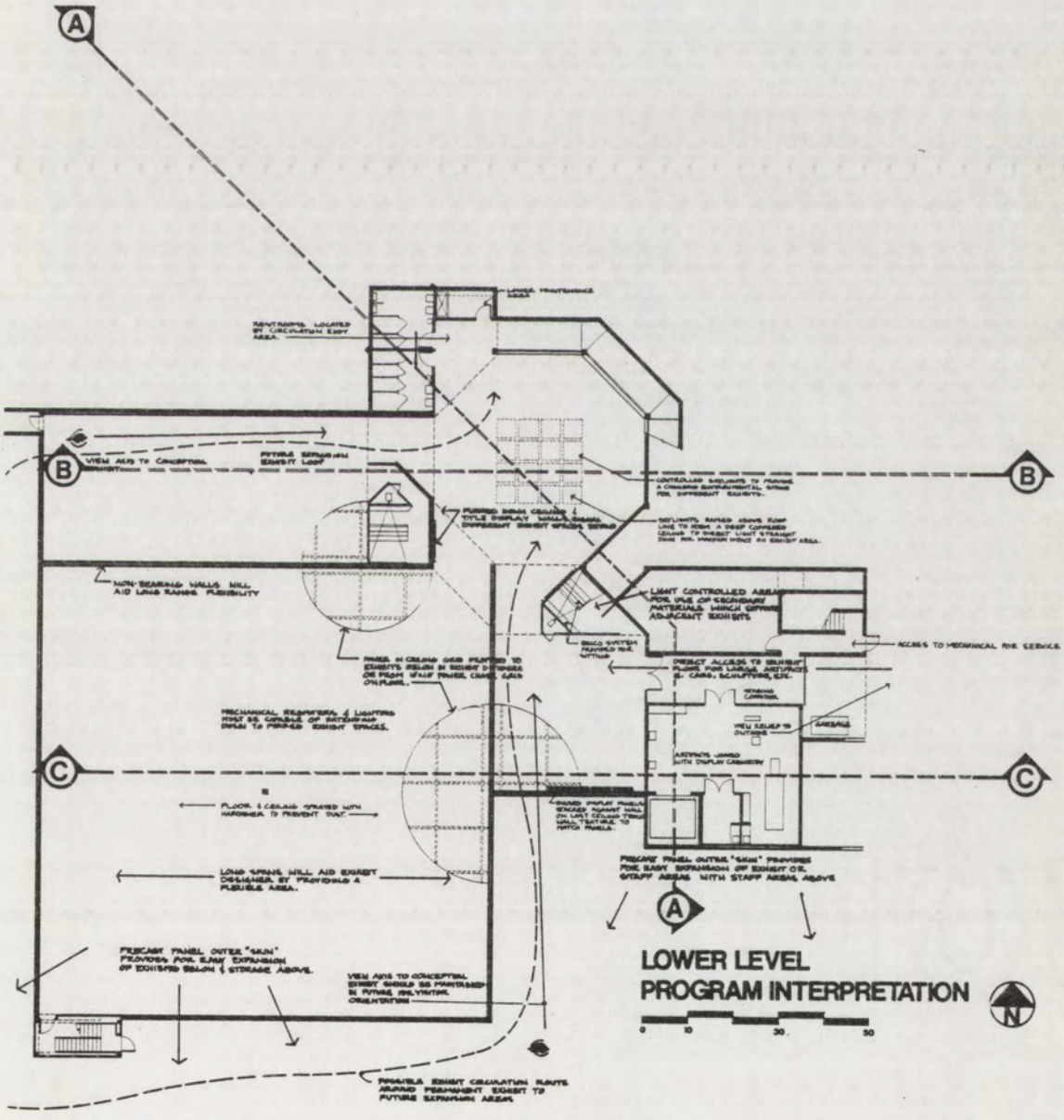

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FIGURE 71 - ARCHITECTURAL SOLUTION: LOBBY LEVEL PROGRAM INTERPRETATION

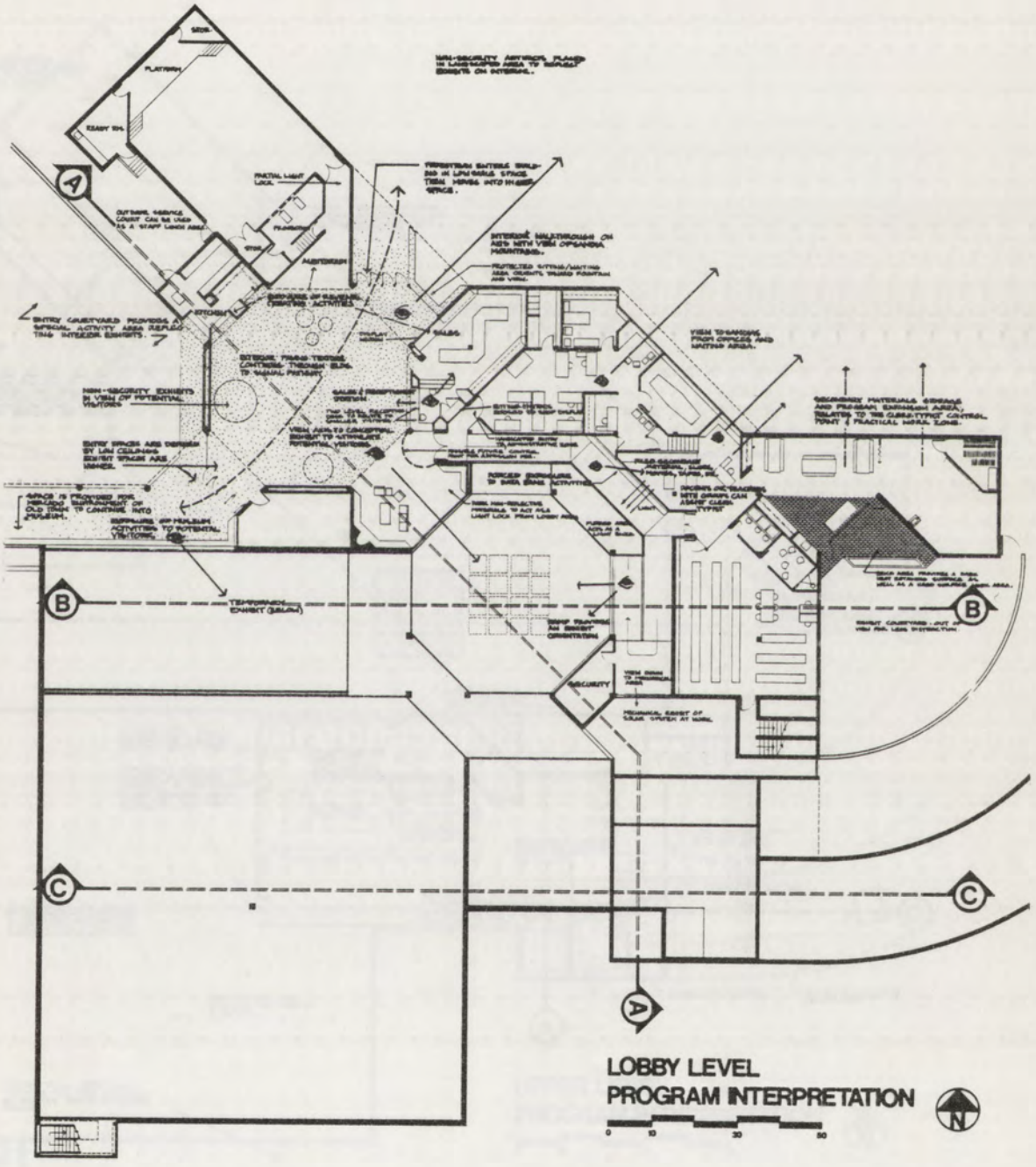

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FIGURE 72 - ARCHITECTURAL SOLUTION: UPPER LEVEL PROGRAM INTERPRETATION

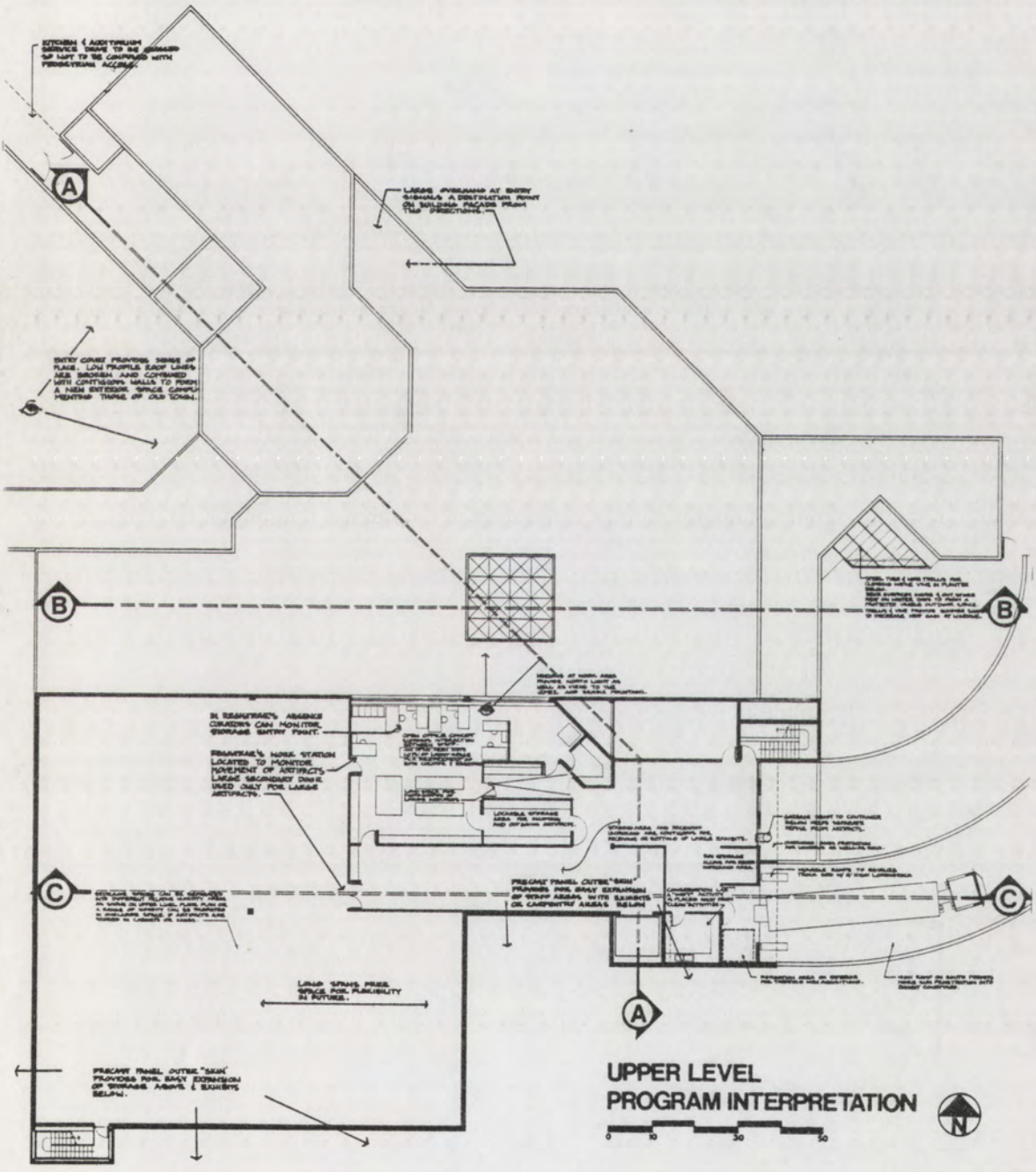

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Figure 73 Architectural Solution:
Sections Through Building
Page 168 - Missing.

FIGURE 74 - ARCHITECTURAL SOLUTION: LOWER LEVEL FLOOR PLAN

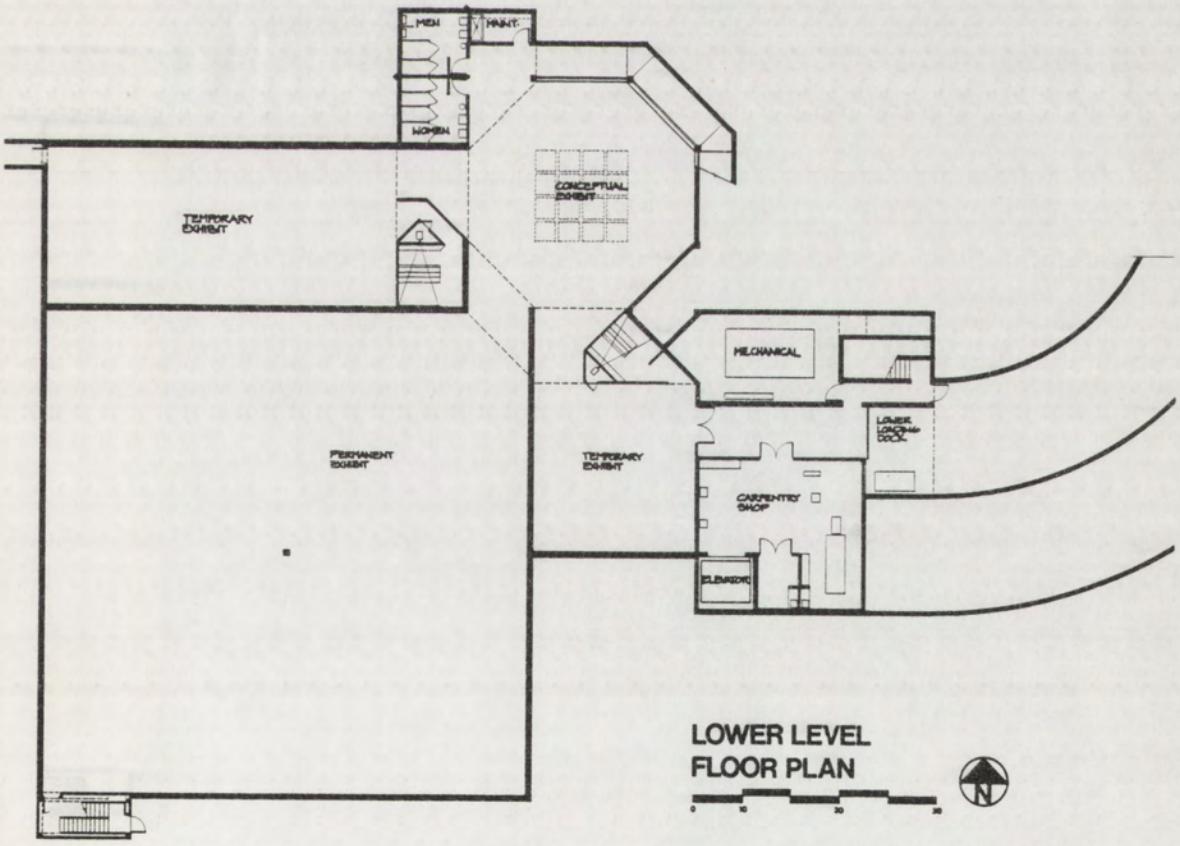

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FIGURE 75 - ARCHITECTURAL SOLUTION: LOBBY LEVEL FLOOR PLAN

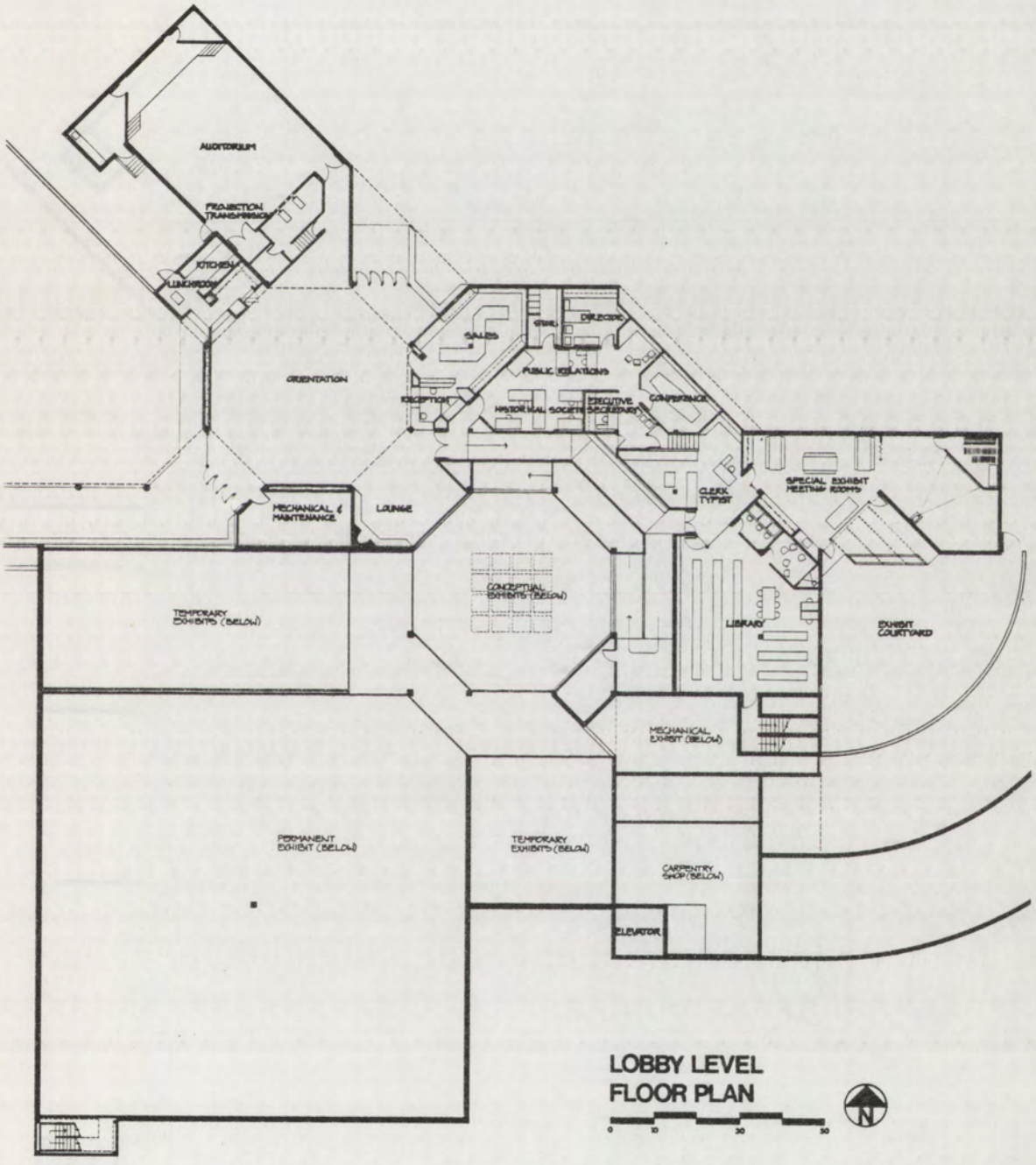

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FIGURE 76 - ARCHITECTURAL SOLUTION: UPPER LEVEL FLOOR PLAN

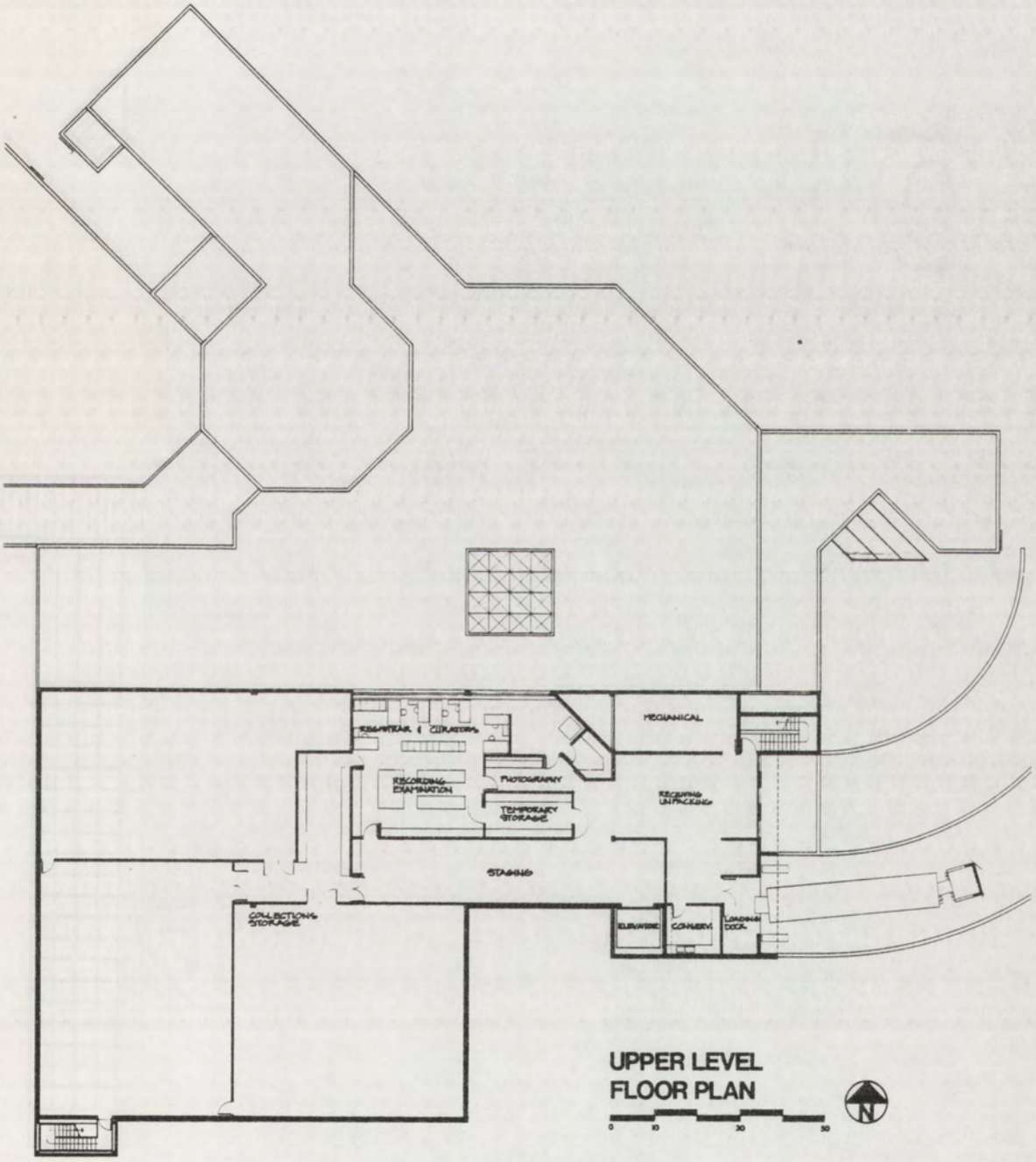

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FIGURE 77 - ARCHITECTURAL SOLUTION: LOWER LEVEL STRUCTURAL PLAN

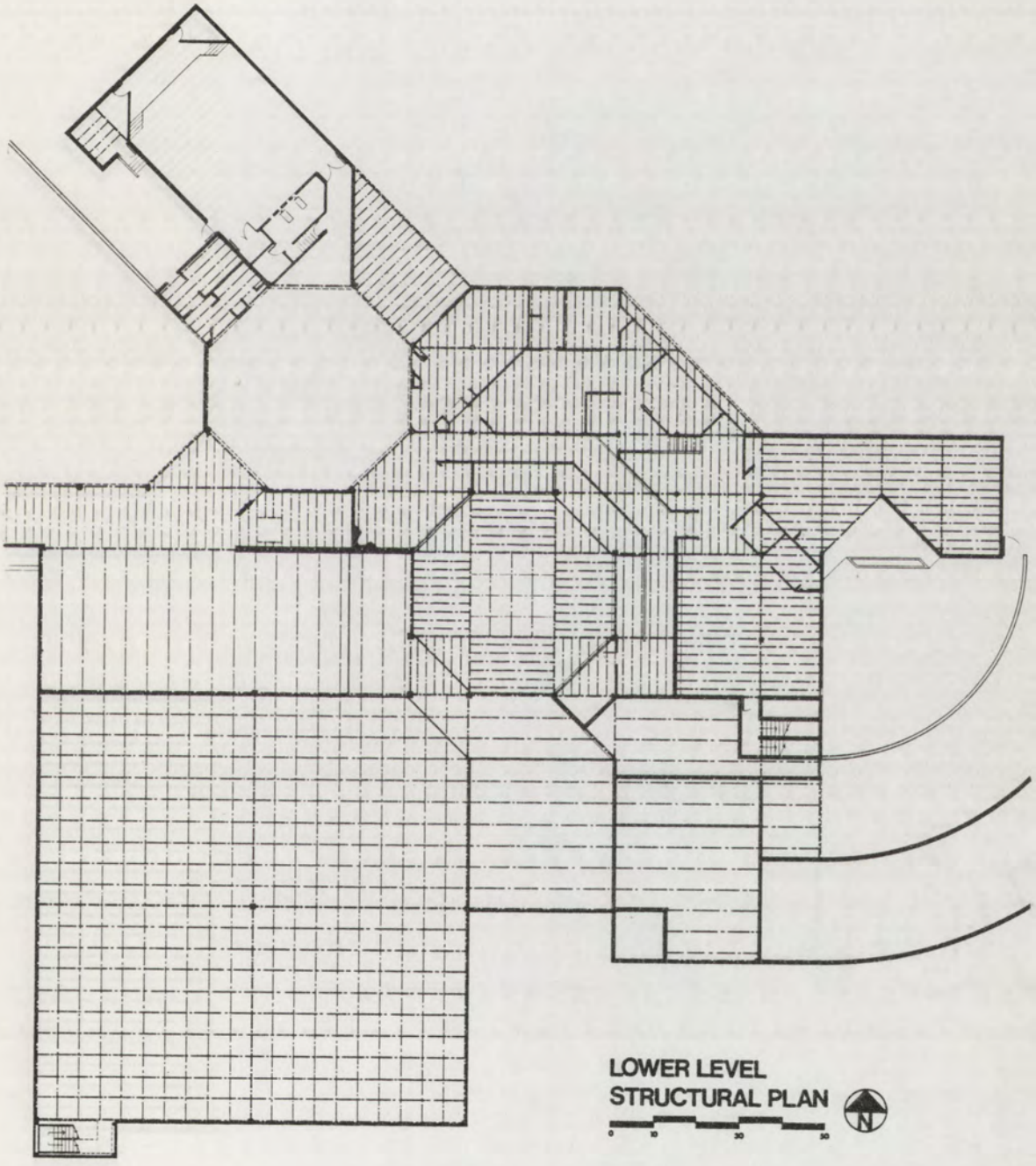

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FIGURE 78 - ARCHITECTURAL SOLUTION: UPPER LEVEL STRUCTURAL PLAN

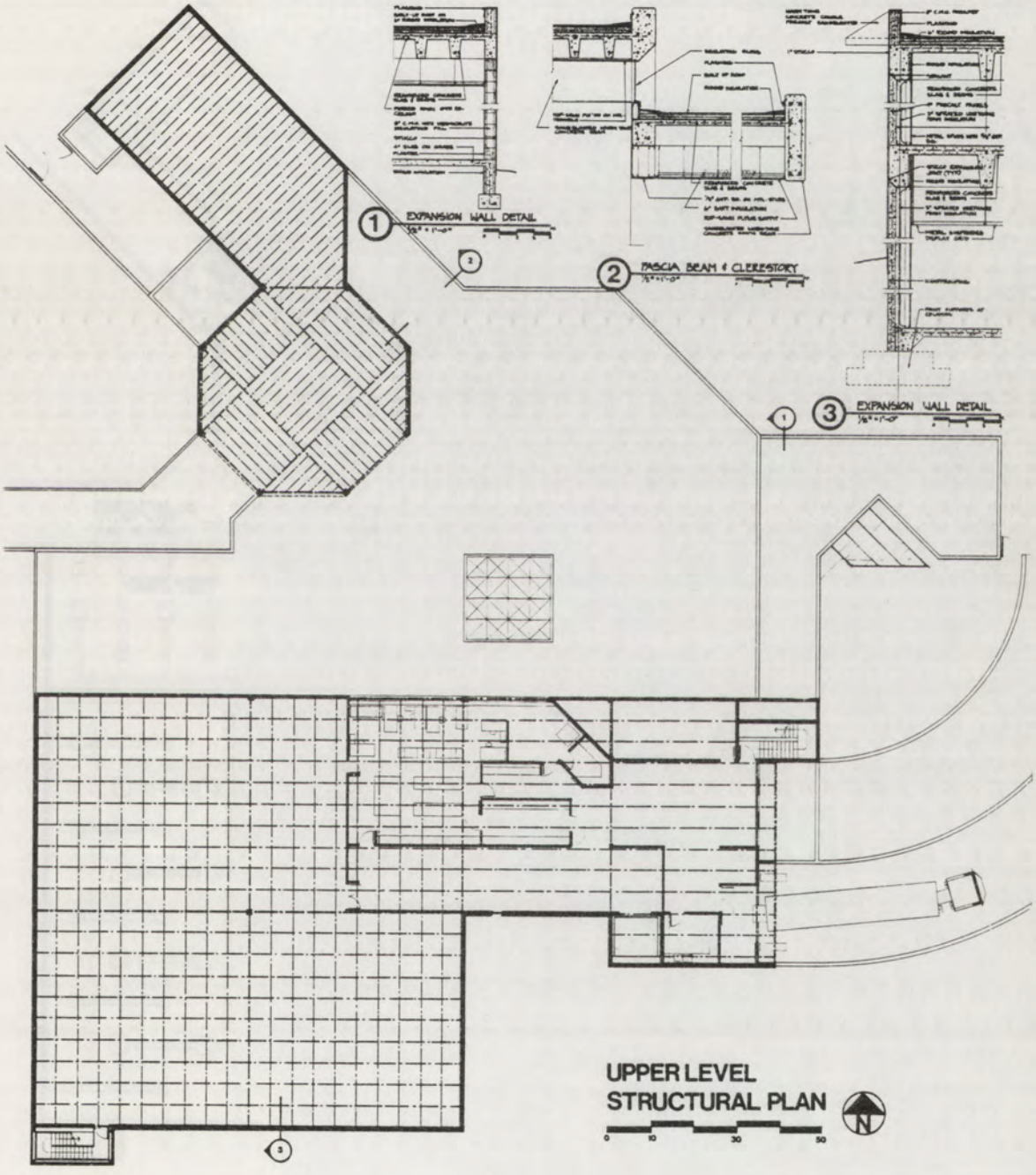

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FIGURE 79 - ARCHITECTURAL SOLUTION: LOWER LEVEL MECHANICAL PLAN

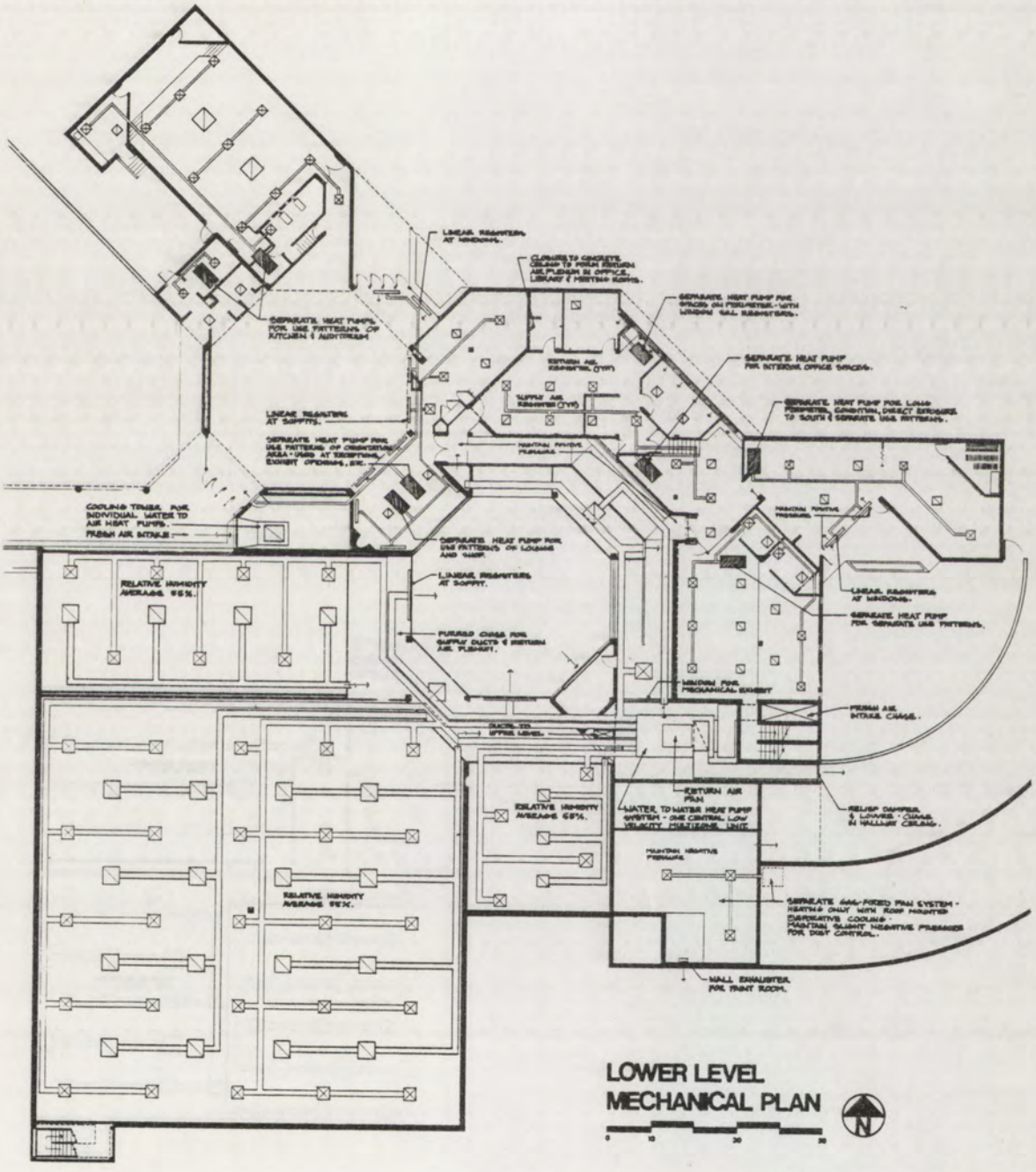

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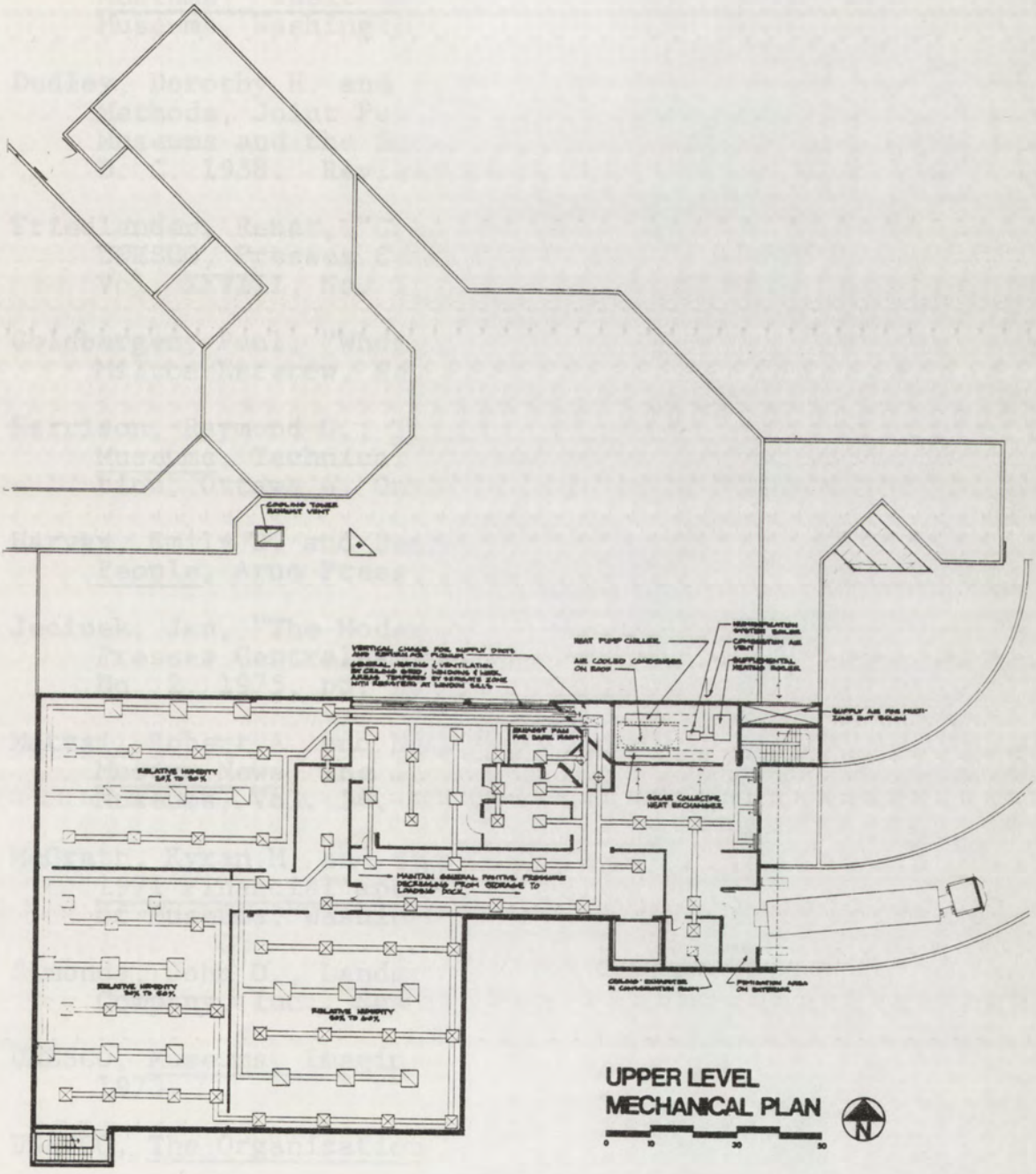
FIGURE 80 - ARCHITECTURAL SOLUTION: UPPER LEVEL MECHANICAL PLAN



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REFERENCES

Books and Magazines

American Association of Museums, Special Committee of, Museums: Their New Audience, American Association of Museums, Washington, D. C. 1972.

Dudley, Dorothy H. and Irma B. Wilkinson, Museum Registration Methods, Joint Publication by American Association of Museums and the Smithsonian Institution, Washington, D. C. 1958. Revised 1968.

Friedlander, Renat, "Creative Encounter With Museums," Museum, UNESCO, Presses Centrales S. A., Lausanne, Switzerland, Vol. XXVIII, No. 1, 1976, pp. 15-27.

Goldberger, Paul, "What Should a Museum Building Be?" Art News, Milton Esterow, New York, N. Y. October 1975.

Harrison, Raymond O., The Technical Requirements of Small Museums, Technical Paper No. 1, Canadian Museums Association, Ottawa 4, Ontario, Canada, 1969.

Harvey, Emily D. and Bernard Friedberg; A Museum for the People, Arno Press; Cambridge, Mass., 1971.

Jecinek, Jan, "The Modern, Living Museum," Museum, UNESCO, Presses Centrales S.A., Lausanne, Switzerland, Vol. XXVII, No. 2, 1975, pp. 52-59.

Mattai, Robert A. and Neil E. Deaver, "Child-Centered Learning," Museum News, The Journal of the American Association of Museums, Vol. 54, No. 4, March/April, 1976.

McGrath, Kyran M. and the American Association of Museums, 1971 Financial and Salary Survey, American Association of Museums, Washington, 1971.

Simonds, John O., Landscape Architecture, McGraw-Hill Book Company, Inc., New York, N. Y. 1961.

UNESCO, Museums, Imagination and Education, UNESCO, Paris, 1973.

UNESCO, The Organization of Museums, UNESCO, France, 1960.

Wittlin, Alma S. Museums: In Search of a Usable Future, M.I.T. Press: Cambridge, Mass. 1970.

Mimeographs

Borhegyi, Suzanne, Exhibit Master Plan (First Phase), Museum of Albuquerque, Albuquerque, New Mexico, January 1976.

_____, State of the Museum, Museum of Albuquerque, Albuquerque, New Mexico, January 1976.

Johnson, E. Verner, Planning Considerations and Architectural Requirements for Museum Storage Systems, Johnson, Hotvedt and Associates, Inc., Boston, Mass., November 1976.

State Historical Society of Colorado, Colorado Heritage Center, State Historical Society, Denver 1973.

Stowlow, Nathan, Dr., Recent Concepts in the Conservation of Museum Collections in Storage: An Overview, presented at the International Conference on Museum Storage, Washington, D.C. December 1976.

Taylor, Anne Ph.D., The Cultural Roots of Art Education: A Report and Some Models, presented at the National Art Education Association Convention, Miami Beach.

Warner, Michael, Outline of Education Division Programs, Listing of Educational Programs of the Museum of New Mexico, Santa Fe, New Mexico.

Interviews

Chiba, Judith, Curator, International Folk Art Museum, Museum of New Mexico, Santa Fe, New Mexico.

Grant, Zana, Registrar, Museum of Albuquerque, Albuquerque, New Mexico.

Taylor, Anne, Ph.D.; Dean of the Graduate College, University of New Mexico, Corrales, New Mexico.

Warner, Michael; Director of Education, Museum of New Mexico, Santa Fe, New Mexico.