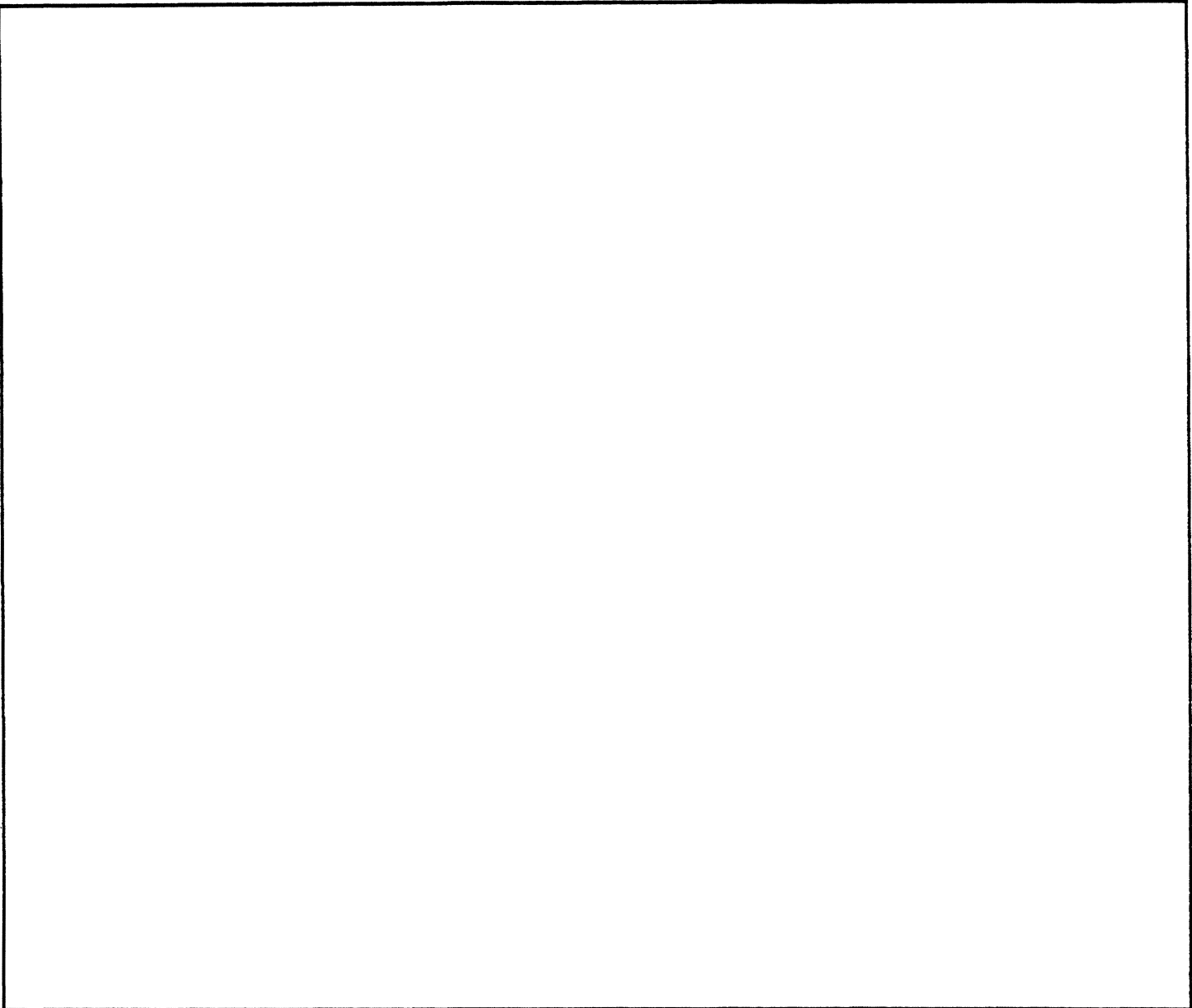
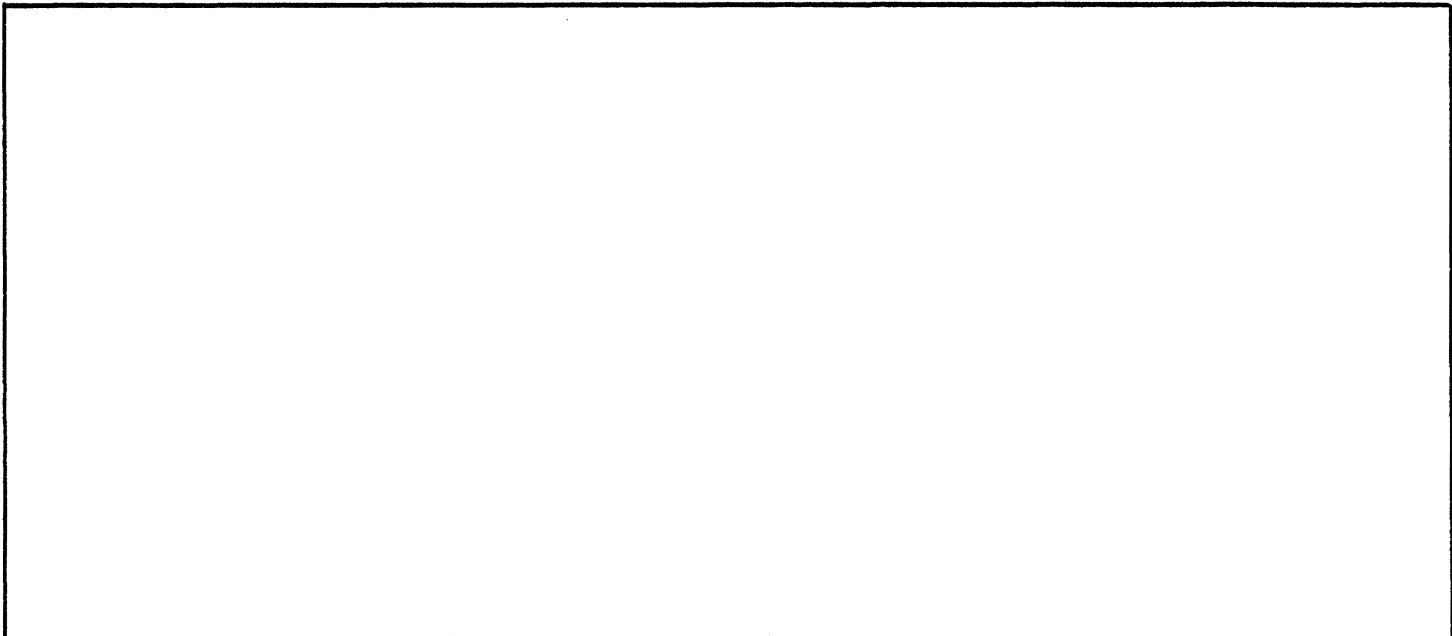




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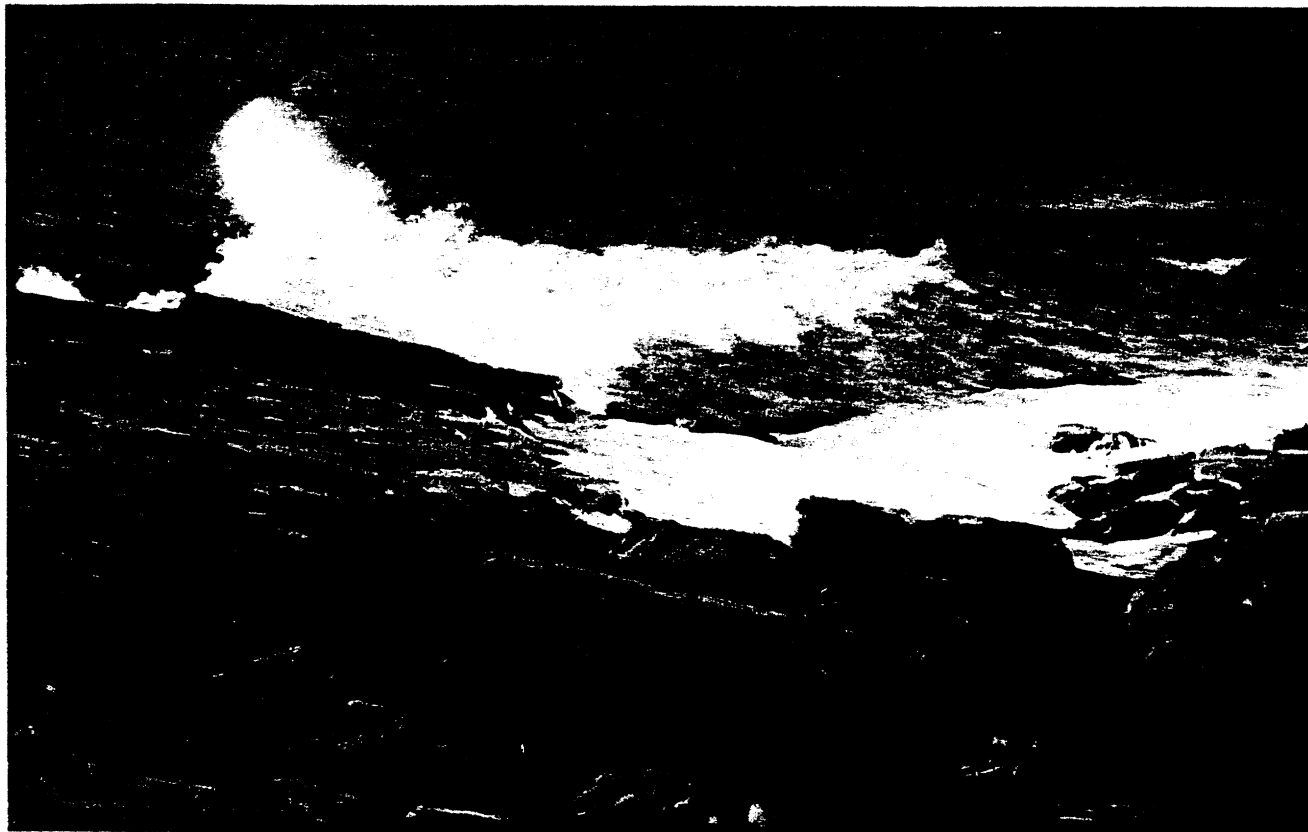
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# Table of Contents

The Museum	
Old Museum.....	1
New Museum.....	3
The Art.....	5
Philosophy.....	6
Statement of the Problem	
Analysis	
Regional.....	9
Local.....	11
Site.....	22
User.....	30
Climate.....	37
Programmed Spaces	
Square Footage Summary.....	42
Public.....	43
Private.....	68
Collection and Service.....	92
Goals and Concepts	
Appendix	
Lighting Techniques.....	120
State of the Art: Museums.....	105
Bibliography.....	133

## Acknowledgement



• T H E • P O R T L A N D • M U S E U M • O F • A R T •

I would like to dedicate this program to my wife Kimberly, because without her support and encouragement this program would never have been completed.

*Scott A. Stober*  
Scott A. Stober

## Resource People



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

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# The Museum

## Existing Museum



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

The present Portland Museum of Art has two elements, the galleries and the McLelland-Sweat House. They have different characteristics but they share distinction as an important center in historic Portland that should be carefully preserved and enhanced. the McLellan-Sweat House is a Registered National Historic Landmark erected in 1800; the connected galleries were erected after 1908 by John Calvin Stevens with funds bequeathed by Mrs. Lorenzo de Medici Sweat in memory of her husband. The galleries and the House are listed by the United States Department of the Interior, National Park Service. Named the Portland Museum of Art, this facility opened to the public in 1911. the Museum is governed by the Portland Society of Art which was founded in 1882. The Society also governs the Portland School of Art. The Museum, the oldest public museum in Maine, in a nonprofit educational institution based on the visual arts and critical excellence. The Museum is supported by memberships, private donations, endowment income, and grants from national, state and municipal organizations. It is open throughout the year free of charge and serves as the major visual resource for southern Maine by collecting, preserving, exhibiting and elucidating works of art. The present annual operating budget has been recently increased to \$190,000 to administer expanded facilities, collections, and programs.

The McLellan-Sweat House is a three story and basement non-fireproof structure of great architectural importance and historic value. Its use for general museum purposes is understandably limited by design, structure, and interpretation. It is in essence a "house museum" (a series of period rooms reflecting for the most part the Federal Period in general). The use of the House should be confined mainly to this purpose in those areas on the lower two floors unaltered by John Calvin Stevens.

The galleries form a one story and basement fireproof structure. The galleries of the 1908-1911 period are well-designed and can be readily adapted to present museum requirements without change to their architectural character. Exhibition space in the present galleries is about 3,000 square feet.

Total square feet available for storage is 3,200, with 1,300 square feet for administration, and 1,400 square feet for other uses. Because of the limitation in exhibition space, less than one quarter of the permanent collection may be seen at once.

The space in the existing Museum is inadequate for even present activities, the functions and needs of Museums having changed considerably since the galleries were built. The building does not allow any adjustments for future needs as all existing space is over-taxed. It is recognized that in addition to exhibition space, support services for the classification, preparation and conservation of the collections are vitally necessary and that proper storage is essential for the collections not on view. In effect the Museum has less exhibition space now than it had when it was built. In addition, space for administration and preparation has been created in House spaces.



## The New Museum



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

It is crucial that any plans for the growth and development of the Portland Museum of Art be based on an accurate understanding of art, past and present, in Maine. This is the key to a valid delineation of the role that the Portland Museum of Art undertakes in relationship to the area and audience it serves.

The visual arts are the clearest and most vital expression of the spirit and character of Maine. The art that characterizes this expression is certainly of lasting moment. The history of American art illustrates the foundation role Maine has played for many artists who have known Maine and found encouragement here. For a hundred years Maine has inspired and nourished the creative spirit.

An examination of art held in the collections of major institutions in this country reveals that an amazingly high percentage of these works owe much to Maine. Yet events here often go unheralded. People in Maine and elsewhere have not been able to benefit fully from these rich artistic resources. With the new expanded facility outlined here it will be possible to provide access to the Museum of Art's Collection of regional works, historic and contemporary, not available elsewhere.

Today the Portland Museum of Art has rallied a unique combination of people and circumstances that together make real the opportunity to mold an institution that will reflect the vitality and significance of art in Maine. This opportunity has been recognized in the concept of The State of Maine Collection. The Museum will of course continue to develop in other areas as well, to present a well rounded statement to the viewers, but it is important to recognize the uniqueness of the Museum's relationship to Maine and thereby design its future as a true leader among museum's.

The permanent collection of the Museum and the buildings that house it can become the most important single visual asset in this state. The Museum can also become one of the most important institutions in this country.

The intention of the new Portland Museum of Art, including the McLellan-Sweat House, is to continue to collect, preserve, exhibit, and elucidate works of art. The wonderful promise of the Homers as the core of an expanding collection will make it possible for the Museum to become the major reason for residents, visitors, and students to come to Portland. A regional and national recognition of the Museum's new stature will attract to the city meetings, trips, conventions, and other special events. The expanded facilities will have profound cultural implications and can only increase the visibility of Portland. The new Portland Museum of Art should be an institution of great quality, reflecting the uniqueness of Maine's artistic riches.

## The Art



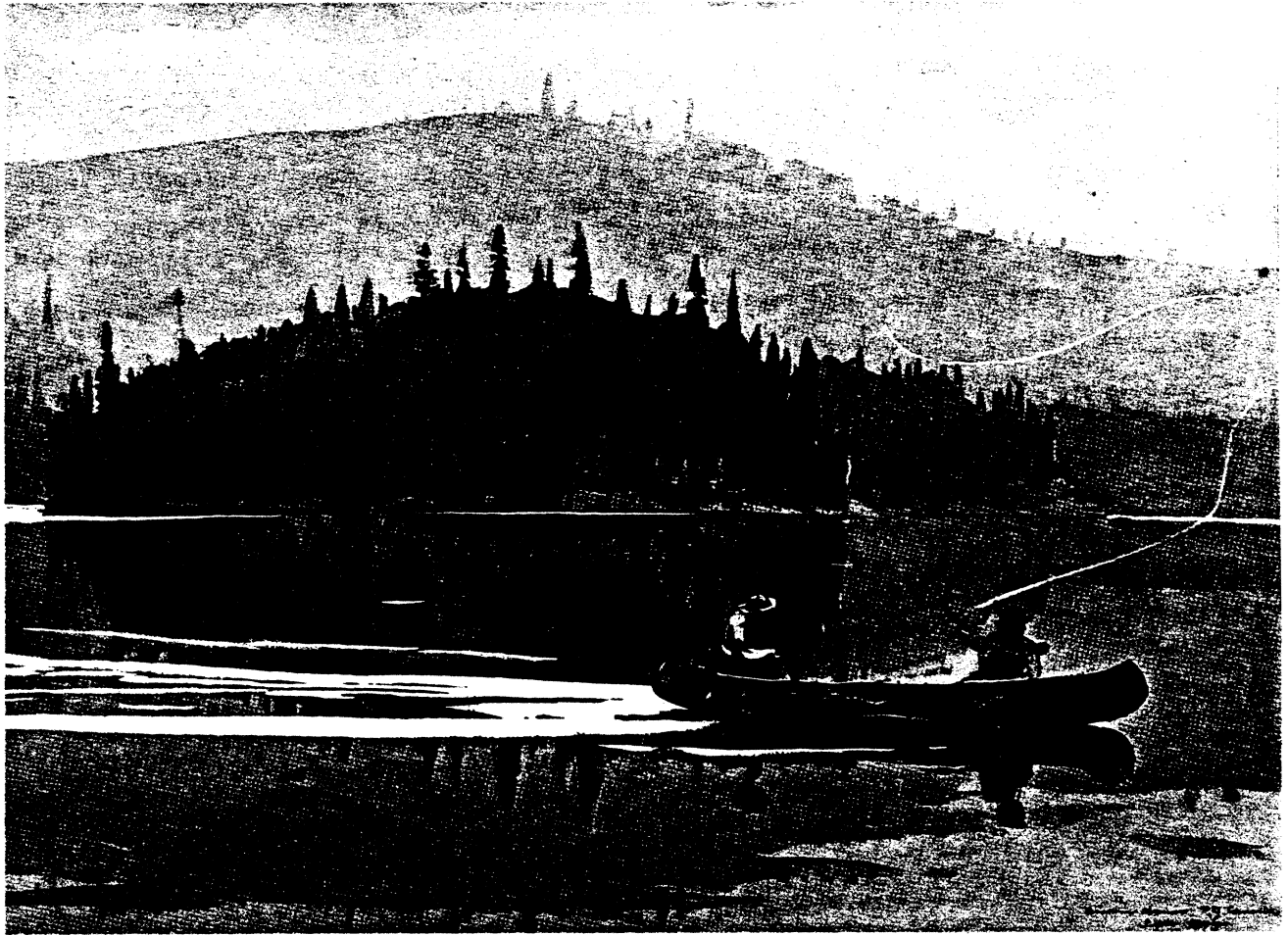
## THE CHARLES SHIPMAN PAYSON COLLECTION

### • THE • PORTLAND • MUSEUM • OF • ART •

Present strengths when seen in the context of Mr. Charles Shipman Payson's promise of his collection of seventeen paintings by Winslow Homer create tremendous momentum for future growth. The Homers, together with the Museum's Maine-related works, will be the foundation of The State of Maine Collection. With the promise of other gifts of paintings, works on paper and decorative arts which relate to art in Maine, historic and contemporary, the idea of The State of Maine Collection is a natural framework for what can become a unique showcase of national significance.

In addition to The State of Maine Collection, the Museum will continue to develop in other areas including earlier and later American art and European works of art; decorative arts including glass, ceramics and silver; contemporary works; prints; drawings; sculpture; oriental and primitive art.

## Philosophy



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

Because of the cultural and aesthetic qualities inherent in the Museum's permanent collection, the Museum recognizes that all programs and activities are educational and that the Museum has a primary responsibility to develop and to encourage understanding and experiencing of the visual arts. The Museum also recognizes its responsibilities to a wide variety of audiences including varying age groups, national backgrounds, and physical capabilities. Affirming art objects as ideas in physical form the Museum will through its educational programs seek to increase visual literacy to disseminate those qualities found in the collections and on exhibition, and to encourage the thoughtful and imaginative interpretation of art, a role unique in contemporary society. These experiences will be wholistic, futuristic, and humanistic: wholistic because it evokes the response of the individual on a physical, emotional and intellectual level; futuristic because it promotes through an examination of the material past a flexibility of approach and direction which encourages alternatives and options as healthy, even necessary aspects of living; and humanistic because the Museum experience of communication places one individual in touch with the physical expression of what living has meant to another individual.

# Statement of the Problem

## Statement of the Problem



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

After considering all the information that has been compiled in the program, the programmer and designer collaborate to produce the statements of the problem. These statements should be a sythesis of all the information into a few salient statements regarding the problem. They include all the complicating factors, yet also represent the essence of all the programmatic information. The statements cover the four basic areas of function, form, economy, and time.<sup>4</sup>

## Function

Since education is the main purpose of the Museum, the solution should encourage investigation and learning by the visitor and provide for educational exchange by locating education functions within easy access of visitors while at the same time maintaining security control.

Since the expansion represents a new era in the life of the Museum, the new building should be the visitors initial experience, from which, he could understand the progression of the Museum functionally and historically.

Since Congress Square is a developing pedestrian area, the Museum should encourage the use of its facilities by these people by providing a direct link between the Museum and the square.

## Form

Since Congress Square and the existing Museum (McLellan-Sweat House and L.D.M. Sweat Galleries) are such important factors in the design, the form of the expansion should be directly influenced by these two elements.

Since Lighting is such a critical part of the Museum experience, natural lighting because of its varied quality should be provided in all areas where it would not adversely affect the art or the character function of the space.

## Economy

Since the Museum is predominantly funded by private public donations, the public area (exhibition space, auditorium, meeting rooms) should be the high image sophisticated spaces while the administrative areas should be of a minimal but attractive nature.

Since operating costs are always a factor in public facilities, materials and design should be such that they facilitate low maintenance costs and a long life span

## Time

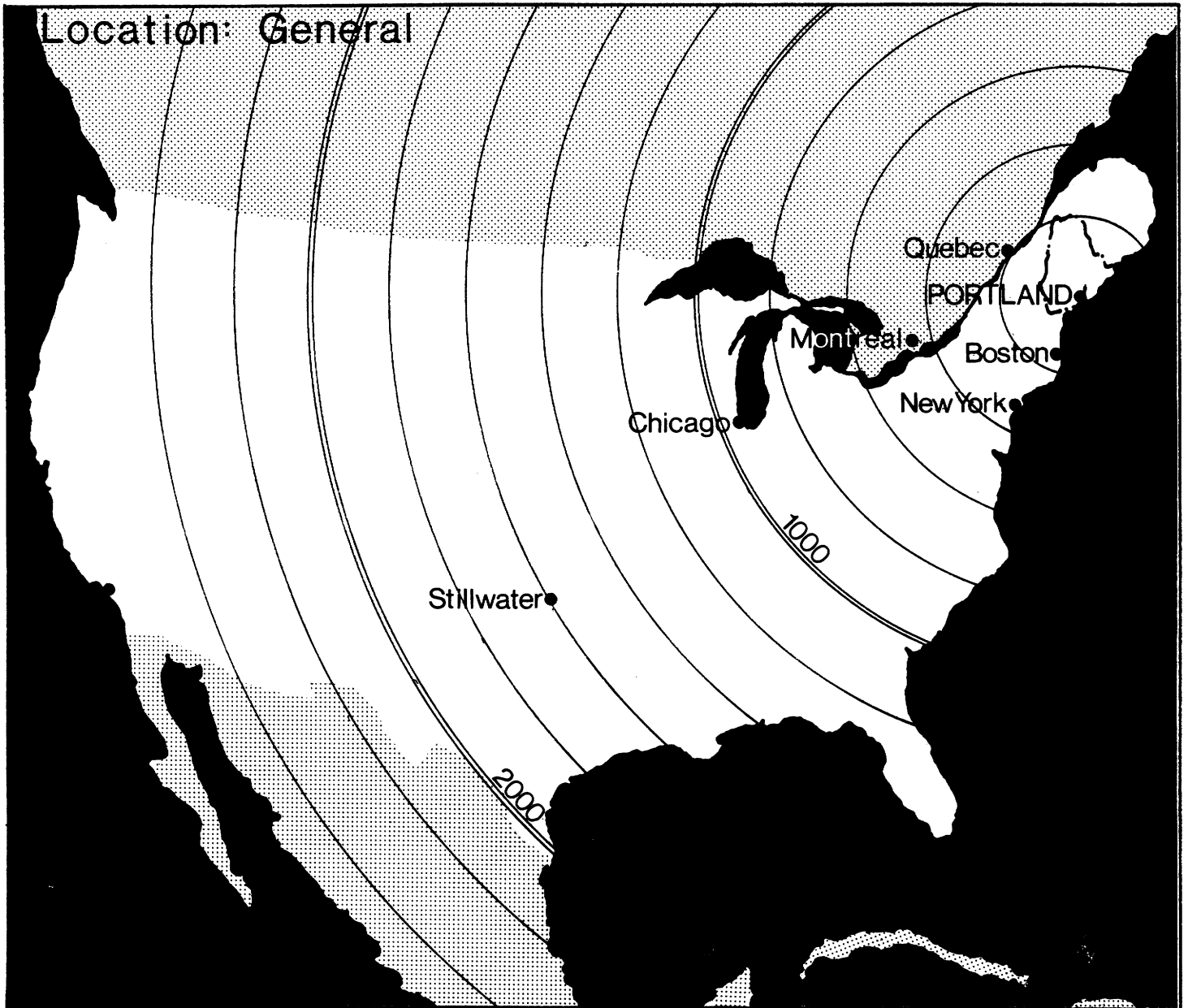
Since the buildings which immediately surround the expansion site have such a historic nature, the Museum expansion should respond in a sympathetic way which preserves their intended character.

# Analysis



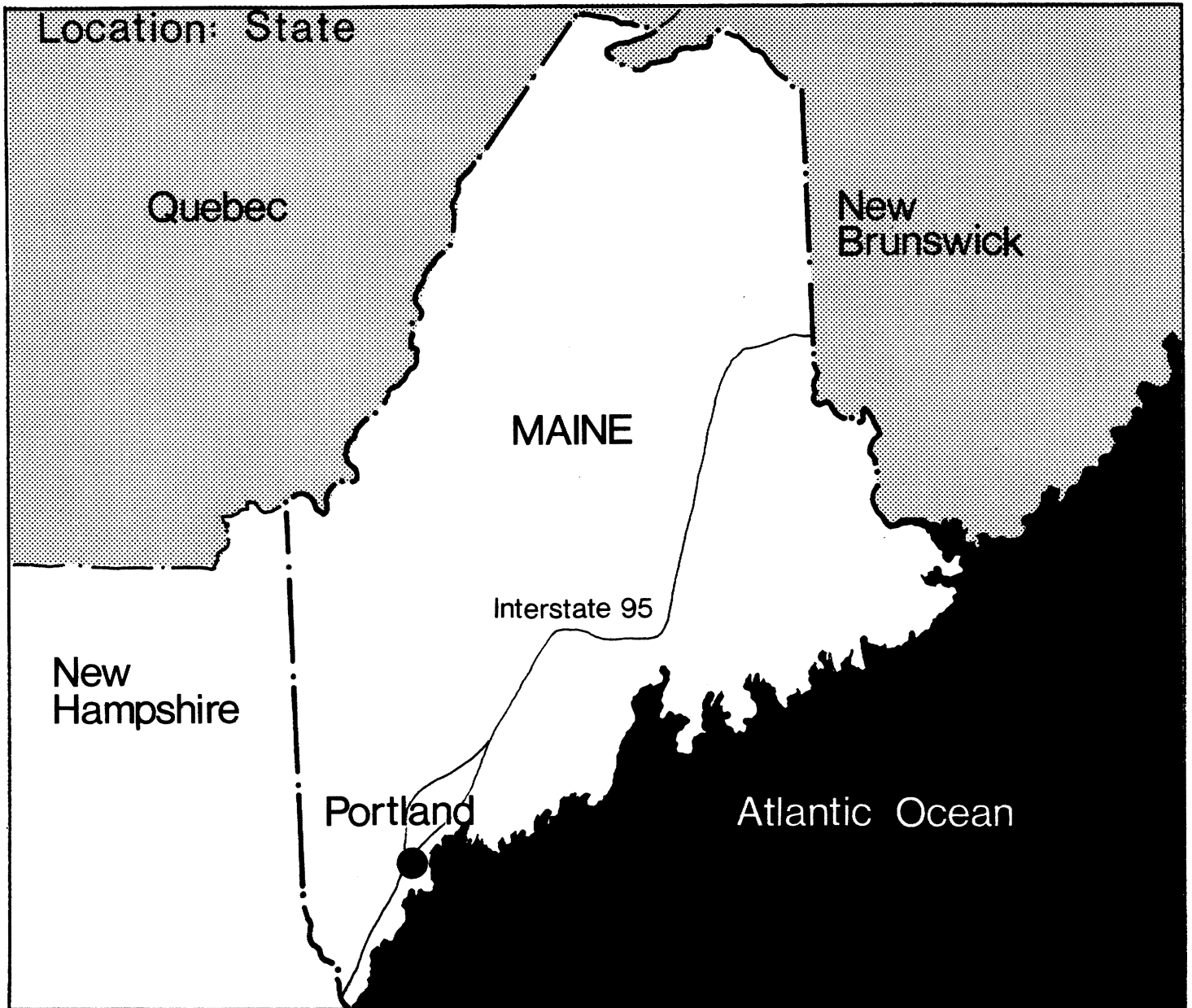
# Regional Analysis

## Location: General



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

The state of Maine is the northeastern most state in the United States. This gives the state a unique position between the urbanized Northeastern part of the United States and the large urban Canadian cities of Quebec and Montreal. This means that Portland, Maine is easily within a four hour driving distance of all the major Northeastern United States cities and many Canadian cities. This unique location could in time, allow the Portland Museum to become one of the prominent North American Museums.

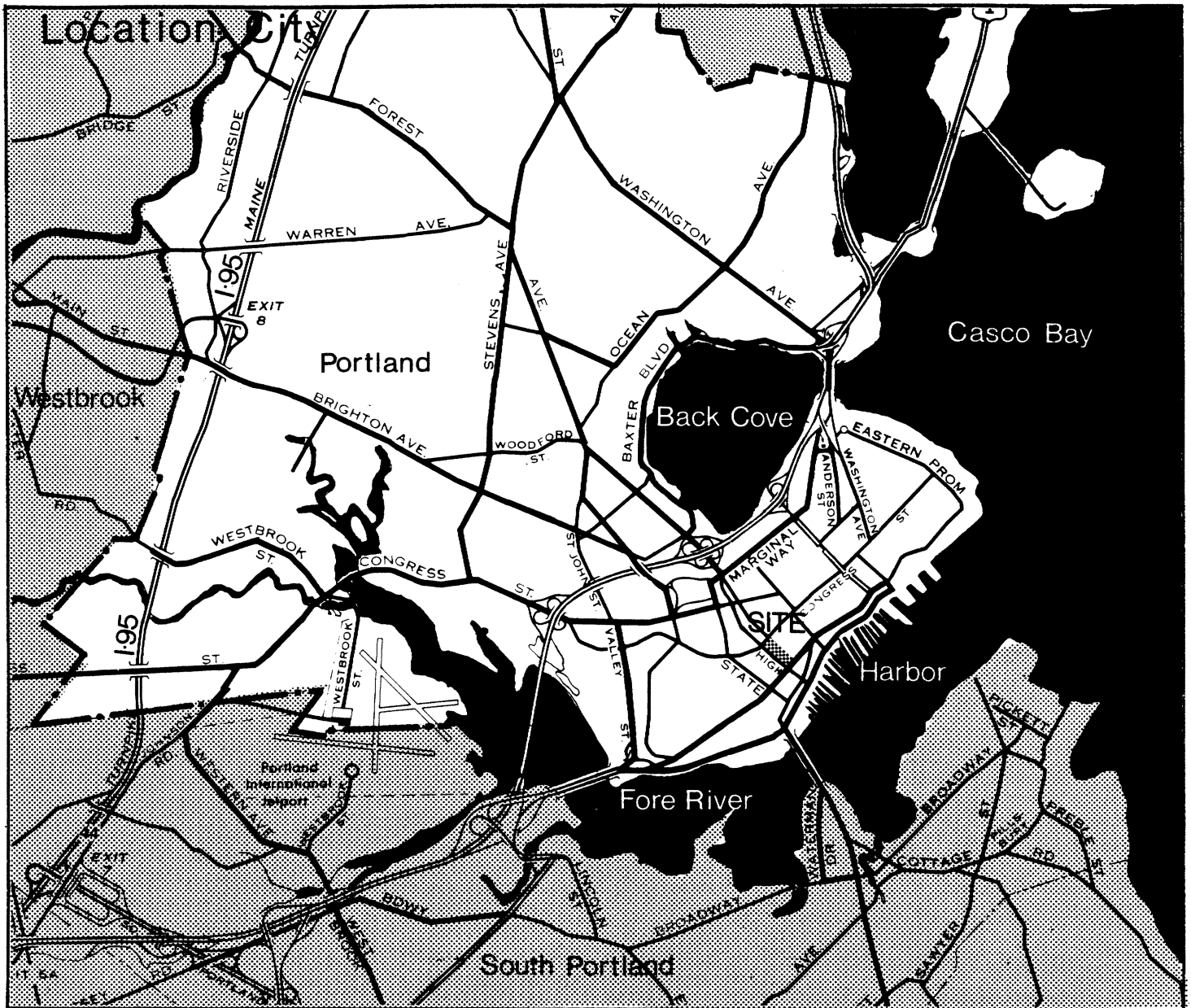


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The state of Maine has many unique qualities which continually draw people to the area. The uniqueness of the Rocky coastline and its amenities make it a popular tourist area among Americans as well as Canadians. Old Orchard Beach is within 30 minutes of Portland and is a popular French-Canadian vacation spot. Tourists are also drawn to Maine because of its natural beauty. Acadia National Park is one of the more spectacular natural areas. In actuality 80 percent of the state is tree covered which gives Maine its wilderness character.

Tourism is a critical component of the state's economy. This factor makes Portland a prime spot for a nationally recognized Museum. The location of Portland on the only interstate Highway into Maine makes it an important gateway and also adds to its desirability for housing a Museum of this kind.

# Local Analysis

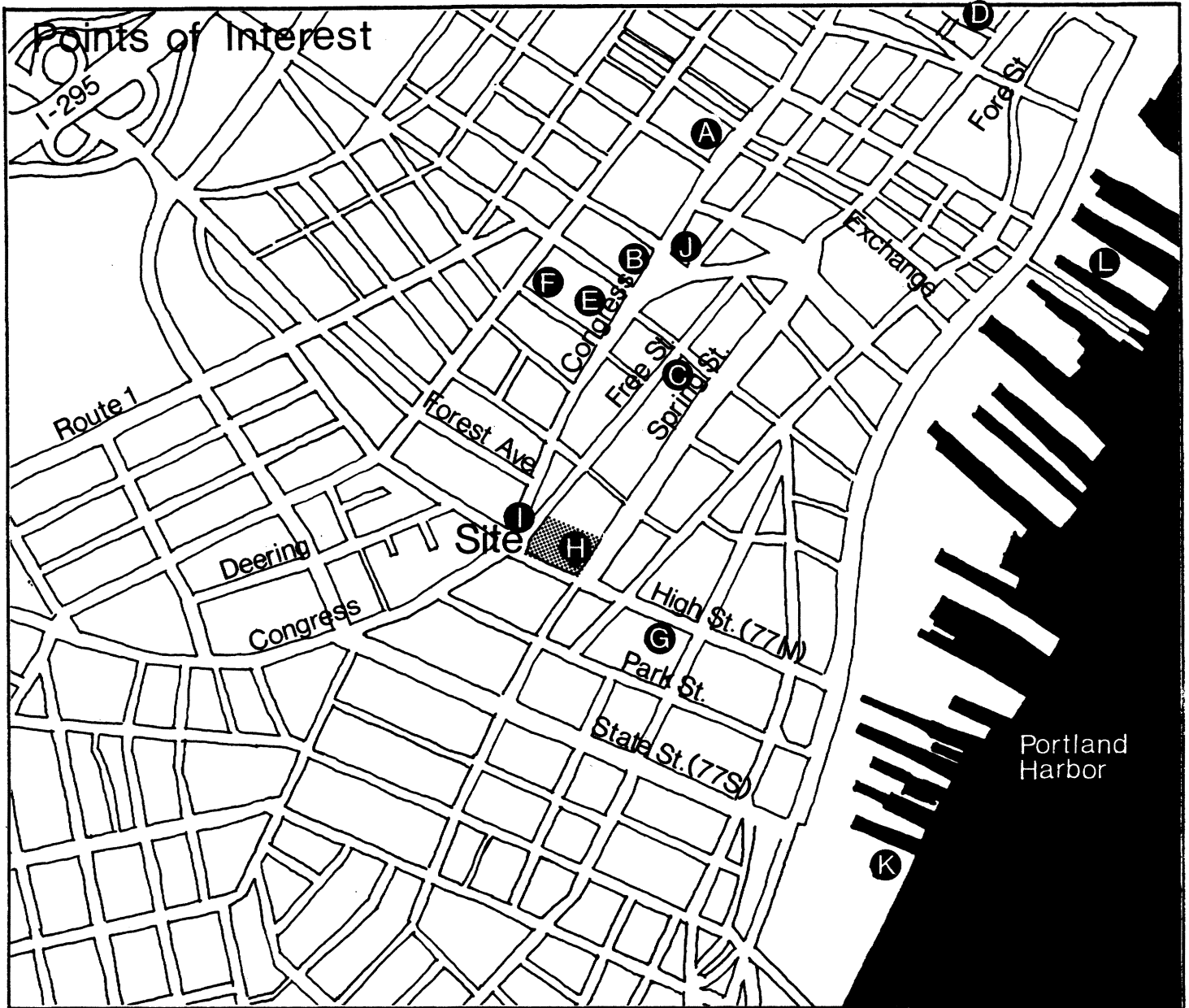


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Few who have visited Portland would deny that it has a special air about it. Casco Bay, Atlantic Ocean, Fore River, and Back Cove surround Portland and emphasize its connection to the sea. The Peninsula and its land form provides a special place of prominence for the downtown area. The constant change of the ocean together with the other aspects continually remind those in Portland of their ever changing special location.

This unique atmosphere only adds to the importance of Portland as a Museum location. The connection with the sea is also critical because of the impact that this element had on the art of Maine.

The architectural character of Portland also makes it suitable, since it has three-hundred and fifty years of heritage which gives it an image of the past as well as the present. A suitable environment for an institution which stresses preservation.



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Most of the major points of interest in Portland are within easy walking distance of the proposed site for the Museum.

**Municipal Facilities**

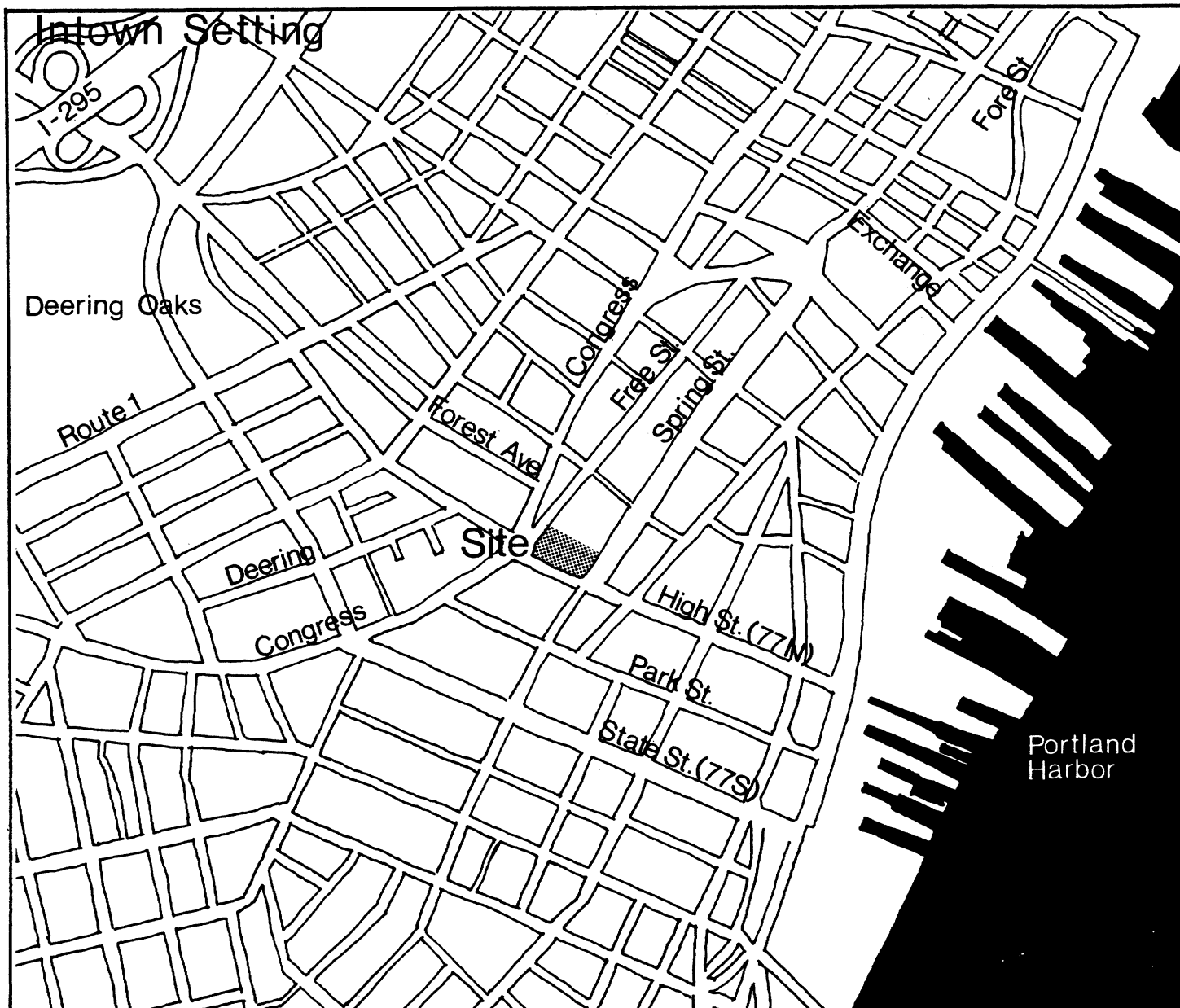
- A - Portland City Hall
- B - Portland Public Library
- C - Cumberland County Civic Center
- D - Cumberland County Court House

**Historical Points**

- E - Henry Wadsworth Longfellow Home
- F - Maine Historical Society
- G - Victoria Mansion
- H - Sweet Mansion

**Recreational and Gathering Points**

- I - Congress Square
- J - Monument Square
- K - Prince of Fundy Cruises
- L - Casco Bay Lines



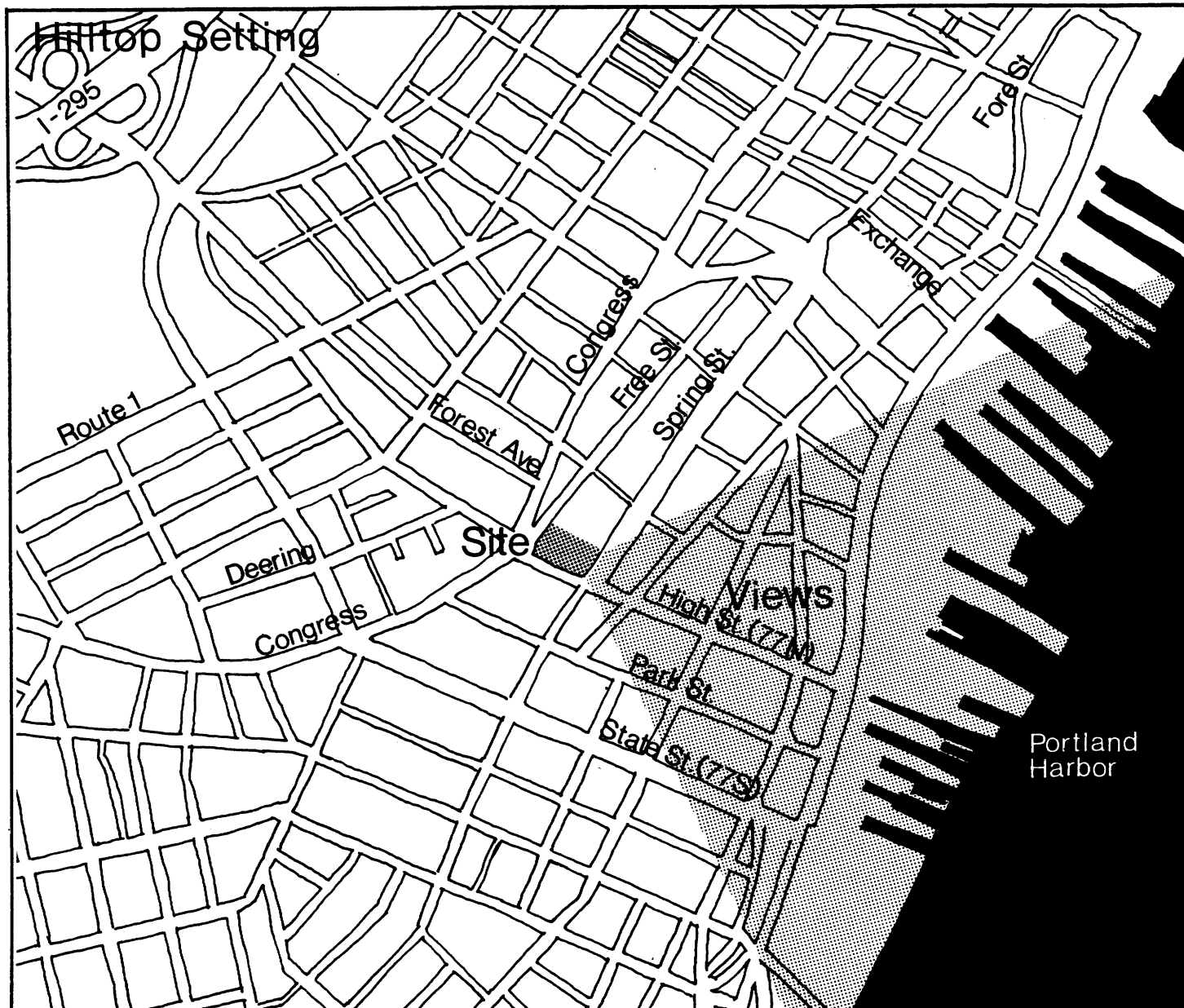
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The site of the present and new facility is located on the southerly slope and near the top of a hill on the Portland peninsula. This neck of land running east to west, and defined east to west by Congress Street, is bordered by Portland harbor to the south, Casco Bay to the east, and Back Cove to the north. Deering Oaks, a park, boards part of the peninsula to the northwest. The site itself is bordered by Spring Street to the south, High Street to the west, and Free Street to the north. At the top of the hill abutting the site of the Museum, is Congress Square. Congress Square is formed by the intersection of High, Congress, and Free Streets and is one of the busiest intersections in the city. Much of Portland's retail and commercial activity occurs east of Congress Square. The location of the new facility reaffirms an edge of the city center.

Because of its location, the Museum's neighborhood is an active one, being commercial, cultural and residential. A block away and to the east on Spring Street is the Cumberland County Civic Center, the site of many sporting and entertainment events, as well as conventions. Between the Civic Center and the Museum is the YWCA. Across from the YWCA and

diagonally across from the Museum is the Holiday Inn. There are several hotels near Congress Square, as well as several movie theatres and restaurants. State Street, one of the city's most famous and beautiful residential streets, is two blocks away to the west. Next to and across from the Museum on Spring Street are two buildings of the Portland School of Art.





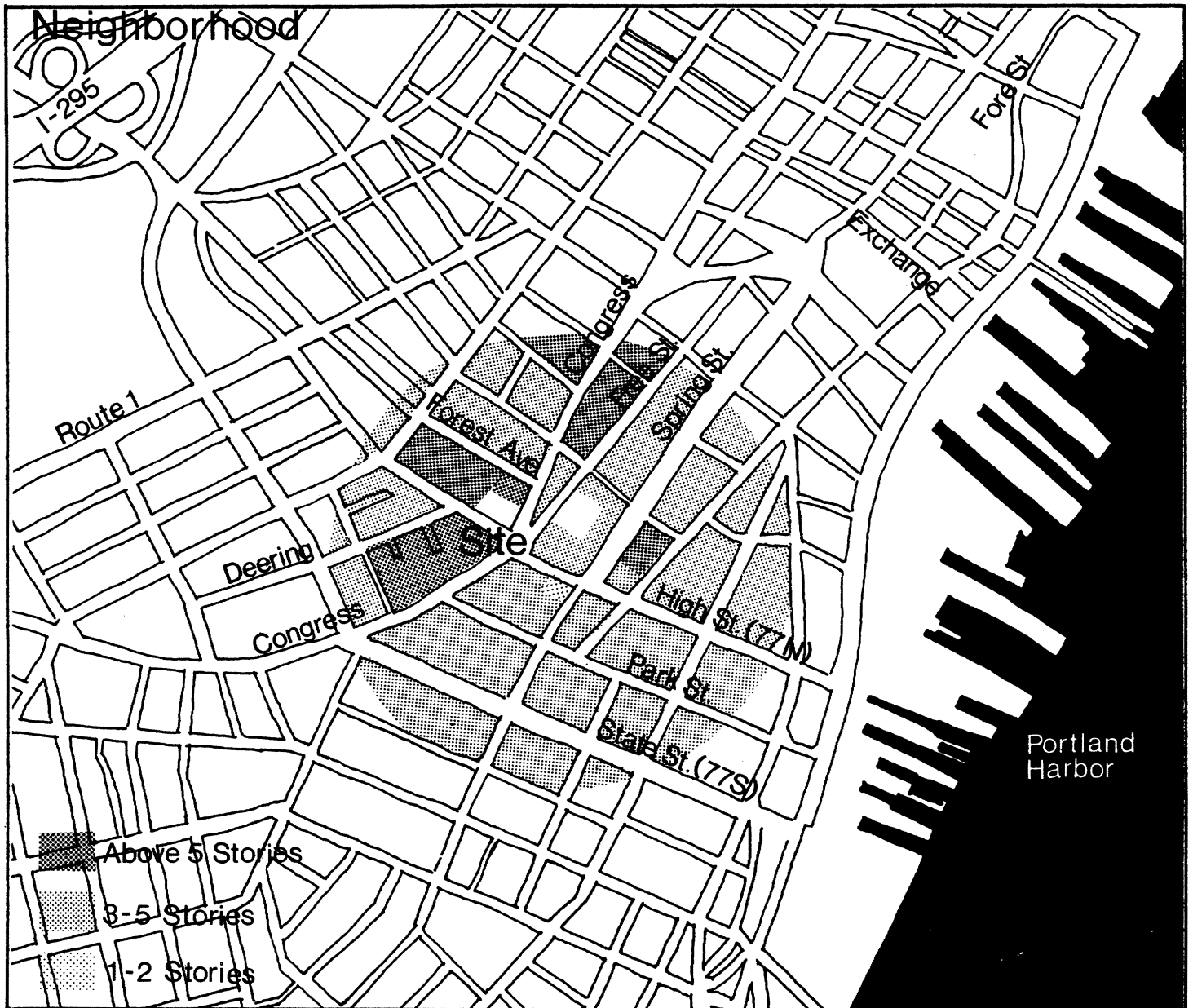
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The sea has always played an important part in the life of Portland, commercially, defensively and visually. Maritime trade and fishing were major factors in the city's economic development through the eighteenth and nineteenth centuries. Although Portland is now less dependent on the sea economically, its harbor is being revitalized. It is one of the best deep water ports on the eastern seaboard. Present harbor activity centers on the Portland Pipe Line, the Maine State Pier, the Lion Ferry Terminal and the Casco Bay Lines Terminal.

Old waterfront buildings are being rehabilitated along nearby Exchange and Fore Streets, and many structures have become highly desirable business, office and apartment spaces. The sea has also played an important part in the life of the Museum. The McLellan family, original owners of the McLellan-Sweat House, were active seafarers and derived their income from maritime trade, as did the Mussey family, John Mussey being the father of the last owner of the McLellan-Sweat House. Many elements in the collection of the Museum are related to the sea and this subject area will develop in time.

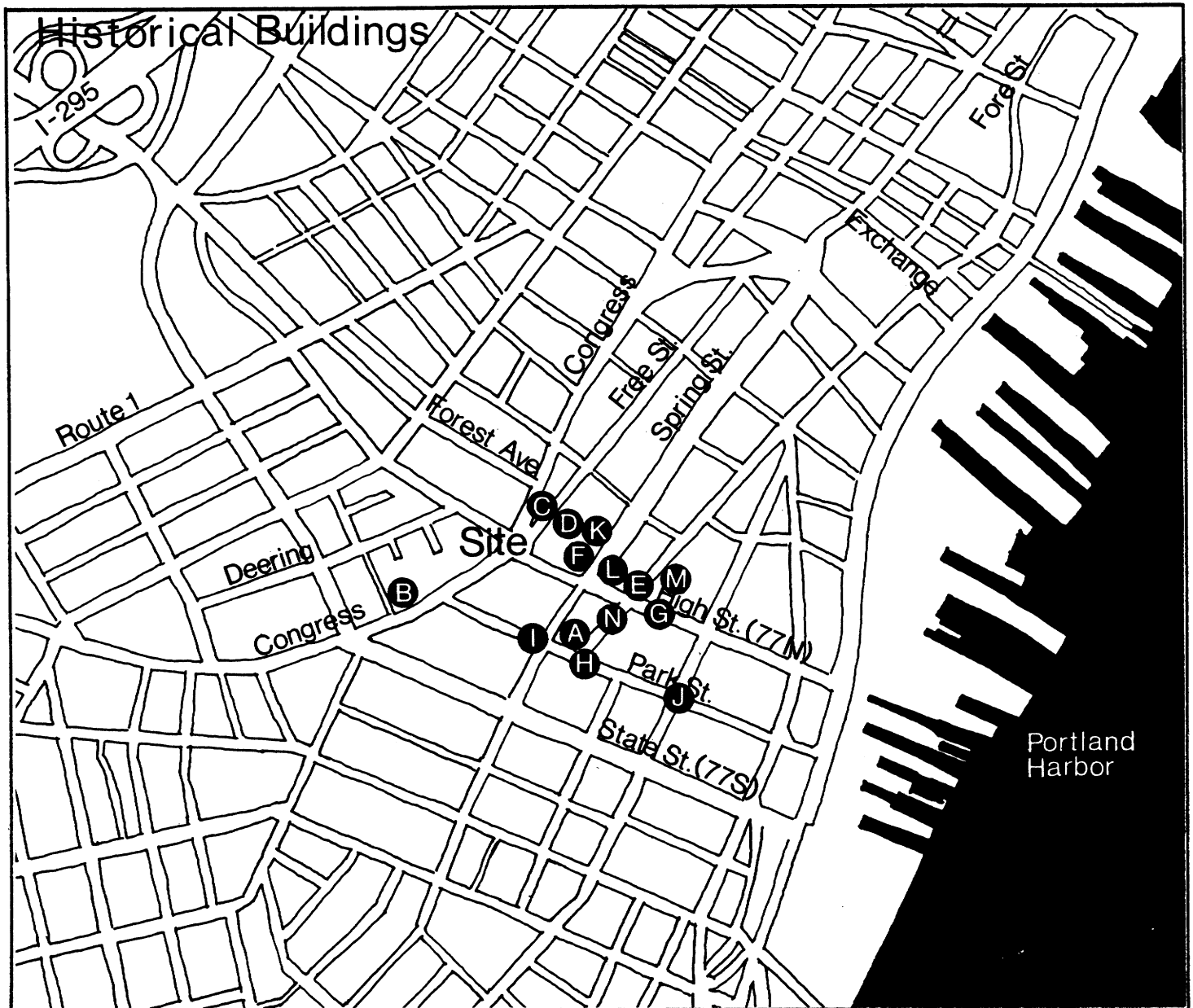
From the top floor of the McLellan-Sweat House one has broad view of

Portland Harbor to the south, and Casco Bay and its island to the east. Portland Harbor is also visible at street level looking down High Street. Parts of Casco Bay can be seen along Spring Street. The scent of the sea and the sound of gulls is often present.



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Most of the buildings surrounding and near the Museum stand separate from one another and are two or three stories high. The buildings on Congress Square tend to be five or six stories and are attached to one another. Most of the buildings in the neighborhood of the Museum date from before the Civil War and strongly define and affect the character of the neighborhood. The most widely used material is brick, which is used in the construction of many of the buildings and sidewalks throughout the area. Granite is used for all street curbing, as well as for many building foundations and outside steps. Many of the buildings have ornate cast iron fences, fire escapes, and decoration. In addition, there is a rich texture of wooden ornaments. This predominately residential quality is reinforced by a magnificent Copper Beech tree at the entrance of the present Museum facility. Many of the streets in the area are fairly narrow with the buildings forming comfortable and somewhat intimate street spaces. Overall the neighborhood is one which invites walking and in which one is constantly delighted by the warmth of the visual experience of form, texture, space and detail. Although many of the buildings in the area of the Museum are quite handsome, some are of particular architectural and historic significance.



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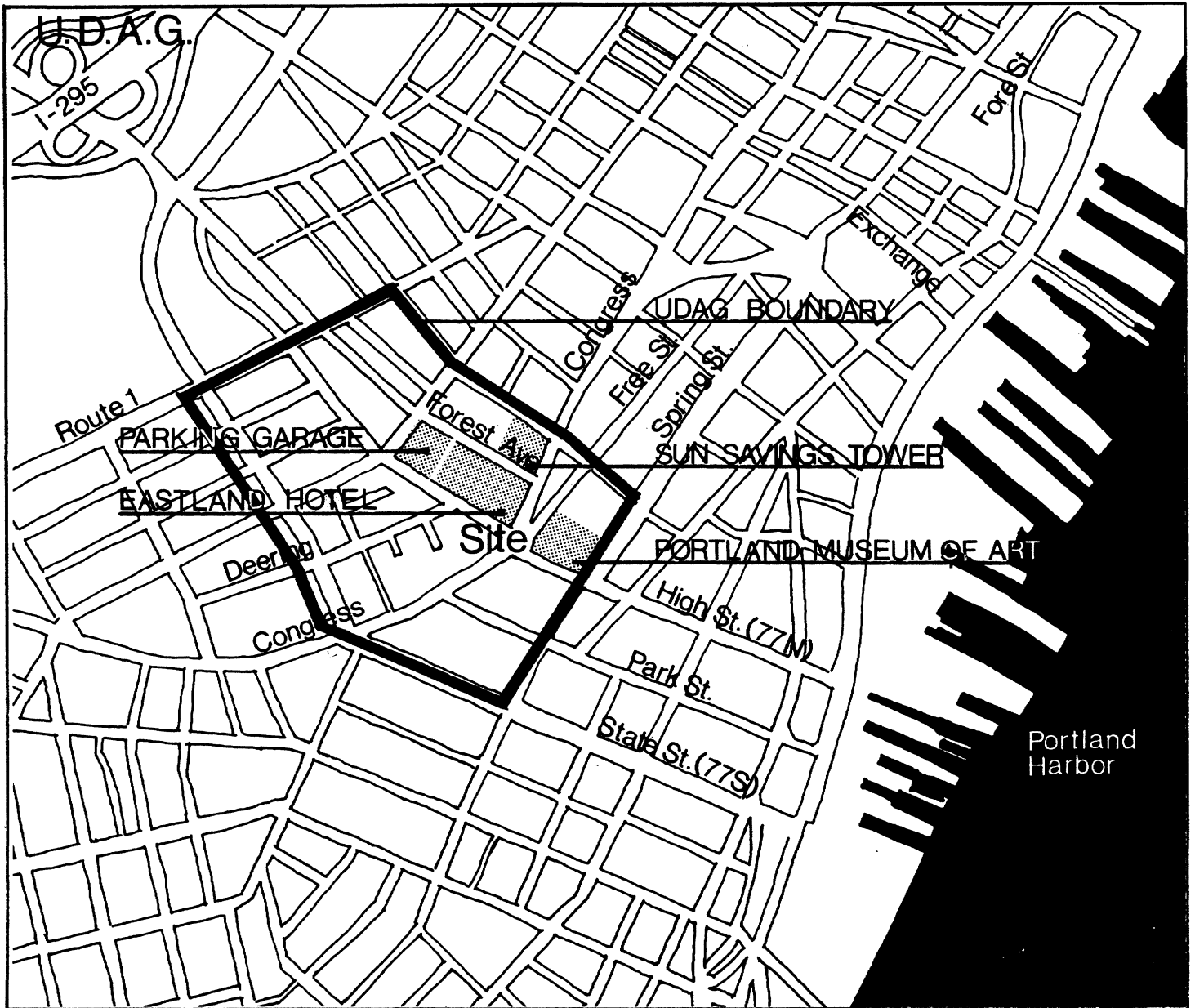
**A Holy Trinity Hellenic Orthodox Church:** Built in 1828 and formerly the Park Street Church. It is brick with a wood tower and is located at the corner of Park and Pleasant Streets across from the row houses.

**B Baxter Library Building:** Designed by Francis Fassett and erected as a library in 1888. Located just east of the head of Park Street and to the west of Congress Square on Congress Street. This building now serves as a school of art. A new library is under construction on Monument Square.

**C H. H. Hay Building:** Designed by Charles Quincy Clapp. This is one of two "flat iron" buildings in Portland and is located on Congress Square at the meeting of Congress and Free Streets. A building key to the square, it is located across from the Museum site on Free and High Streets. Built in 1826, it houses a pharmacy and was recently purchased by greater Portland Landmarks.

**D Chamber of Commerce Building:** Built in 1830's as a theatre, later used as a church. Restored to a free interpretation of its original facade by John Calvin Stevens, it presently houses the Greater Portland Chamber of Commerce. It is located on Free Street and abuts the new Museum site.

- E St. Elizabeth's Home:** A Federal period three story brick residence erected in 1805. This restrained structure has an extension to the rear and serves as a child care facility. It is located down High Street next to the Safford House.
- F Stephen McLellan House:** A three story Federal period brick home erected in 1800. This building, built by the brother of High McLelland for whom the McLellan-Sweat House was erected in the same year, has housed the Cumberland Club since 1896. The Libby Building was built on the site of the former club house on Congress Square, formerly The William (King) Cobb House designed by Alexander Parris in 1801.
- G Joseph Hold Ingraham House:** A three story Federal period frame house erected in 1801 as a home. It is located across Pleasant Street to the south below St. Elizabeth's Home.
- H Park Street Row:** It extends between Spring and Gray Streets facing Park Street. The row contains private apartments and single residences.
- I John B. Carrol Mansion:** Designed by Charles Quincy Clapp and erected in 1851 for his daughter. It is located on Park Street. It continues as a private duplex home and is brick.
- J Ruggles Sylvester Morse House:** A Registered National Historic Landmark. It was designed by Henry Austin and erected in 1859 as a private residence. On the corner of Park and Danforth Streets, this house is considered to be the best surviving unaltered Italianate Villa town house in the nation. It is made of sandstone and is owned by the Victoria Society.
- K Charles Quincy Clapp House:** A Greek revival temple form building designed by the son of the second owner of the McLellan-Sweat House as his home in 1832. This building is next to the McLellan-Sweat House on Spring Street and houses administrative offices of the Portland School of Art. The House is listed on the National Register of Historic Places.
- L Safford House:** an Italianate villa with bow fronts erected as a residence by a coal merchant in 1858. This building is across from the McLellan-Sweat House on Spring Street at the corner of High and houses the library, studios and classrooms of the Portland School of Art.
- M The Thomas Delano House:** Located down Pleasant Street around the corner from Shalom House. A two story frame building built in 1800, it continues as a private resident.
- N-Shalom House:** Located across High Street from the Safford House. It is a wooden three story residence erected in 1821-1822, and presently is a half-way house offering a protected environment for young people.



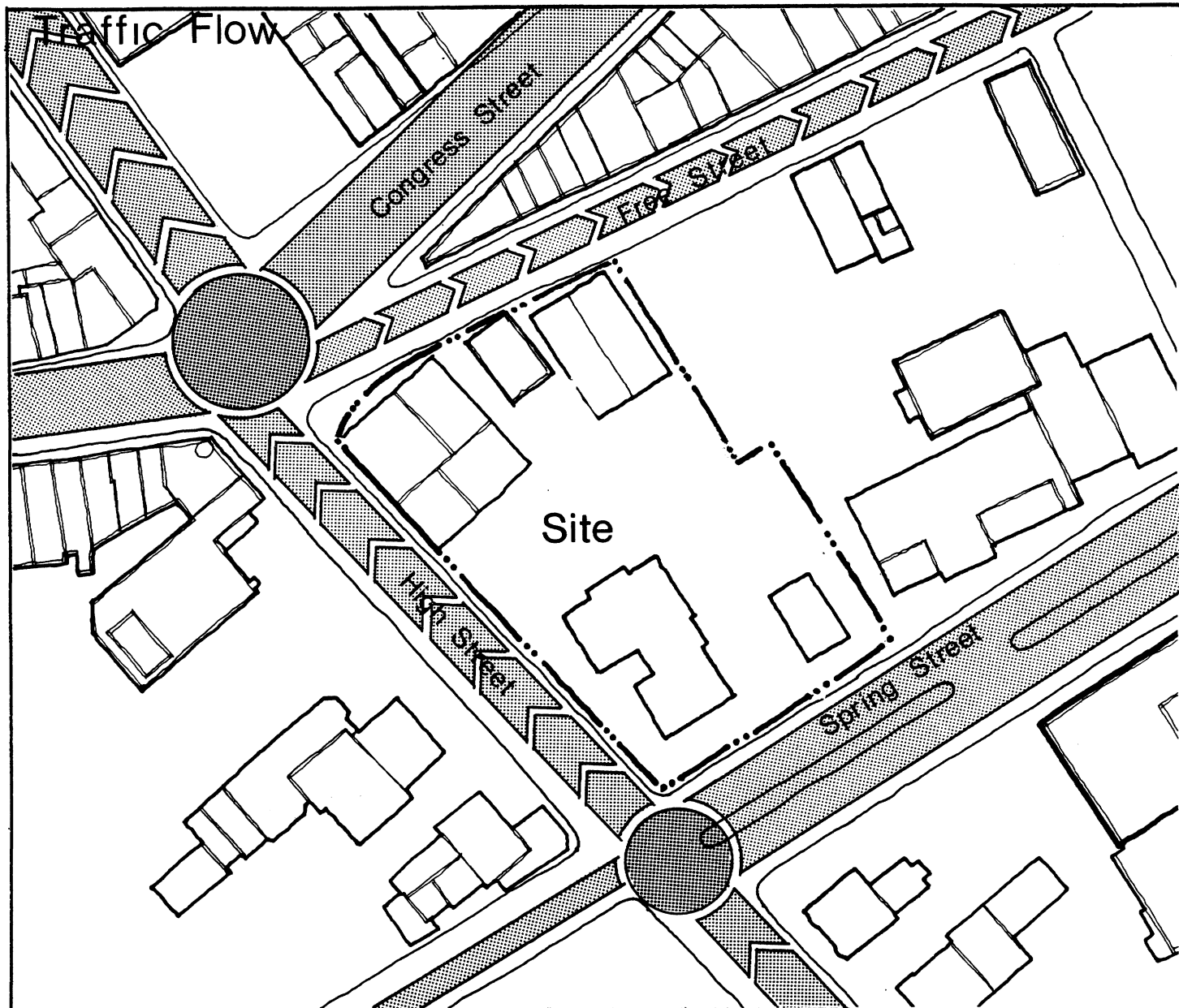
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The Portland Museum of Art expansion is part of an even larger program. Approximately 10% of the funds for it were acquired through an Urban Development Action Grant Program. This program included extensive redevelopment and renovation of the Congress Square area and consists of five major areas.

Neighborhood Renovation - Assistance of \$250,000 would be provided for facade improvements of businesses in the Congress Square Area.

Portland Museum of Art - Grant assistance of \$2 million to provide a new building for the display of important proposed donations of art which are contingent upon the construction of the new building.

Eastland Hotel and Plaza - \$1 million mortgage assistance for the conversion of an old 500 room hotel. It would provide 150 hotel rooms, 15,000 s.f. of office space, 65 apartments, and a ground floor restaurant, banquet, and retail facility. In addition to this, a plaza will be constructed at the corner of Congress Street and High Street to link the hotel to the Congress Square activity.



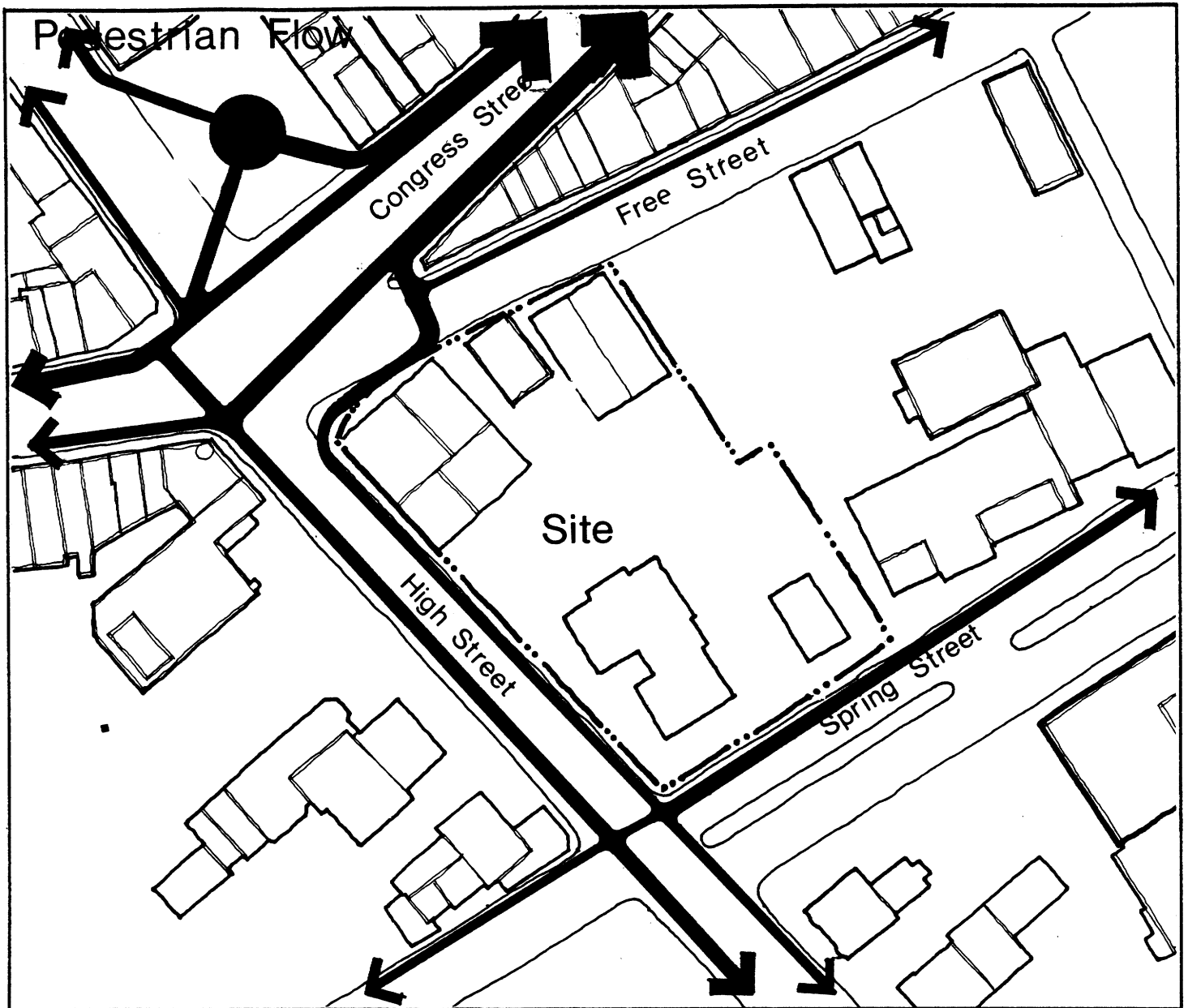
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Both streets which are adjacent to the expansion site are oneway streets. High Street is oneway to the north and Free Street is oneway to the east. All other streets are two way.

High Street is a state highway and handles a majority of the traffic from South Portland and Cape Elizabeth to the downtown business district and beyond. Congress Street is a major artery which connects downtown Portland. It and High Street have heavy to moderate traffic all day.

Free Street tends to be more of a service street which feeds the back side of many of the Congress Street buildings.

Spring Street is also a major artery in the downtown plan. It links many of the high density areas to High Street.

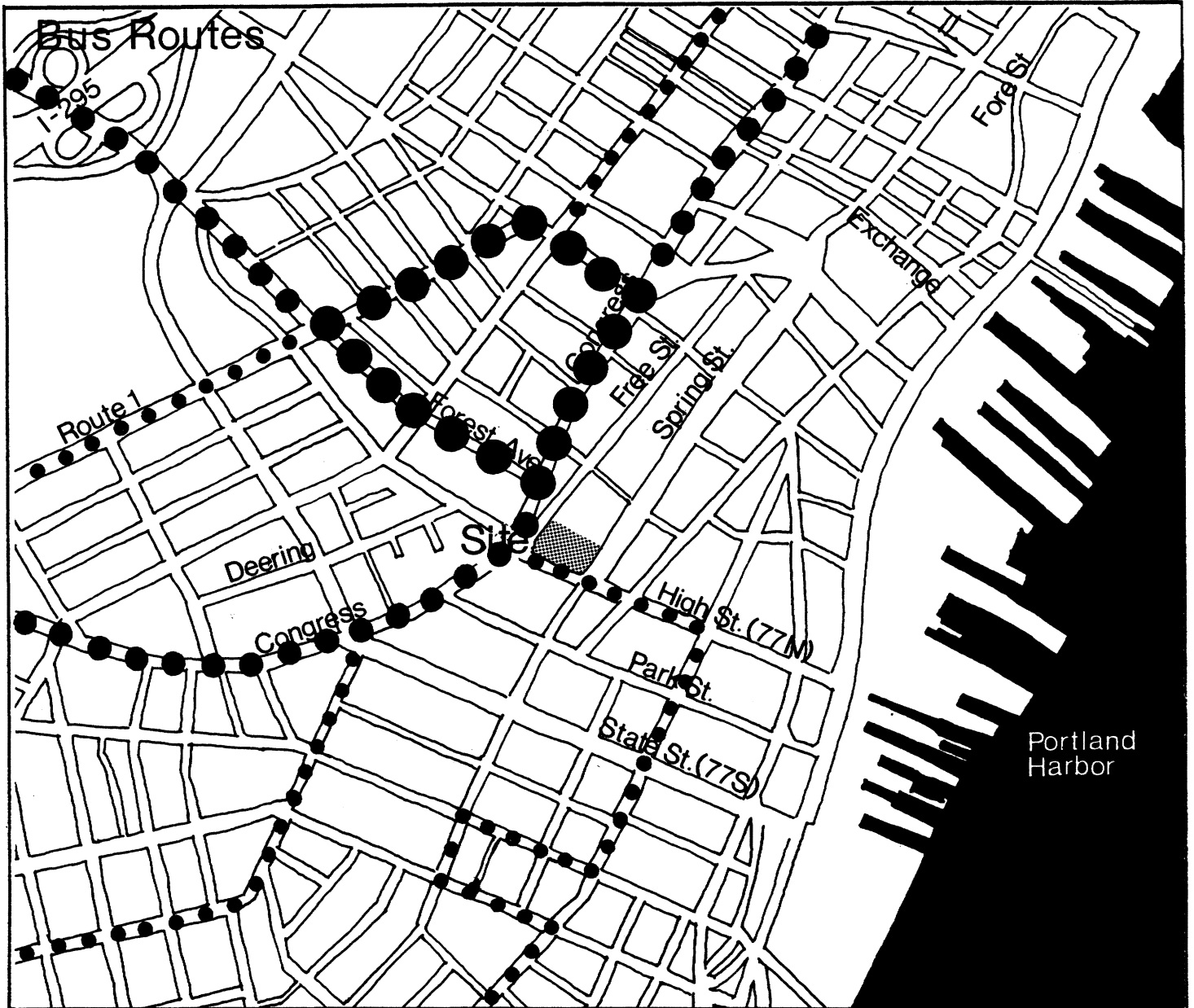


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Congress Square Park is a large pedestrian magnet. Pedestrians often circulate between this Park and Monument Square which is about 3 blocks to the east on Congress Street. Congress Street usually has a constant flow of shoppers during the day and into the evening.

High Street to the north has a heavy pedestrian traffic also. Because of the parking garage and Deering Park many pedestrians move along High Street between Congress Street and the park.





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Every bus loop for the metro bus system for the greater Portland area passes within a half block of the site. The Congress Street and the Pine Street bus loops both pass directly in front of the Museum.

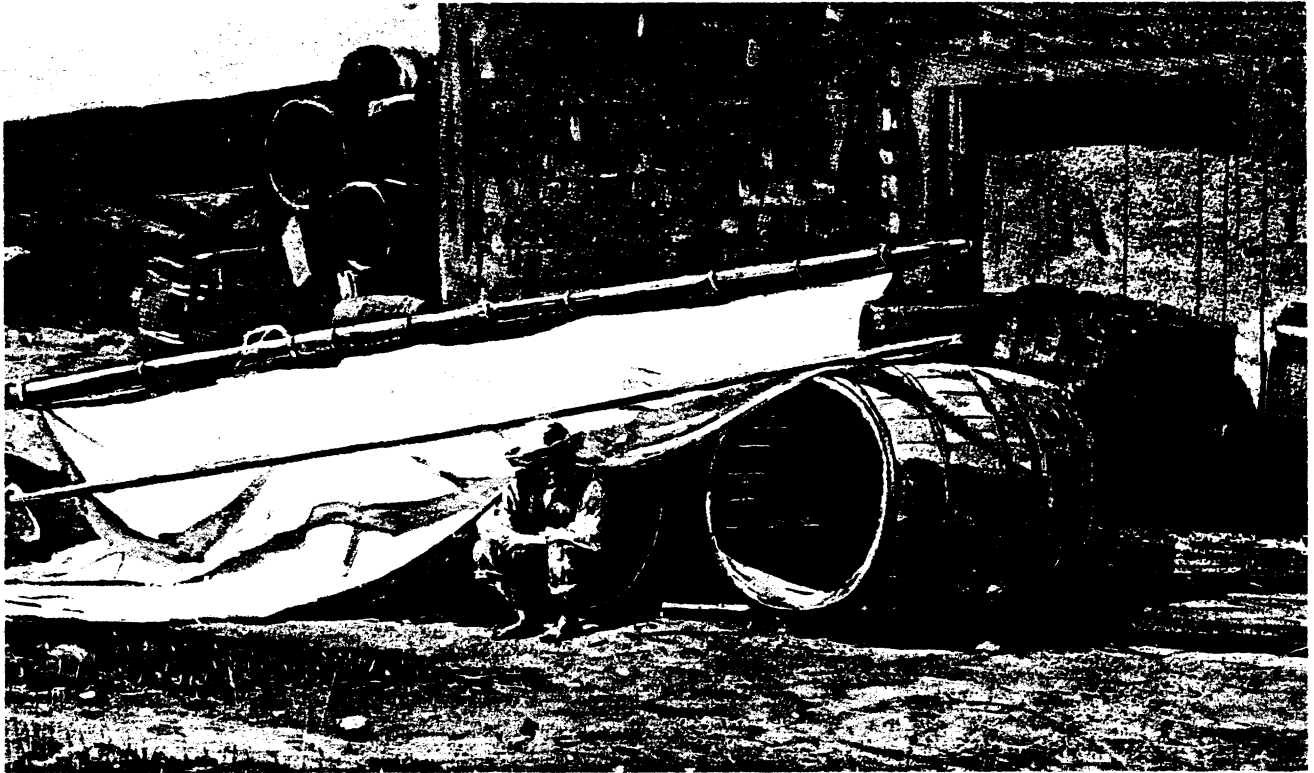
The bus system allows easy access to any part of the city from the Museum.



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Parking within a one-block radius is more than adequate. A new public parking structure is being constructed just north on High Street at Cumberland Avenue. This alone would meet the parking needs. There is also a parking garage at the Holiday Inn. This parking supplemented by on-street parking adequately meets the needs of this part of downtown Portland.

User: Staff



• T H E • P O R T L A N D • M U S E U M • O F • A R T •

Staff are the lifeblood of the Museum. They are responsible for all Museum activity from administration to exhibit preparation. Most of their activities occur away from the public eye since their contact with the public spaces is usually only during off-public hours.

The staff are responsible for exhibitions from the time that they are conceived until the time that they leave the Museum. They also sometimes do in-house construction of display equipment.

Education is a major interface between the staff and the public. Guided tours and lectures are some of the ways the Museum staff are able to educate the public.

User: Volunteer



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Volunteers are halfway between the Museum Staff and the Public. They do a considerable amount of the Museum's work and money raising while also participating in public activities. The volunteers run the Museum gift shop in order to raise money for the Museum. They also work on Museum mailers and public information projects. Their meetings take place in the Museum meeting room monthly.

User: Visitor

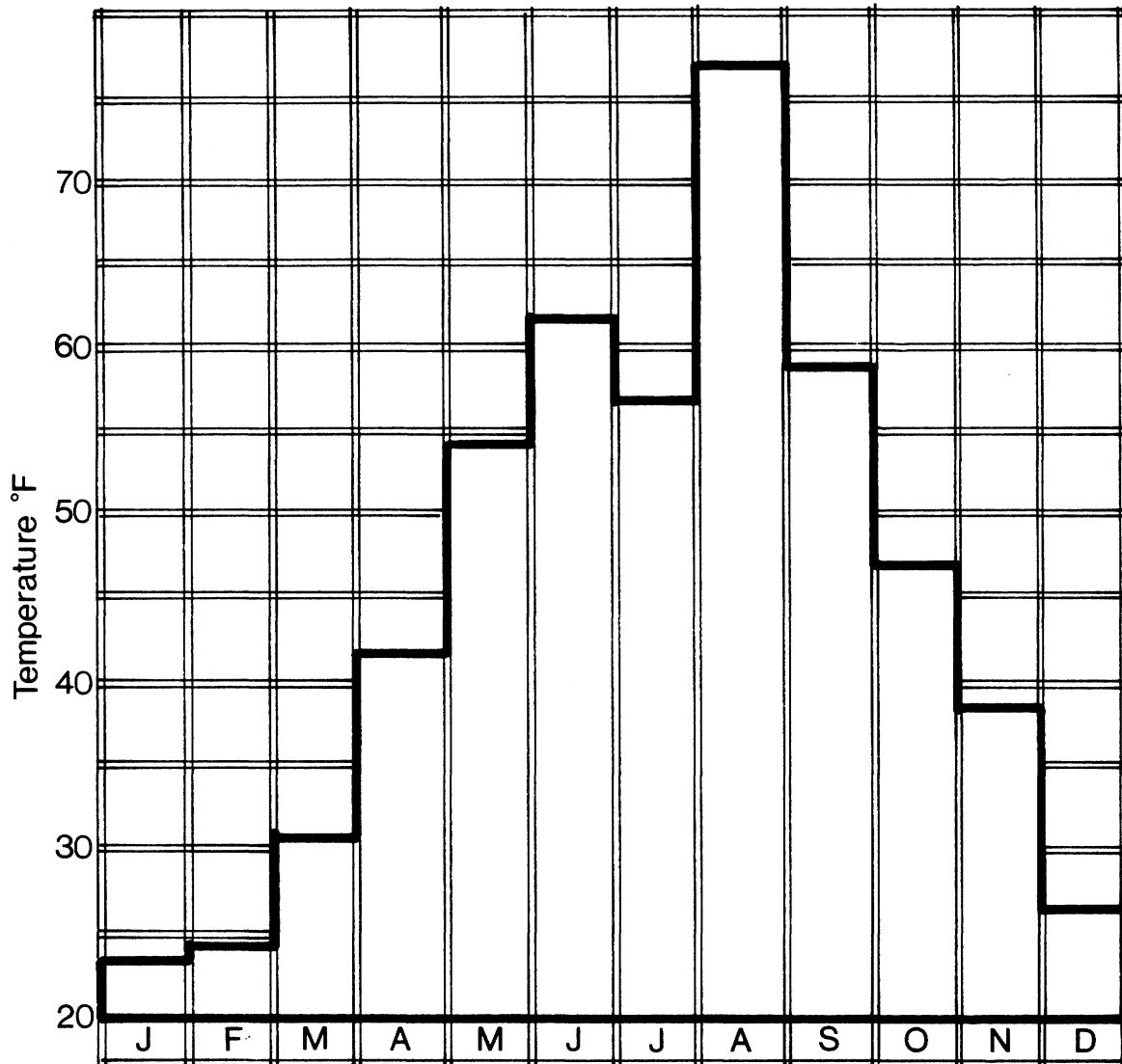


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The public visitors are divided into two major categories: Tourist and education oriented. The tourist visitors tend to be mainly one-time visitors who have come to Portland to take in the Museum as well as the other attractions of Maine. They will usually only be using the gallery spaces. The education oriented visitors will be those who visit the Museum a number of time every year. They will be coming to view the new exhibits and will also be attending the extra educational function. They will be using the meeting room and auditorium for lectures, films, recitals, and meetings.

# Climate Analysis

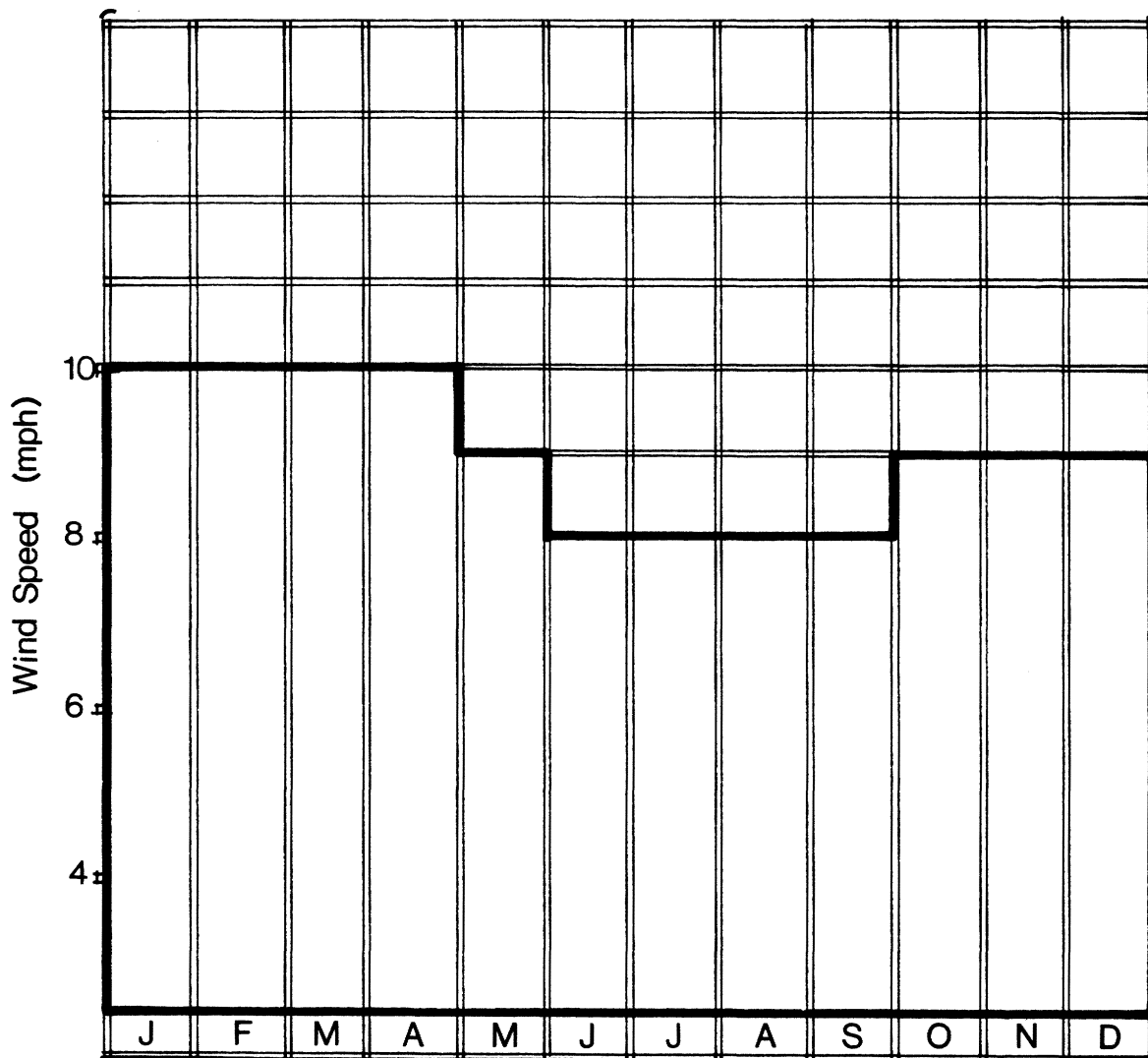
# Temperature



• T H E • P O R T L A N D • M U S E U M • O F • A R T •

As a rule, Portland has very pleasant summers and falls, cold winters with frequent thaws, and disagreeable springs. Very few summer nights are too warm and humid for sleeping. Winters are usually quite severe, but begin late and then extend deeply into the normal springtime. Temperatures well below zero are recorded frequently each winter. Cold waves sometimes come in on strong winds but extremely low temperatures are generally accompanied by light winds.

# Wind Speed



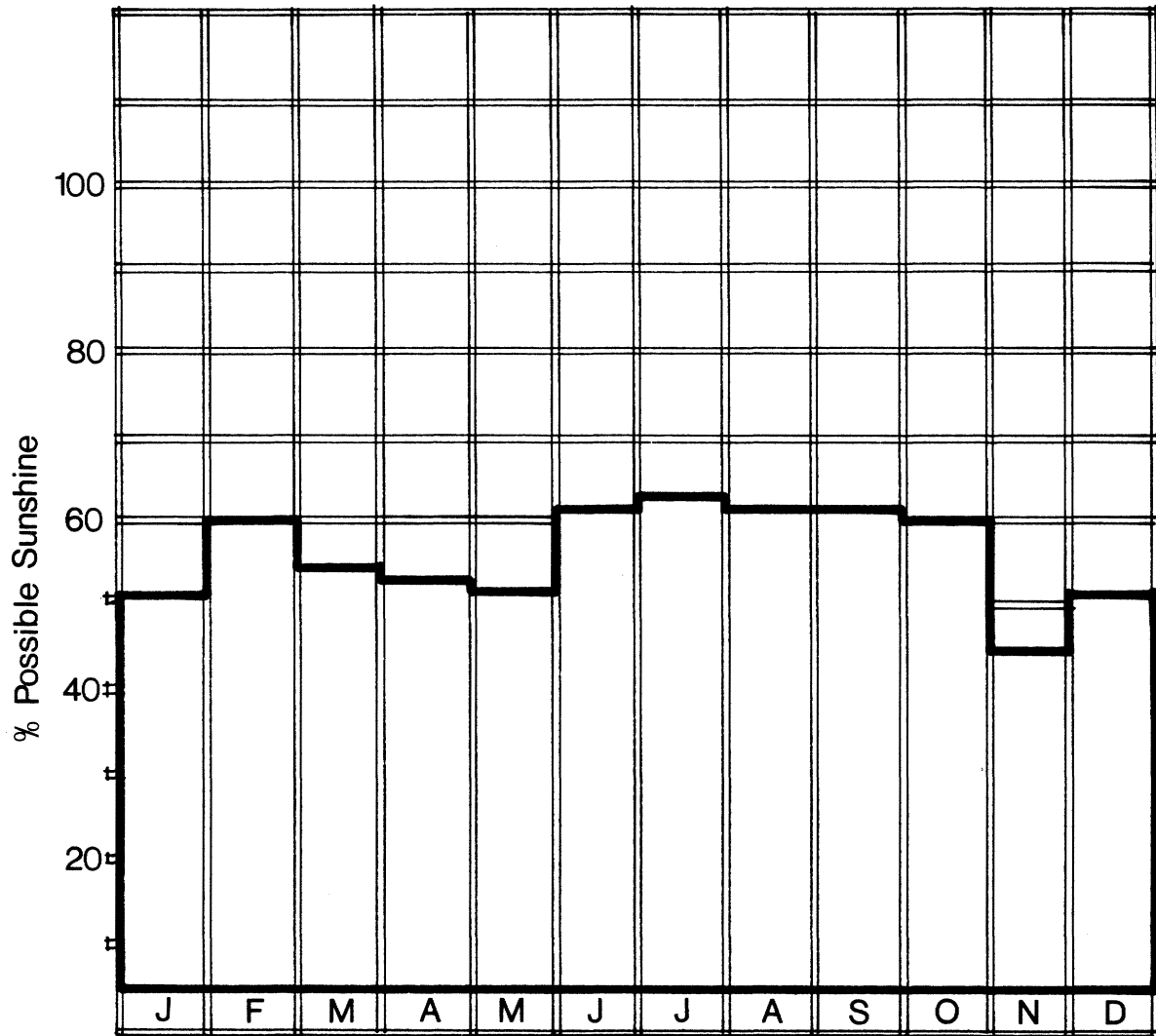
## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

Winds are generally quite light with the heaviest velocities being confined mostly to March and November. Even in these months the occasional northeasterly gales have usually lost much of their severity before reaching the coast of Maine. The fairly consistent breezes allow the cooling effect of the ocean in the summer and the warming effect in the winter.

Downtown winds during the winter usually vary from the norm. Along High Street and through Congress Square they can be very strong and greatly increase the chill factor.



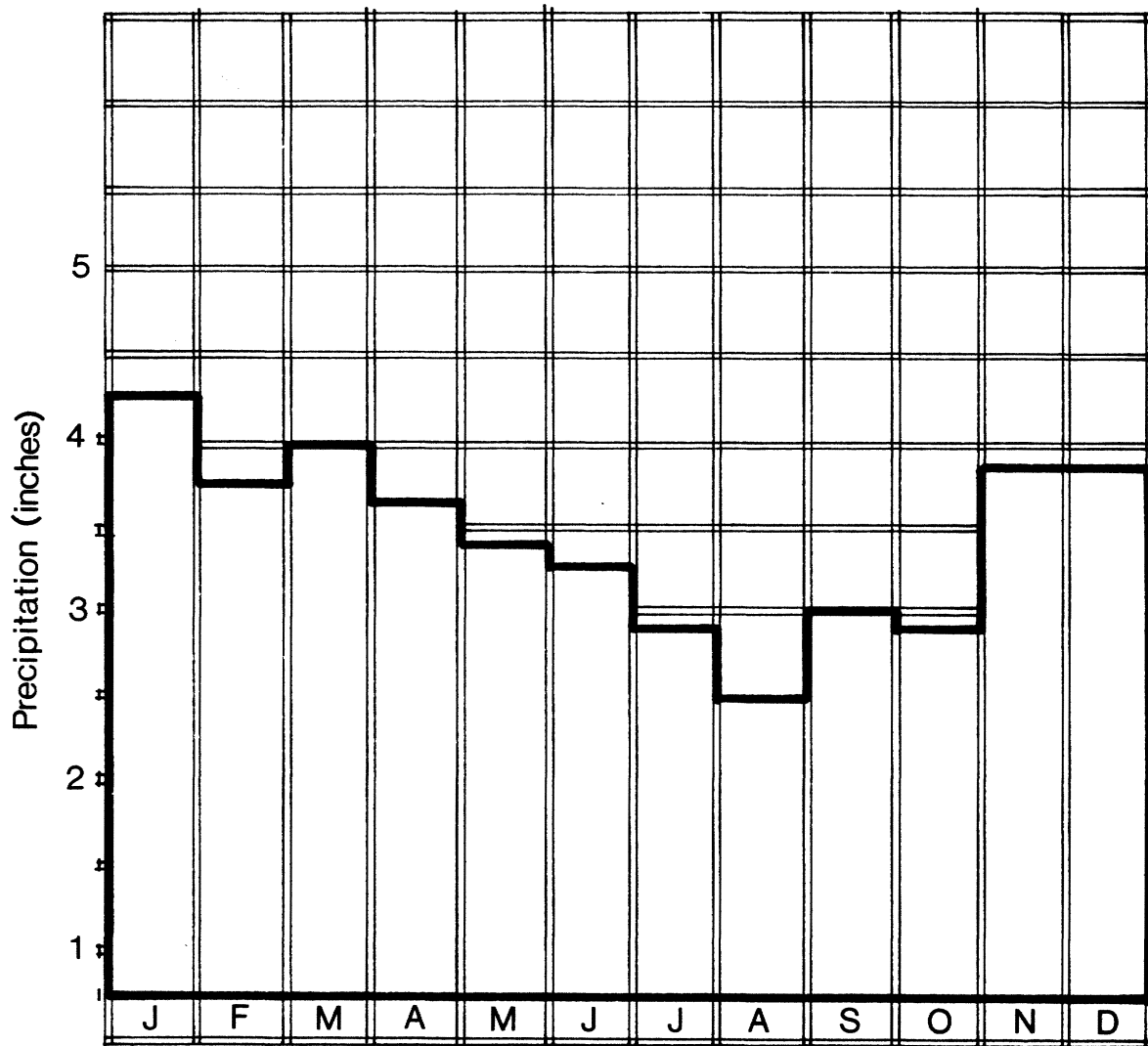
# Sunlight



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

The climate in the area of the Museum is strongly affected by its location on the southerly slope of the hill. The slope and nearness to the top of the hill cause the Museum to be exposed to a great deal of sunlight throughout the year. Since this area is a definite heating priority this location seems particularly suited to an energy efficient passive solar building.

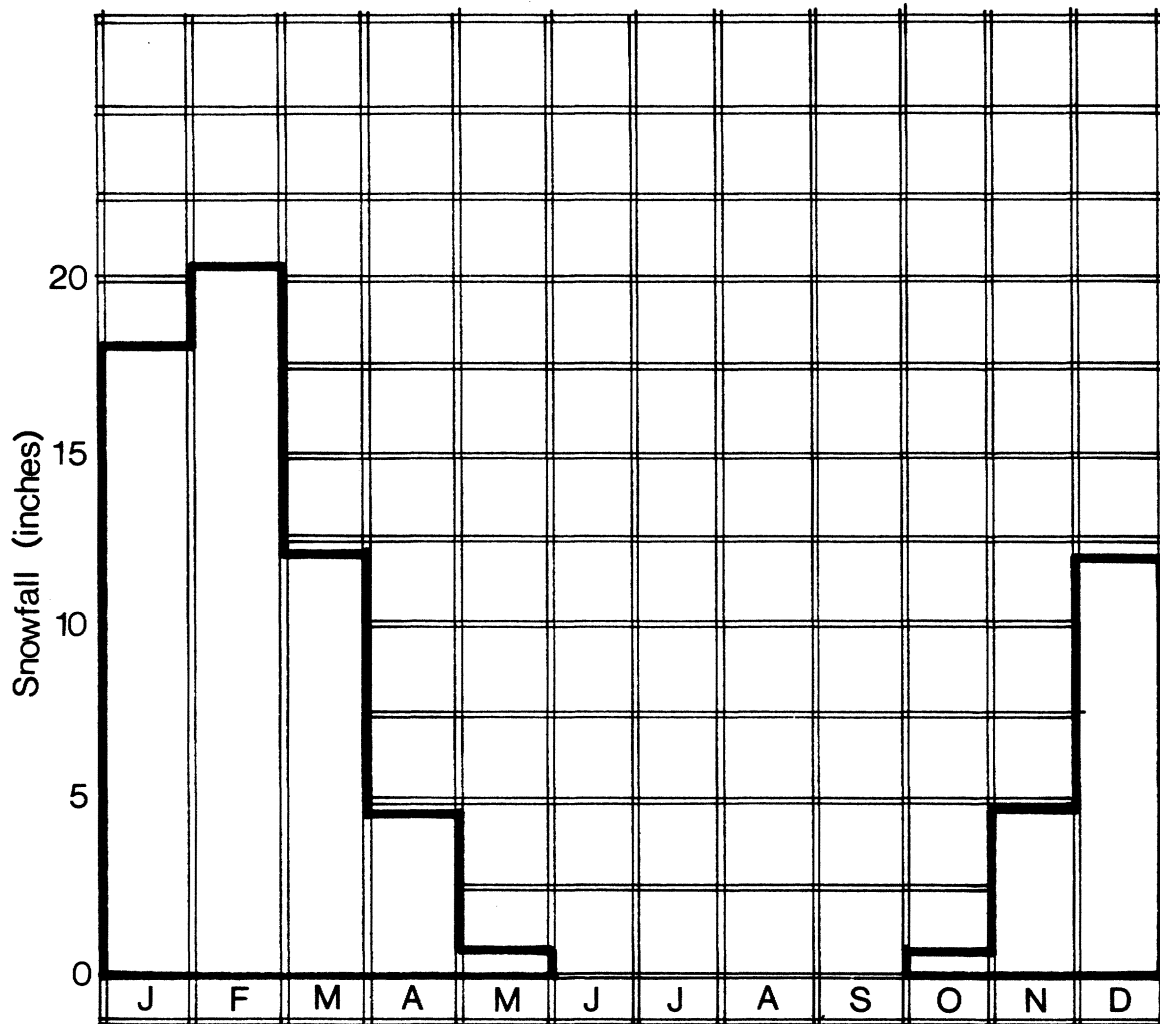
# Precipitation



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

Normal monthly precipitation is remarkably uniform throughout the year. Average monthly precipitation in Portland never varies much more than three-fourths of an inch from the annual average. The consistency of the rainfall is another factor which helps to moderate the climate.

# Snowfall



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

The majority of snowfall occurs within the six-month period of November through April. This is lower than the average for this part of the country because of the proximity to the ocean and the White Mountains. The mountains keep considerable snow from reaching Portland and, together with the ocean, it helps to moderate the temperature. Negligible traces of snow also fall during May and October. Heavy seasonal snow falls, over 100 inches, normally occur about every 10 years. True blizzards are very rare.

City Parking Garage - Action grant of \$1.5 million to provide a 650 car municipally owned parking garage and retail space.

Sun Savings Office Tower - Assistance of \$1.5 million to help finance a 120,000 s.f. office tower and 300 car parking garage.

# Site Analysis



• T H E • P O R T L A N D • M U S E U M • O F • A R T •

The site is located on High Street between Free Street and Spring Street. Immediately across Free Street is Congress Square which is a large public gathering area which draws people who come to shop on Congress Street. A large Holiday Inn is located to the southeast just across Spring Street.

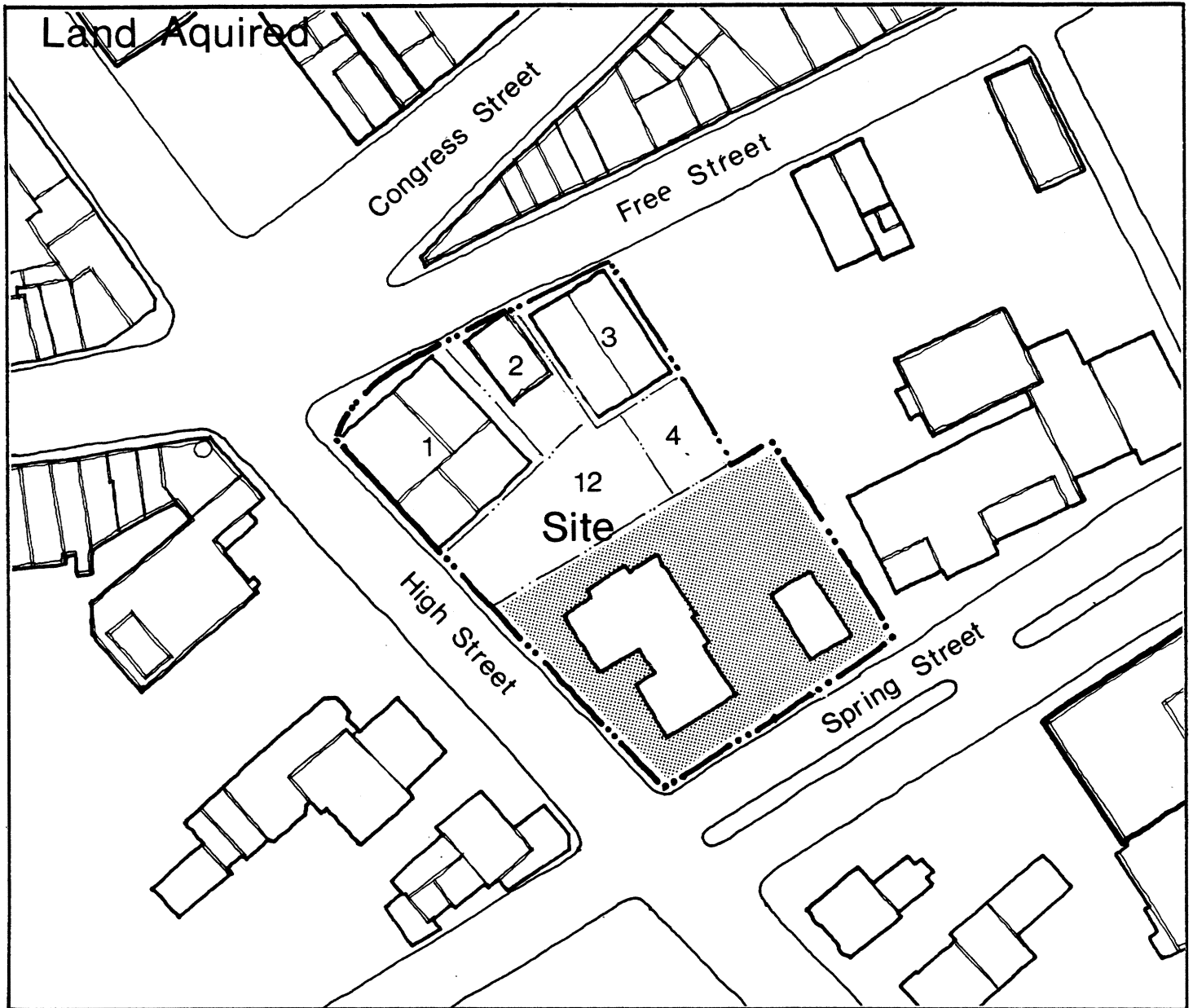
The land immediately adjacent to the northeast of the site is predominantly surface parking with some small commercial buildings.



• T H E • P O R T L A N D • M U S E U M • O F • A R T •

The present Museum consists of two buildings which are linked together. The first is the McLellan-Sweat House. This building is a Registered National Historic Landmark and is the largest object in the Museums permanent collection (excellent example of 1800 Federal Architecture). The second building is the L.D.M. Sweat Galleries, which was constructed later in 1908. These two buildings together form the present Portland Museum of Art. The Architectural Program Committee has determined that the two buildings which currently house the Museum must be maintained in the overall scheme.

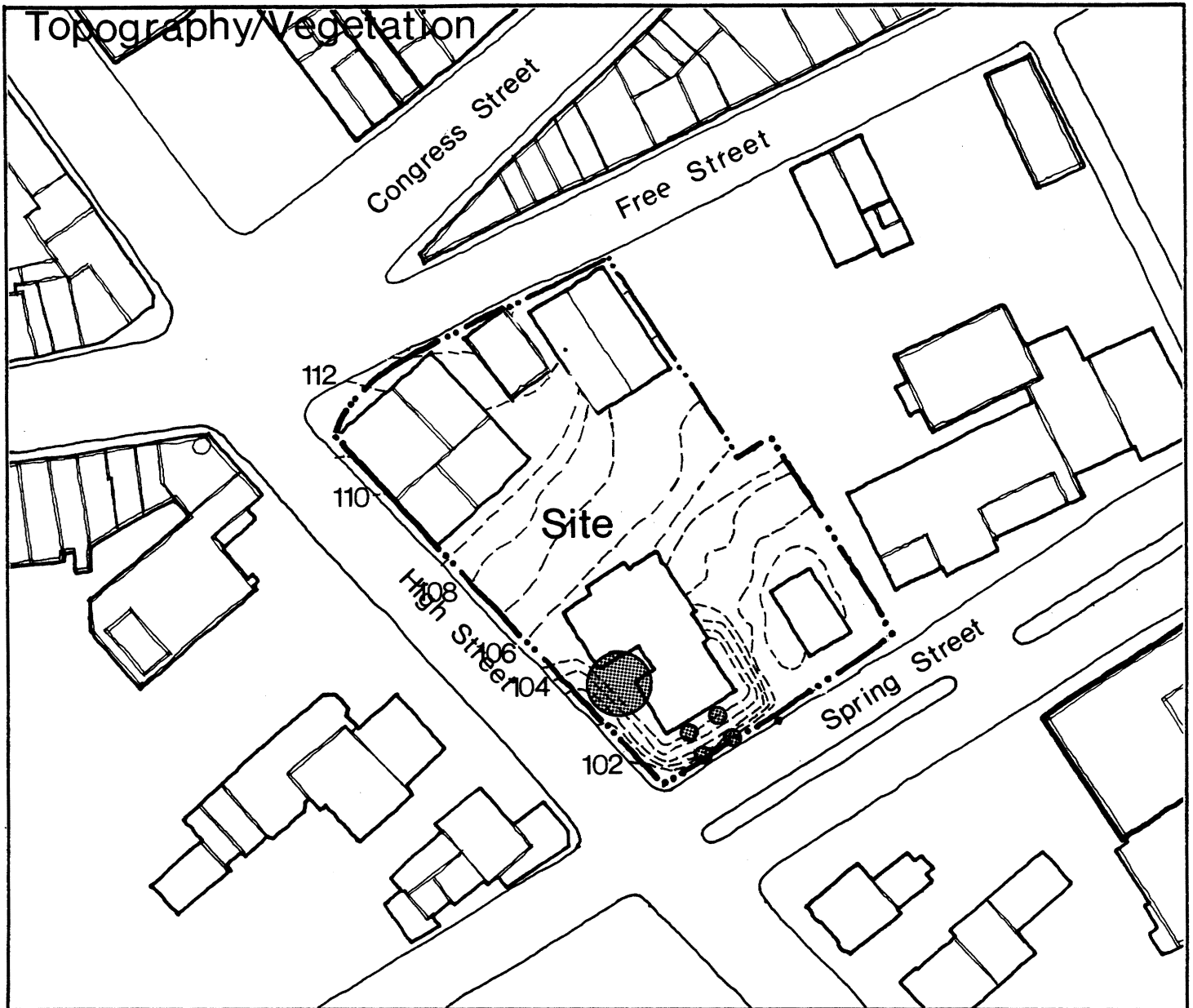
The other building on the site is the Charles Quincy Clapp House which currently houses the Portland School of Art (Administration). Both the school and the Museum are run by the Portland Society of Art.



• T H E • P O R T L A N D • M U S E U M • O F • A R T •

In preparation for the expansion, the Museum has purchased three parcels of neighboring land up High Street and around the corner. These are parcels #12, #1, and #2 on the City of Portland's assessor's Map. The parcel adjacent to the Museum, parcel #12, is vacant and used for parking. The corner parcel, #1, includes the Libby Building. that is a nineteenth century commercial building, similar to others in Portland and in other cities, appearing to have little independent architectural or historic significance. The Museum has also brought parcel #2 including a small frame building. It is wood and seems therefore unsuited to Museum use. It appears to have no architectural or historical significance other than being similar to many other small frame domestic buildings in Portland. Parcel #3 is currently available.





• T H E • P O R T L A N D • M U S E U M • O F • A R T •

The site generally has an even slope across it of about 4% (1 foot every 25 feet). It slopes down to the south with the existing buildings being up on bermed pedestals at the bottom of the hill.

There is relatively little vegetation that exists on the site. One major element that the Museum has requested to be saved is a 4' (Trunk Dia.) Beech Tree which is located to the west of the McLellan-Sweat Mansion. The only other vegetation of significance that exists is four small trees of an unknown type on the south side of the mansion.



• T H E • P O R T L A N D • M U S E U M • O F • A R T •

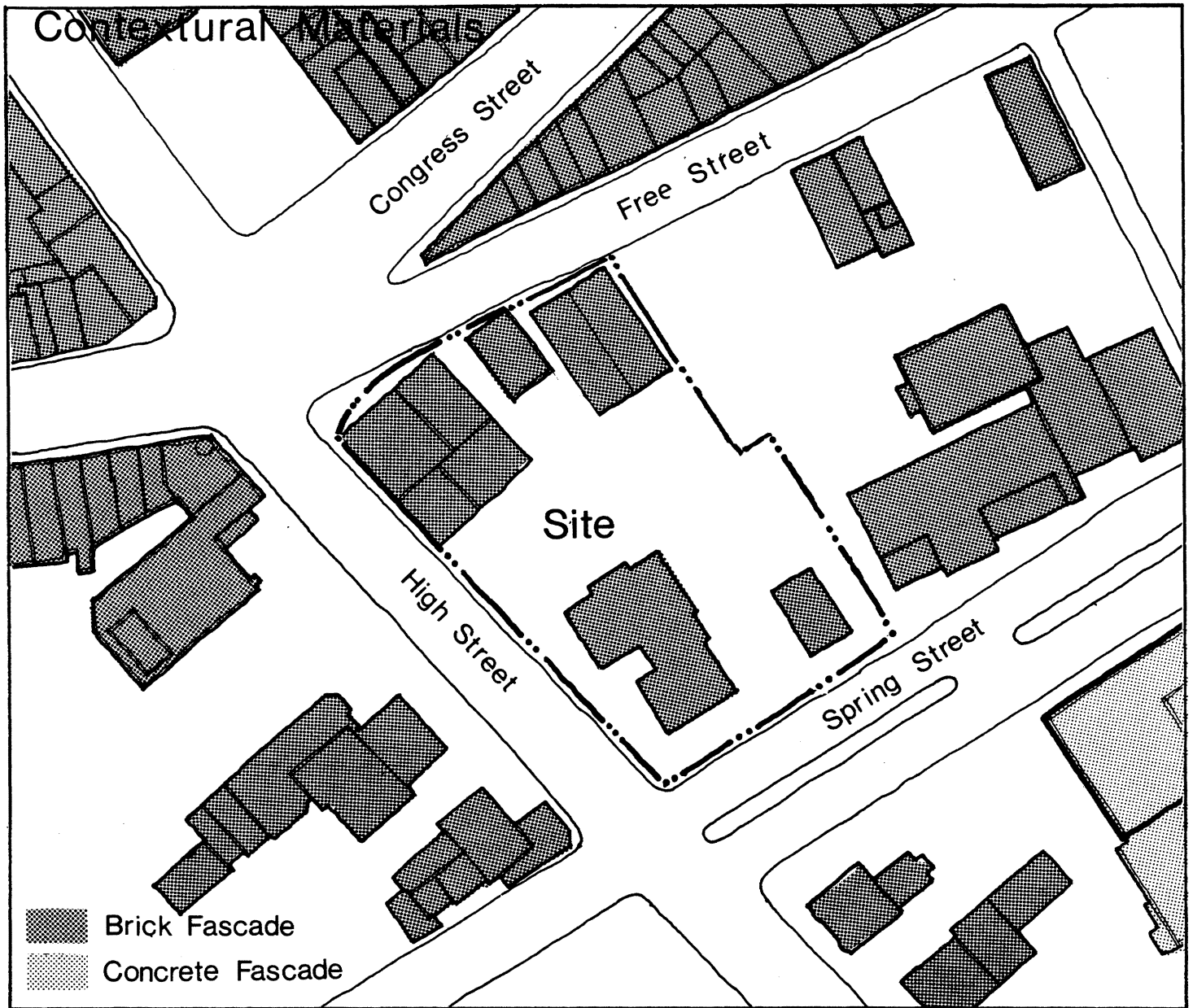
All utilities are within easy access of the site. Buried sewer, gas, water, and telephone lines exist under High Street to the west and Free Street to the north. No utilities easements exist on the site.



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

The site lies within a B-3 Zoning District and is adjacent to a R-6 Zoning District to the south. The following is a brief survey of the applicable B-3 zoning restrictions:

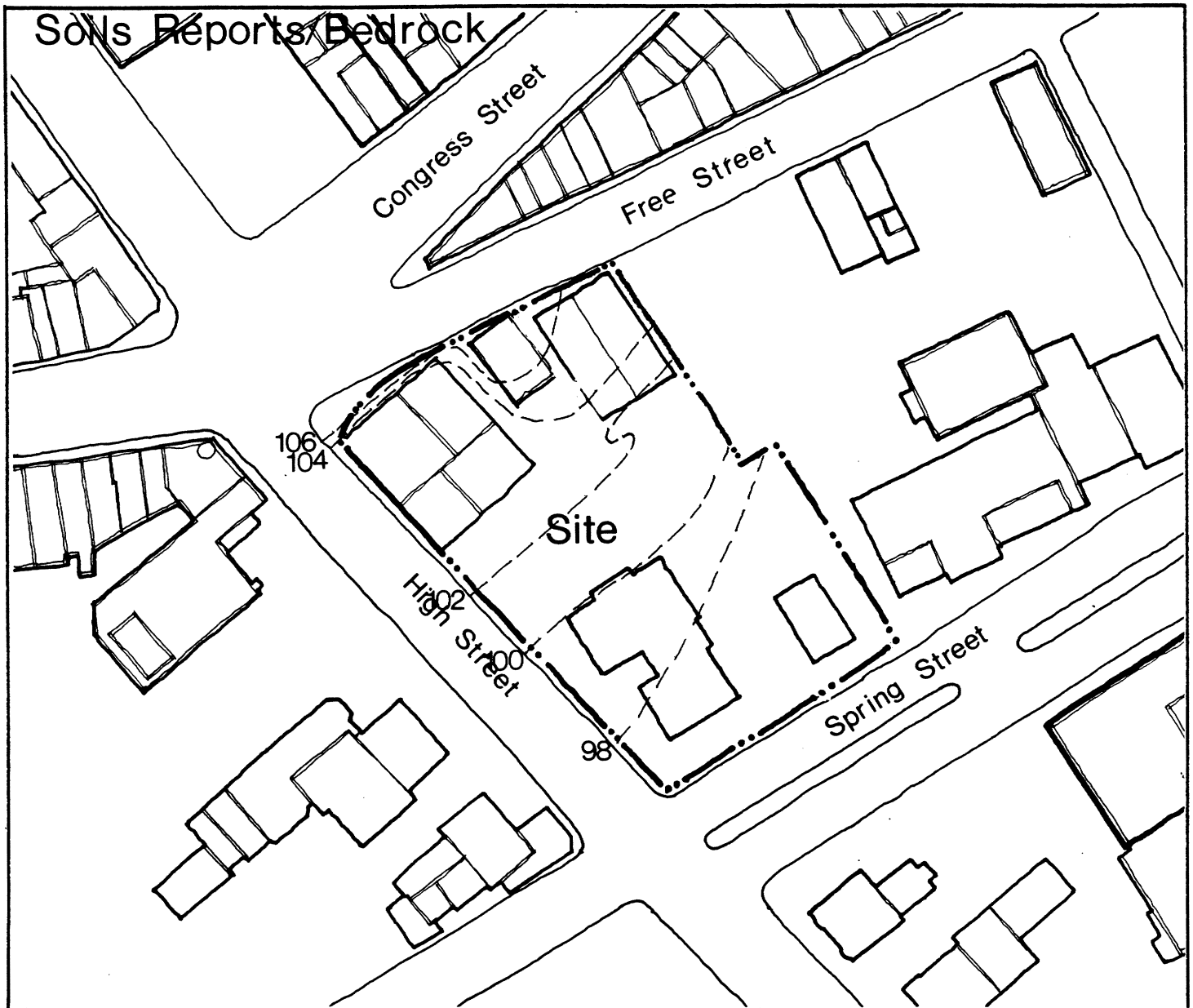
- No setbacks are required except where property line abuts a residential district.
- No maximum building coverage except for residential use.
- Maximum height is ten stories or 125 feet for non-residential use.
- No off-street parking is required in a B-3 zone.
- Off-street loading in a B-3 zone is required.



• T H E • P O R T L A N D • M U S E U M • O F • A R T •

The existing contextural materials are of a relatively limited palette. All the immediate buildings of a historical nature are predominantly brick. Most of the brick used in the area is of a deep redish character. Many of the brick buildings have been painted. Brick pavers are also used extensively throughout Portland for sidewalks and plazas.

Granite is another common material which is used on all city street curbs and some building details. Building details on the historic buildings are also sometimes rendered in wood.



• T H E • P O R T L A N D • M U S E U M • O F • A R T •

The Museum site is similar to most of Portland in that it lies on a large rock outcropping. Therefore bedrock is relatively close to the surface at most locations on the site. At the west end of the site, bedrock lies 7.5 feet below the surface while at the east end bedrock lies only 4.5 feet below the surface. It is recommended that minimum column footings which bear on bedrock should be 5' X 5'. Exterior footings should be a minimum of 5 feet below the finished grade in order to protect it from frost.

Since the Chamber of Commerce Building is so close to the property line of the Museum, care should be taken to protect it. If excavations go below the footings then stabilization of the rock will have to be considered.

# User Analysis

# Program Spaces

# Total Area Summary

<u>Public</u>	<u>18750 s.f.</u>
Galleries	12000
Auditorium	2500
Museum Guild Shop	1500
Meeting Room	1000
Support	1750
<u>Private</u>	<u>4975 s.f.</u>
Administrative Offices	1675
Support	3300
<u>Collection/Service</u>	<u>13650 s.f.</u>
Collection Storage	10000
Shipping/Receiving	2700
Support	950
<u>Building Support</u>	<u>1350 s.f.</u>
Mechanical/Electrical	1350
<u>Total Building</u>	<u>38750 s.f.</u>
<u>Site Amenities</u>	<u>7000+s.f.</u>
Truck Area	
Parking (20 Staff)	7000
Sculpture Garden	

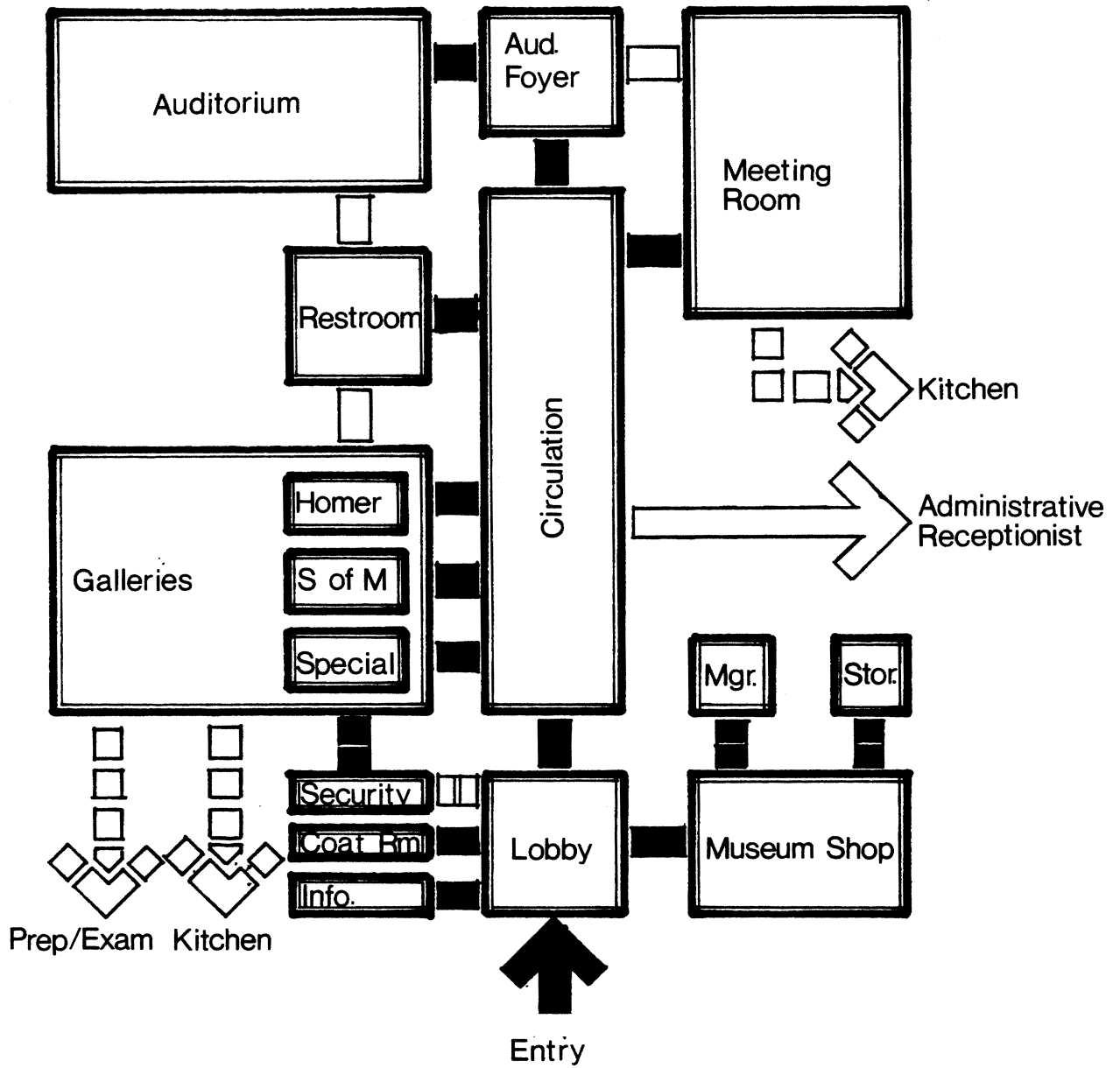


# Public Area Summary

## Public

<u>Galleries</u>	<u>12000 s.f.</u>
Homer Collection	1000
State of Maine Collection	3500
Miscellaneous Paintings	1500
Decorative Arts	2000
Contemporary Work (Permanent Collection)	1500
Prints/Drawings/Works on Paper	1000
Sculpture	2000
Special Exhibition	2000
Oriental and Primitive Art	500
Existing	-3000
<u>Auditorium</u>	<u>2500 s.f.</u>
Auditorium	1300
Storage	300
Stage	300
Projection Room	100
Foyer	500
<u>Museum Guild Shop</u>	<u>1500 s.f.</u>
Shop Area	1200
Manager's Office	50
Storage	250
<u>Meeting Room</u>	<u>1000 s.f.</u>
Meeting Area	750
Storage	250
<u>Support</u>	<u>1750 s.f.</u>
Lobby	1000
Information	100
Coat/Package Check	250
Restrooms	300
Security Office	100
<u>Total Public</u>	<u>18750 s.f.</u>

# Public Area Diagram



## RELATIONSHIPS

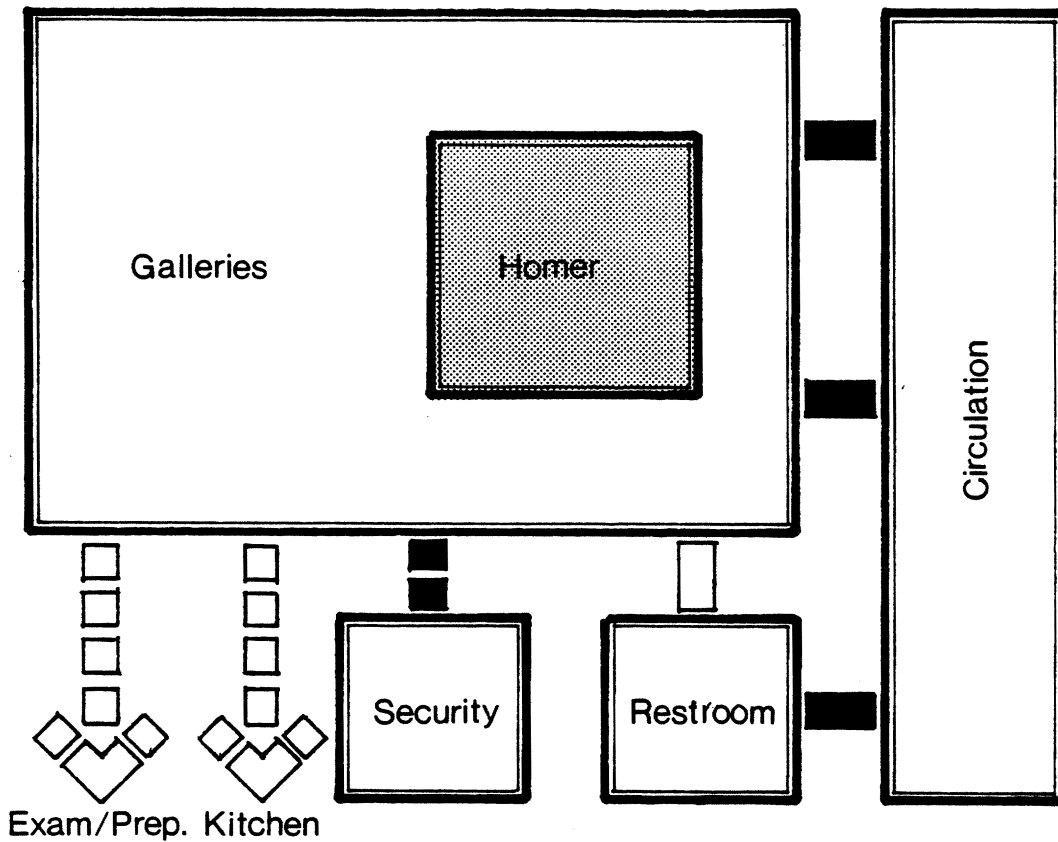
### Public



### Staff



# Homer Gallery



Small Scale Paintngs (Watercolors) Medium to Small Scale (Oils)

## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Visiting Public

Sq. Ft. 1000

### Function

Display of prints, watercolors, and oils by Winslow Homer

### Equipment

Seating Benches

### Special Considerations

Oils can be in a naturally lighted room but water color and print lighting should be carefully controlled, should all be adjoining separate rooms.

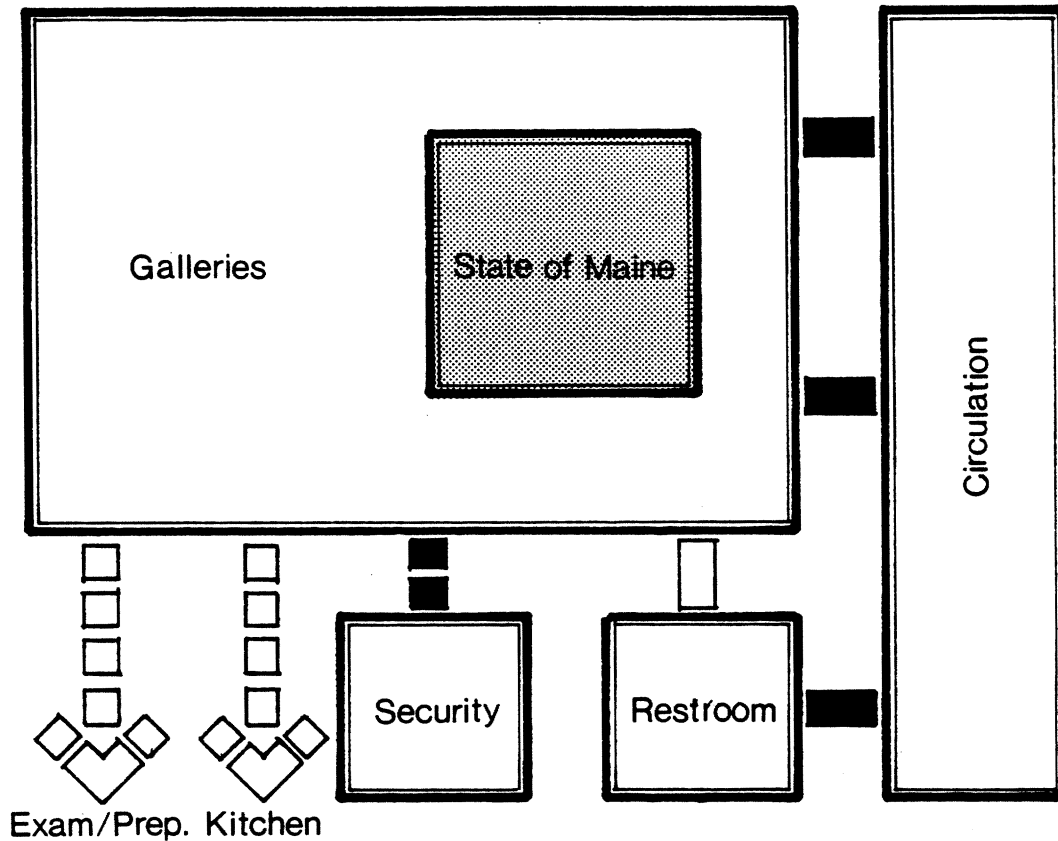
### Systems

- Security Yes
- HVAC Yes (Humidity Control)
- Plumbing No
- Electrical Yes
- Lighting Yes (UV Filtered)

### Finishes

- Floor Hard
- Walls Displayable
- Ceiling Hard

# State of Maine Gallery



Variety of Styles, Sizes and Media

## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Visiting Public

Sq. Ft. 3500

### Function

Display of Maine art.  
Work on Paper, Oils, and Sculpture.

### Equipment

Seating Benches

### Special Considerations

Separately controlled areas must be provided for the different types of art. Natural lighting in all galleries except for works on paper.

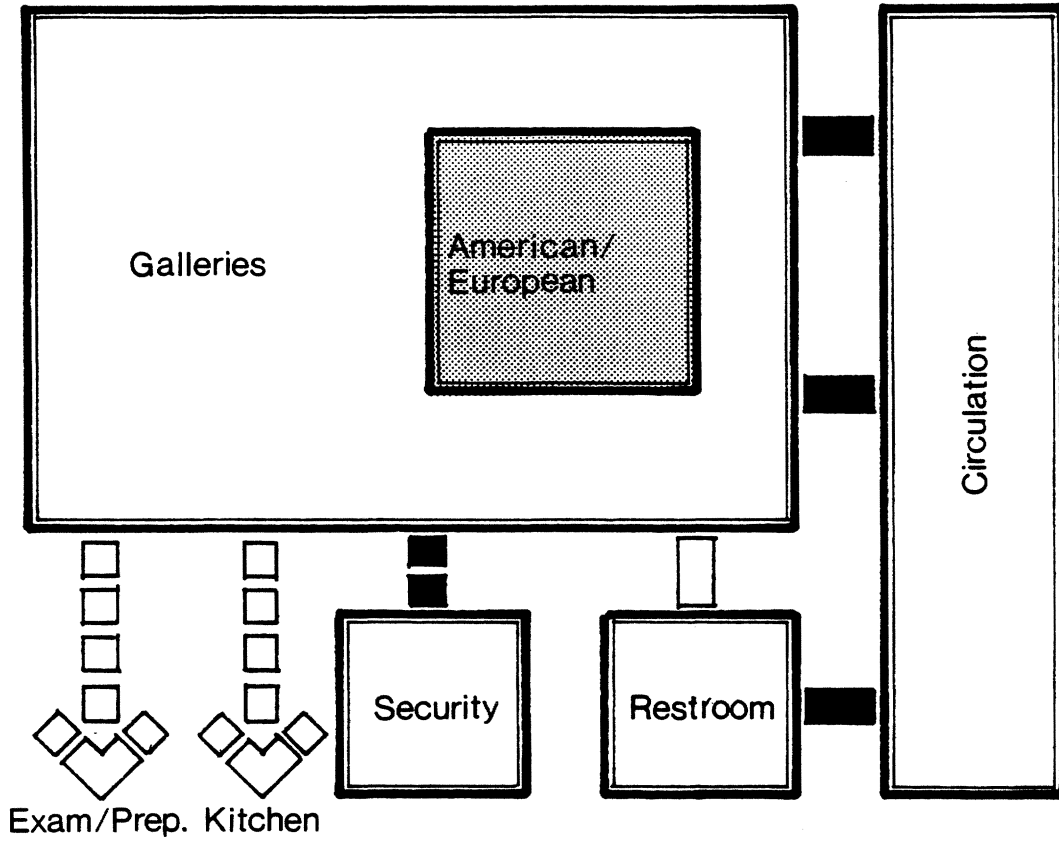
### Systems

- Security Yes
- HVAC Yes (Humidity Control)
- Plumbing No
- Electrical Yes
- Lighting Yes (UV Filtered)

### Finishes

- Floor Hard
- Walls Displayable
- Ceiling Hard

# American/European Gallery



Various Sizes of Paintings

## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Visiting Public

Sq. Ft. 1500

### Function

Display of European and American Paintings

### Equipment

Seating Benches

### Special Considerations

Natural Lighting should be provided.

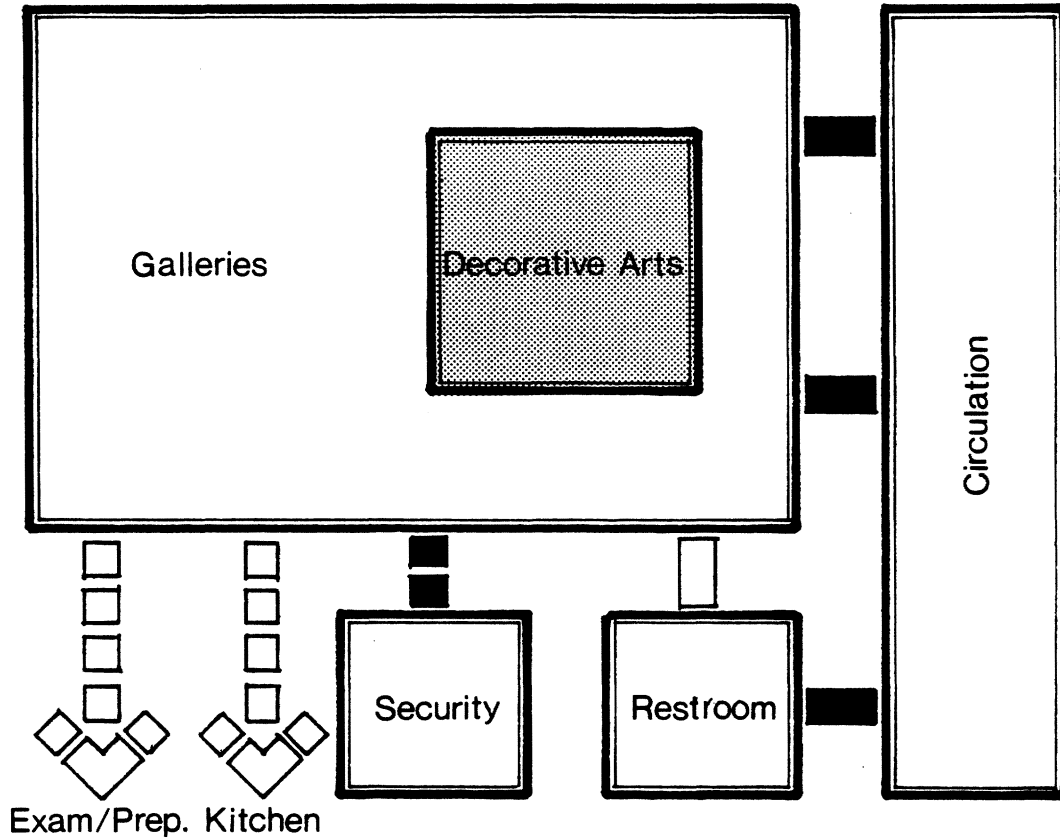
### Systems

- Security Yes
- HVAC Yes (Humidity Control)
- Plumbing No
- Electrical Yes
- Lighting Yes (UV Filtered)

### Finishes

- Floor Hard
- Walls Displayable
- Ceiling Hard

# Decorative Arts Gallery



House scale for display of furniture and small scale for ceramics & silver. Special display for glass.

## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Visiting Public

Sq. Ft. 2000

### Function

Display of Portland glass collection, ceramics, silver, and furniture

### Equipment

Backlighted Glass Cases and Seating Benches

### Special Considerations

Divided into multiple rooms because of the character of the collection.

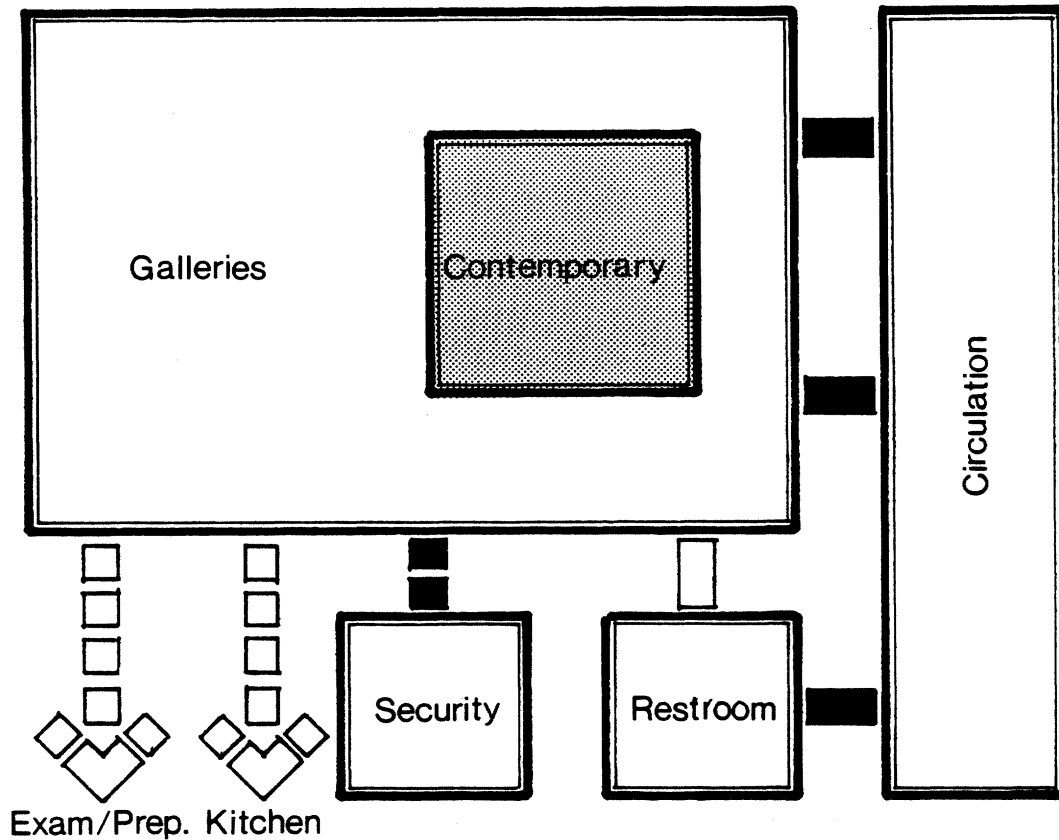
### Systems

- Security Yes
- HVAC Yes (Humidity Control)
- Plumbing No
- Electrical Yes
- Lighting Yes (UV Filtered)

### Finishes

- Floor Hard (Possibly Carpet)
- Walls Displayable
- Ceiling Hard

# Contemporary Gallery



Flexible because of the various sizes and media of contemporary art.

## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Visiting Public

Sq. Ft. 1500

### Function

Provide a flexible space for contemporary work from the permanent collection.

### Equipment

Seating Benches

### Special Considerations

Flexible. Natural lighting except on paper works.

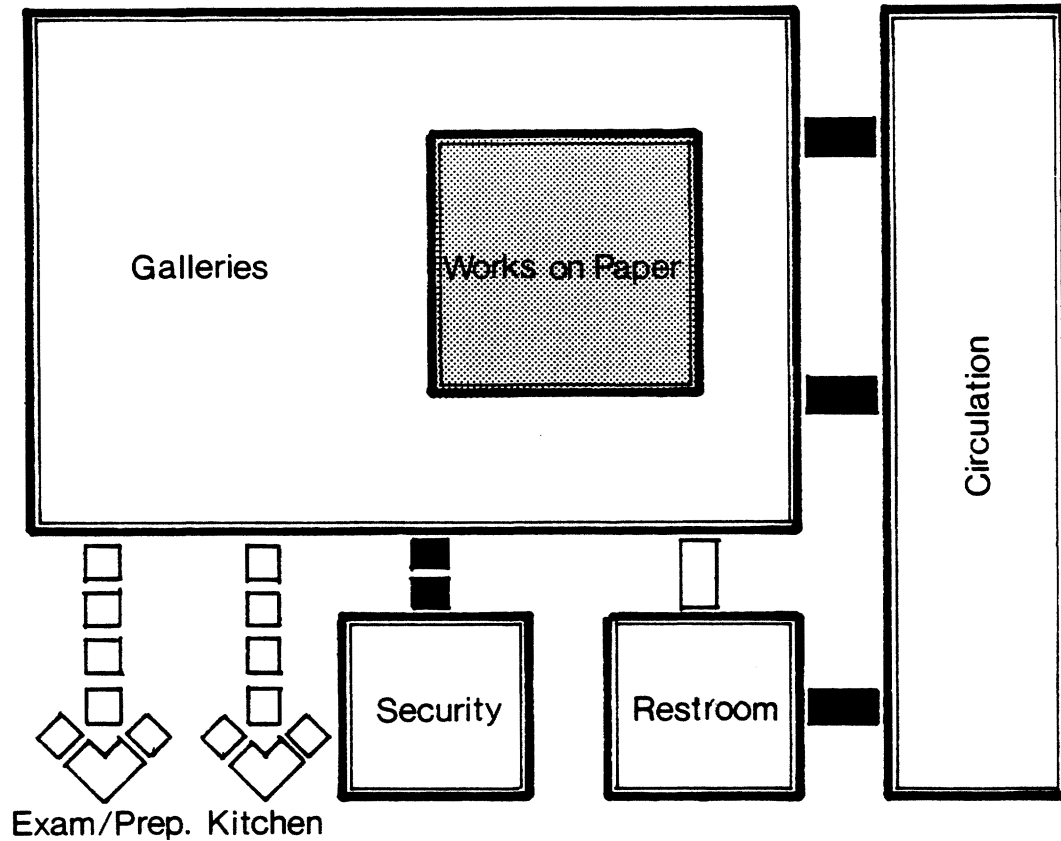
### Systems

- Security Yes
- HVAC Yes (Humidity Control)
- Plumbing No
- Electrical Yes
- Lighting Yes (UV Filtered)

### Finishes

- Floor Hard
- Walls Displayable
- Ceiling Hard

# Works on Paper Gallery



Small Intimate Scale. Upclose Viewing

## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Visiting Public

Sq. Ft. 1000

### Function

Display of prints, drawings, and works on paper

### Equipment

Seating Benches

### Special Considerations

No Natural Lighting. Intimate space.

### Systems

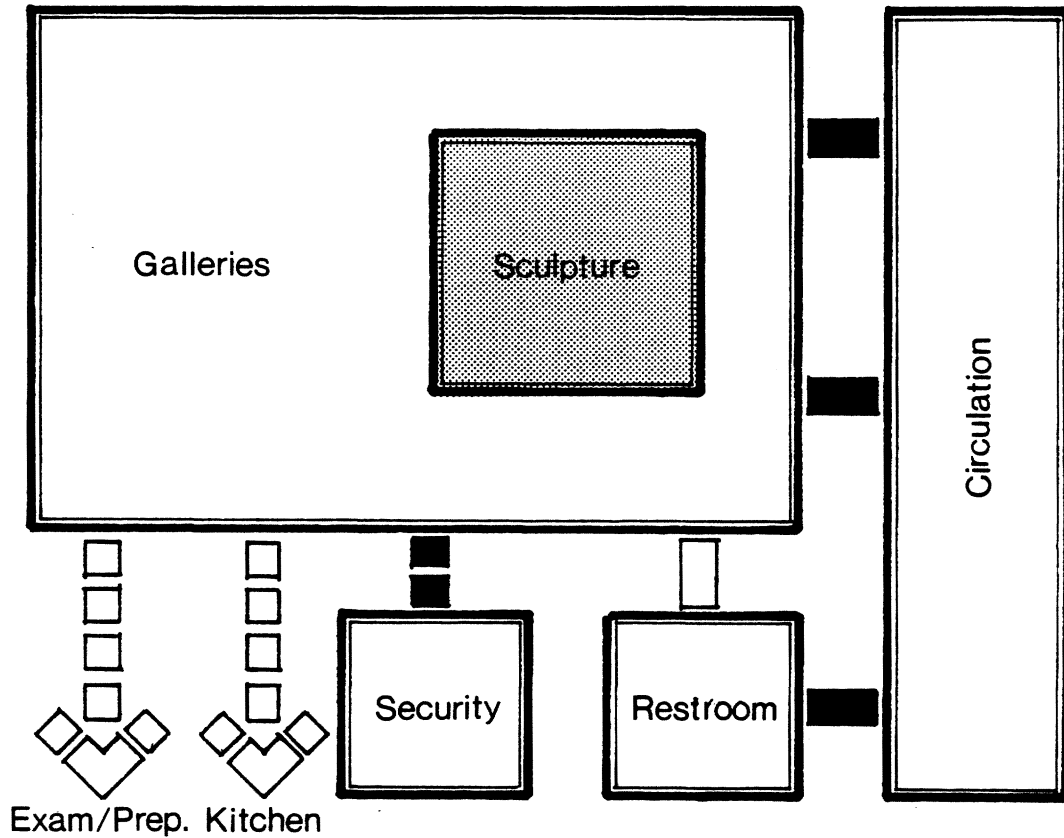
- Security Yes
- HVAC Yes (Humidity Control)
- Plumbing No
- Electrical Yes
- Lighting Yes (UV Filtered)

### Finishes

- Floor Soft (Carpet)
- Walls Displayable
- Ceiling Hard



# Sculpture Gallery



Sculpture ranges from life size figures to small carvings.

## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Visiting Public

Sq. Ft. 2000

### Function

Display Various Sculpture

### Equipment

Seating Benches

### Special Considerations

Space could be distributed throughout the gallery space. Sculpture should have plenty of room. Natural lighting would be best for shadows.

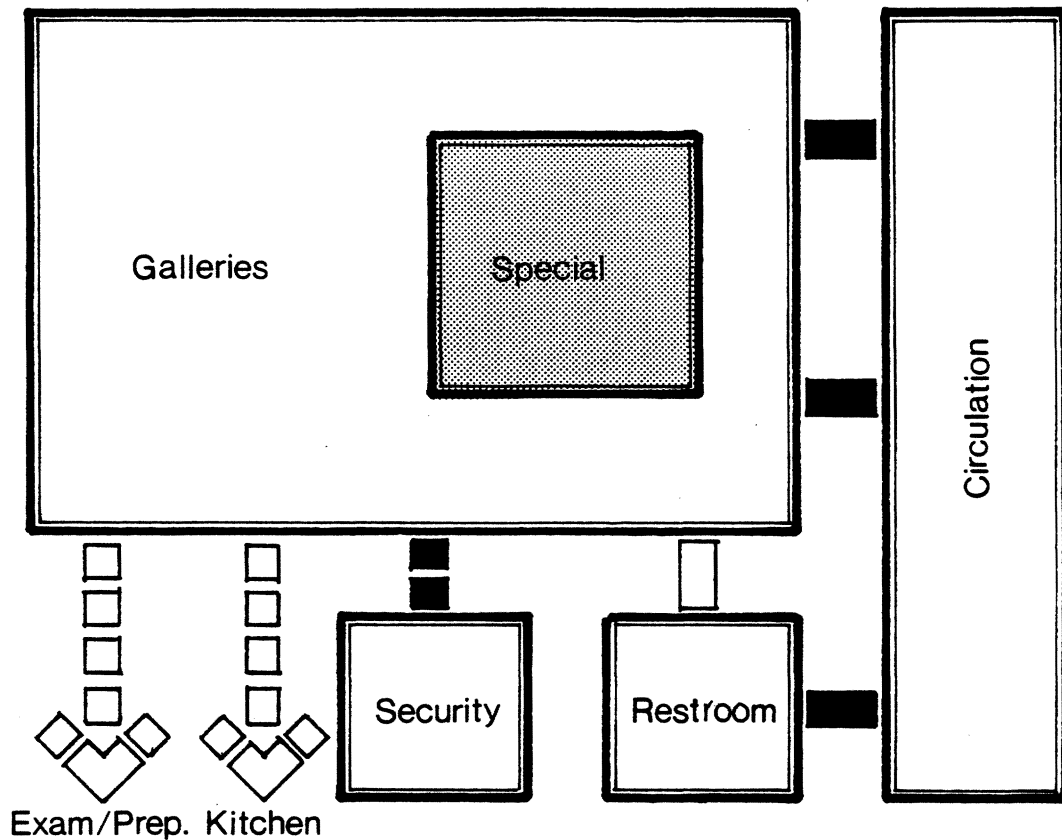
### Systems

- Security Yes
- HVAC Yes (Humidity Control)
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Hard
- Walls Variable
- Ceiling Hard

# Special Exhibition Gallery



Flexible to accept any kind of art.

## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Visiting Public

Sq. Ft. 2000

### Function

Display of traveling exhibits

### Equipment

Seating Benches

### Special Considerations

Possibly broken up into two high spaces to provide flexibility.

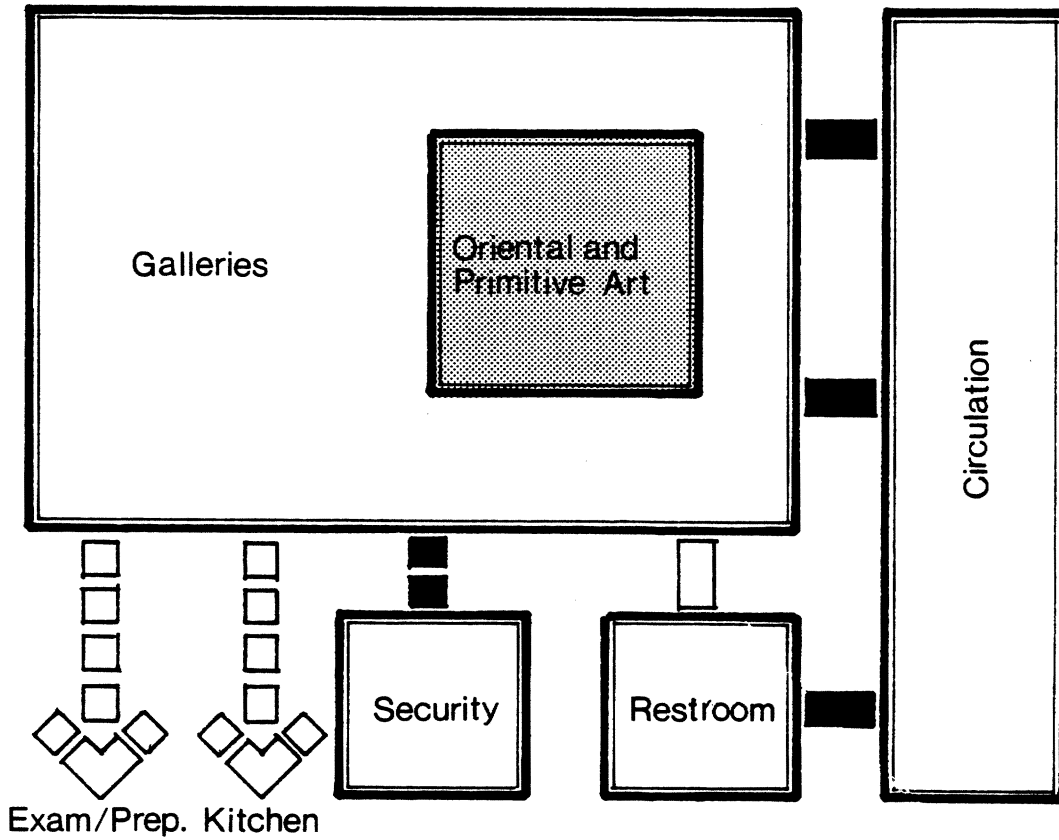
### Systems

- Security Yes
- HVAC Yes (Humidity Control)
- Plumbing No
- Electrical Yes
- Lighting Yes (UV Filtered)

### Finishes

- Floor Hard
- Walls Displayable
- Ceiling Hard

# Oriental and Primitive Gallery



Flexible. Small to medium size works.

## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Visiting Public

Sq. Ft. 500

### Function

Display of Oriental and Primitive Art

### Equipment

Built in Cases, Seating Benches

### Special Considerations

A developing part of the collection.  
Should allow for flexibility.

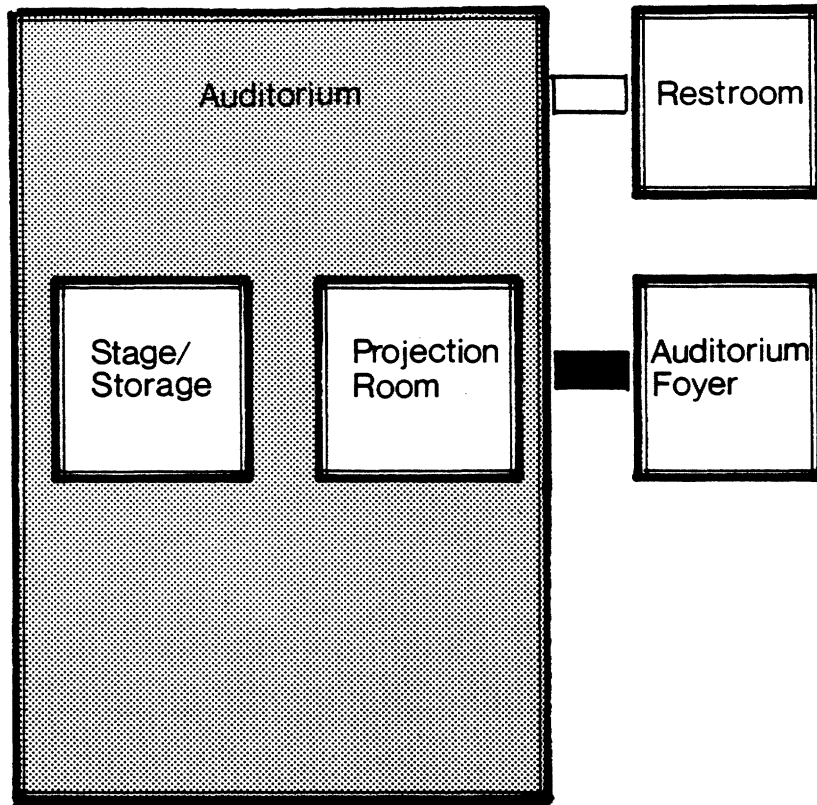
### Systems

- Security Yes
- HVAC Yes (Humidity Control)
- Plumbing No
- Electrical Yes
- Lighting Yes (UV Filtered)

### Finishes

- Floor Hard
- Walls Displayable
- Ceiling Hard

# Auditorium



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Museum Members, General Public, and Museum Staff

Sq. Ft. 1300

### Function

Movies, Lectures, Music, Recitals, Etc.

### Equipment

Seating for 200-300 (can be fixed or movable) Finishes

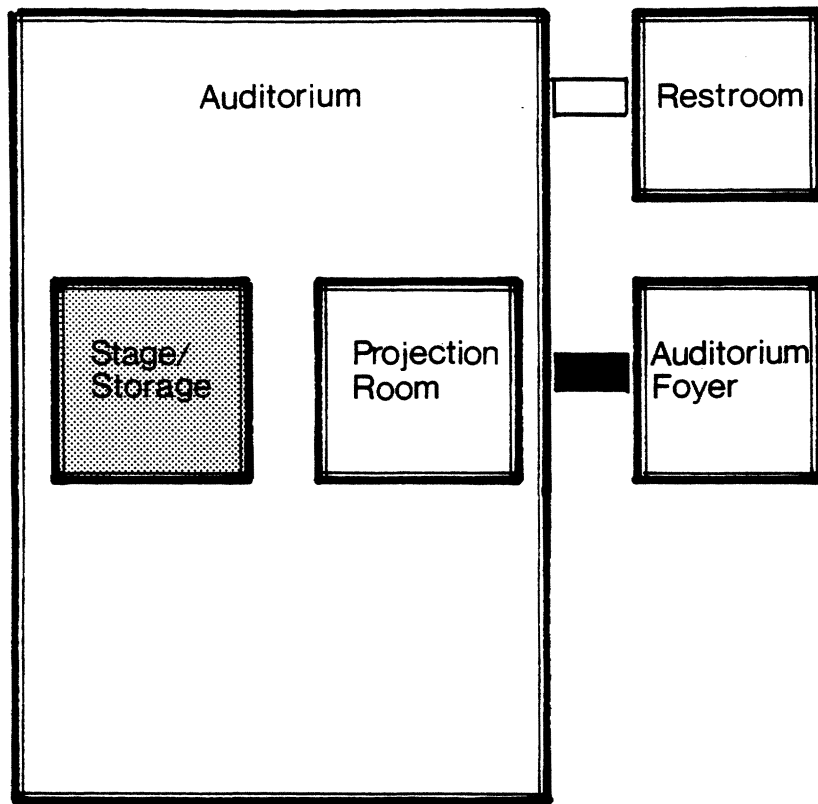
### Special Considerations

Narrow for good visual angle. Sloping floor. Separate outside entry (Security?)

### Systems

- Security No
- HVAC Yes (Humidity Control)
- Plumbing No
- Electrical Yes
- Lighting Yes (Controlled:Spot/House)
- Floor Soft (Carpet)
- Walls Hard/Soft (Variable)
- Ceiling Hard (Consider Acoustic)

# Stage/Storage



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Museum Staff

Sq. Ft. 600 (300 Stage/300 Storage)

### Function

Stage Platform and Storage for Platform Material

### Equipment

Movable Lectern, Screen, and Sound Equipment

### Special Considerations

Concealed screen sound control. Remote audio visual control.

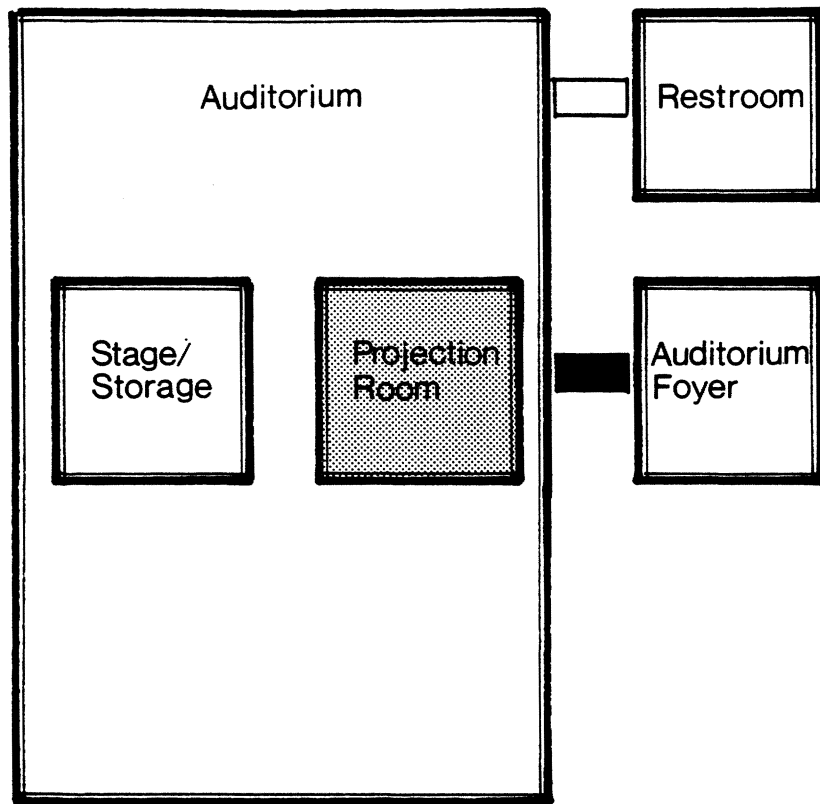
### Systems

- Security No
- HVAC Yes (No-Storage)
- Plumbing No
- Electrical Yes
- Lighting Yes (Remote for House)

### Finishes

- Floor Soft (Carpet)
- Walls Soft/Hard (Hard in Storage)
- Ceiling Optional in Storage

# Projection Room



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Museum Staff

Sq. Ft. 100

### Function

Projection, sound control, and other necessary audio visual control

### Equipment

Projector, Sound Board

### Special Considerations

Storage for audio visual equipment.  
Ventilation. Allow double projection

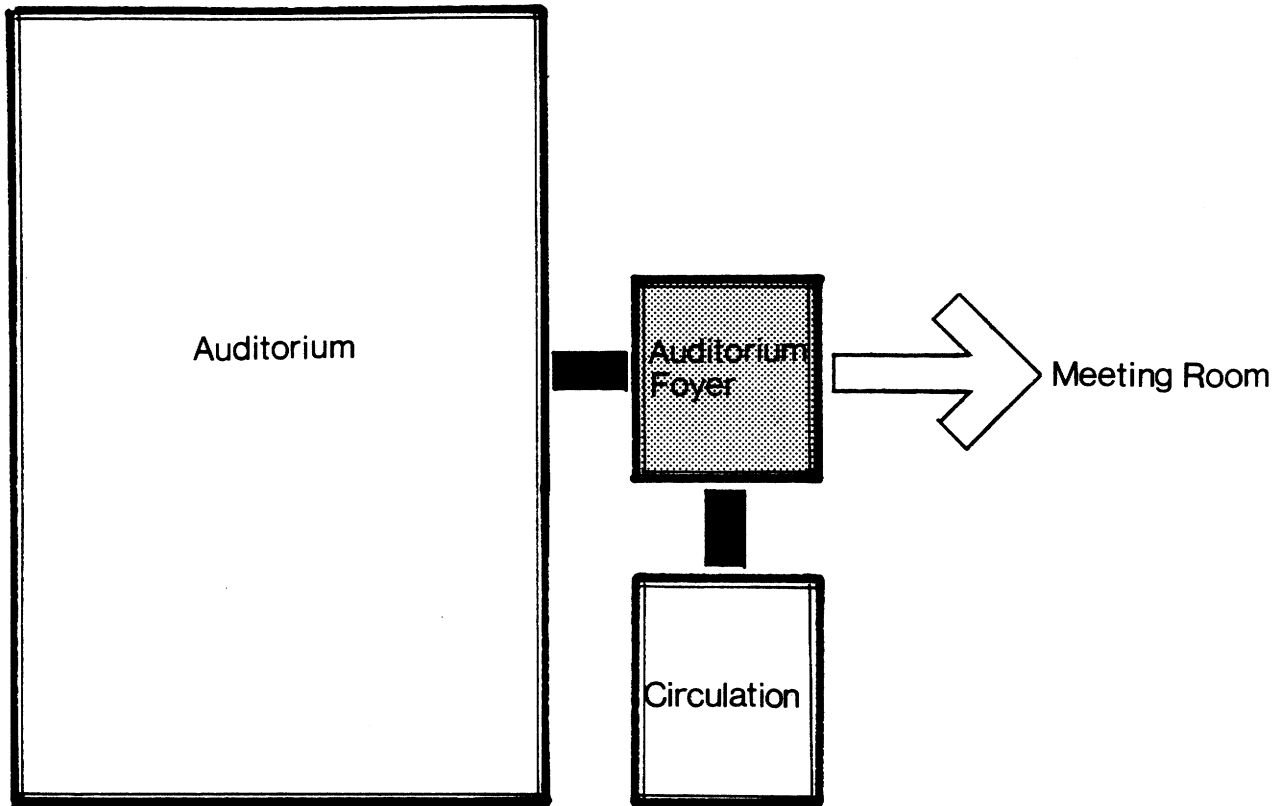
### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes (Separate Control)

### Finishes

- Floor Soft (Carpet)
- Walls Soft (Sound Absorbing)
- Ceiling Hard (Acoustical Tile)

# Auditorium Foyer



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Visitors to the Auditorium  
for Movies, Lectures, Etc.

Sq. Ft. 500

### Function

Waiting Area for Movies, Receptions for  
Lecturers, and Display of Art

### Equipment

### Special Considerations

Sound control should be taken into account  
so that the rest of the museum is not  
disturbed. Should allow for display of  
art work.

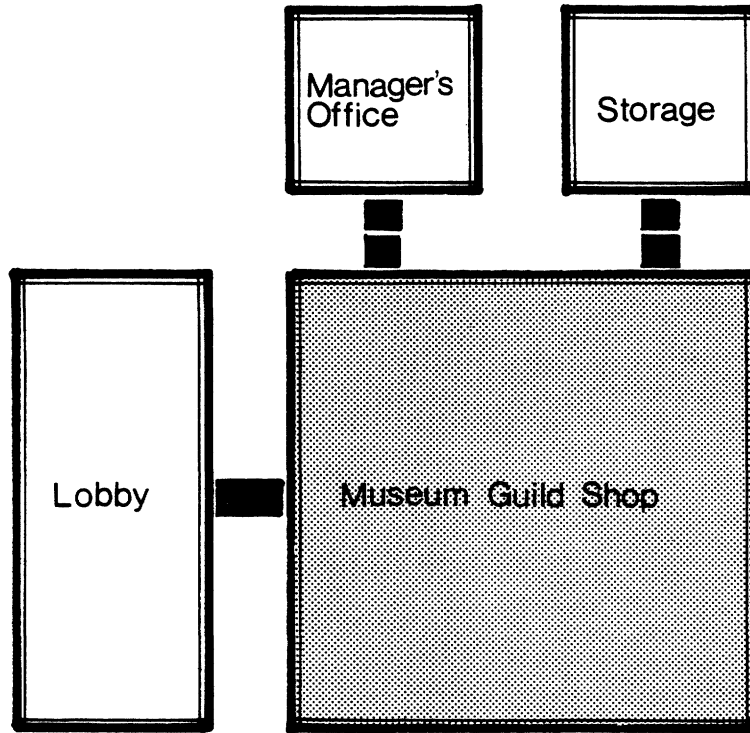
### Systems

- Security Yes
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes (UV Filtered)

### Finishes

- Floor Hard (Durable)
- Walls Hard/Soft (Displayable)
- Ceiling Hard

# Museum Guild Shop



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Visiting Public and Volunteers

Sq. Ft. 1200

### Function

To provide a sales area for museum publications and allow visitors to purchase art.

### Equipment

Display Shelves, Counter Space

### Special Considerations

Natural Light if Possible

### Systems

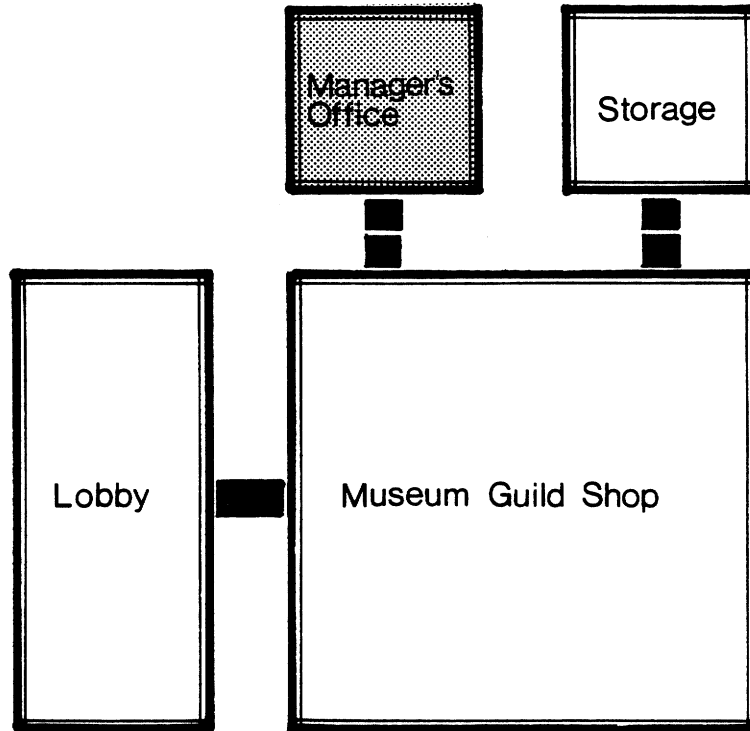
- Security Yes
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes (UV Filtered)

### Finishes

- Floor Hard/Soft (Tile/Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard



# Manager's Office



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Guild Shop Manager

Sq. Ft. 50

### Function

Office space for shop manager

### Equipment

Desk, File, Shelves

### Special Considerations

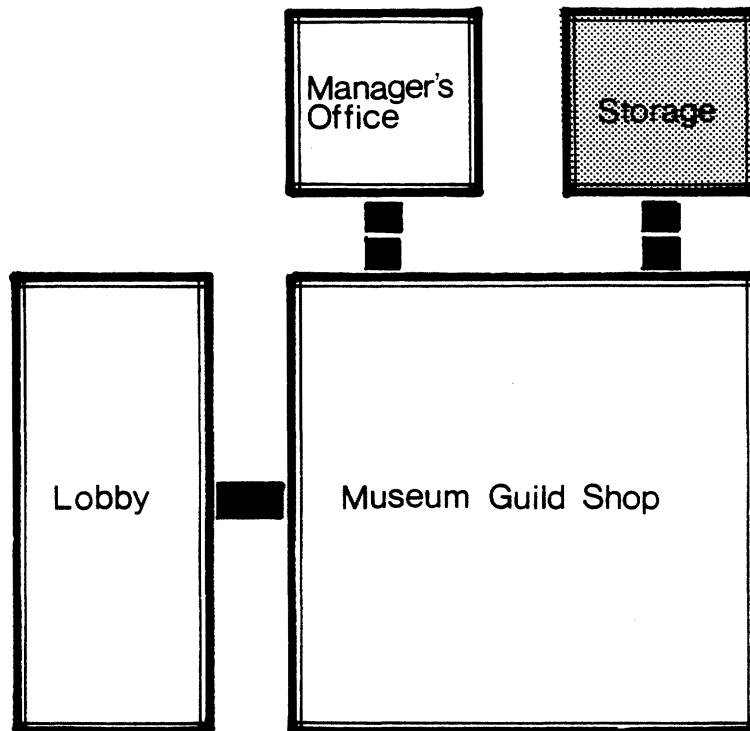
### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)

# Storage



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Shop Manager

Sq. Ft. 250

### Function

Storage of Guild Shop Merchandise

### Equipment

Storage Shelves, Work Table

Special Considerations

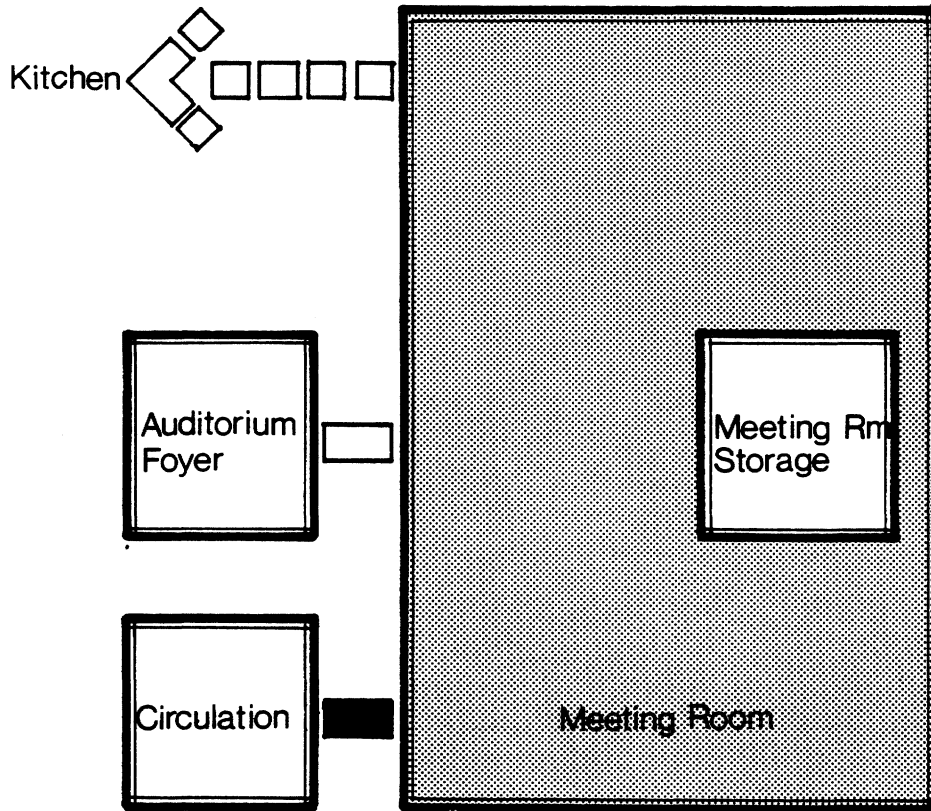
### Systems

- Security No
- HVAC No
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Hard
- Walls Hard (Painted BWB)
- Ceiling Optional

# Meeting Room



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Members, Staff, Volunteers

Sq. Ft. 750

### Function

Provide meeting space for museum members.  
Provide for educational events.

### Equipment

Chairs, Tables, Lecturn, Audio System and  
Projection Screen

### Special Considerations

Possible Kitchenette. All purpose room.

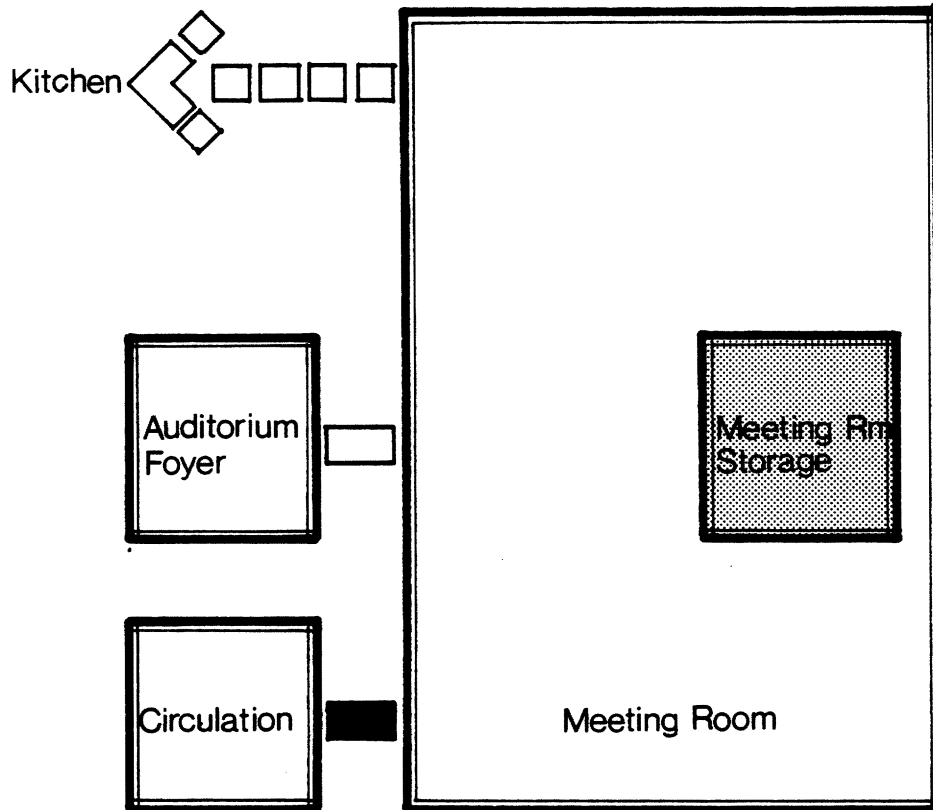
### Systems

- Security No
- HVAC Yes
- Plumbing Optional
- Electrical Yes
- Lighting Yes (UV Filtered/  
Museum Type)

### Finishes

- Floor Soft (Carpet)
- Walls Hard
- Ceiling Hard (Acoustical Tile)

# Meeting Room Storage



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Staff

Sq. Ft. 250

### Function

To provide temp. and permanent storage

### Equipment

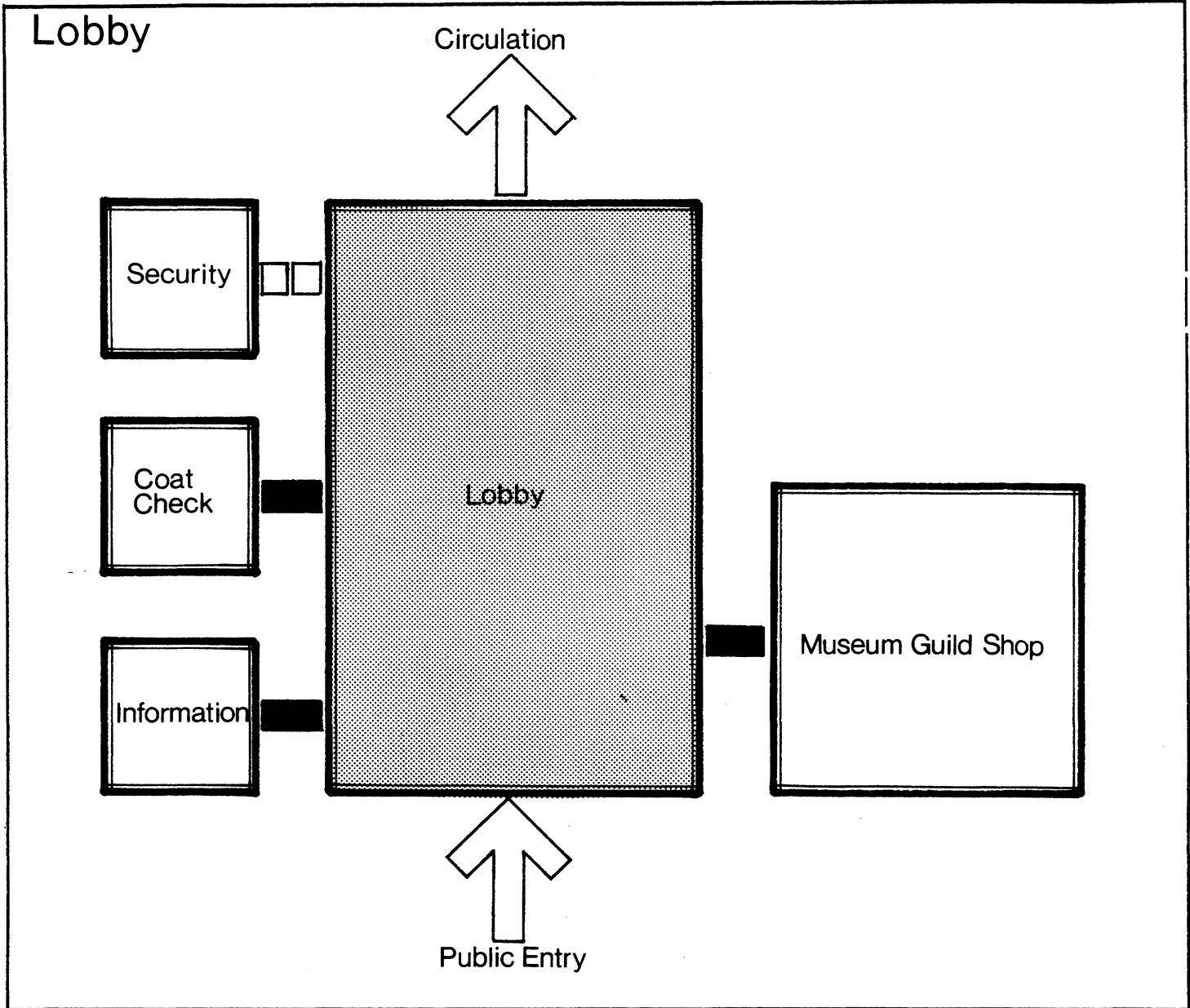
### Special Considerations

### Systems

- Security No
- HVAC No
- Plumbing No
- Electrical No
- Lighting Yes

### Finishes

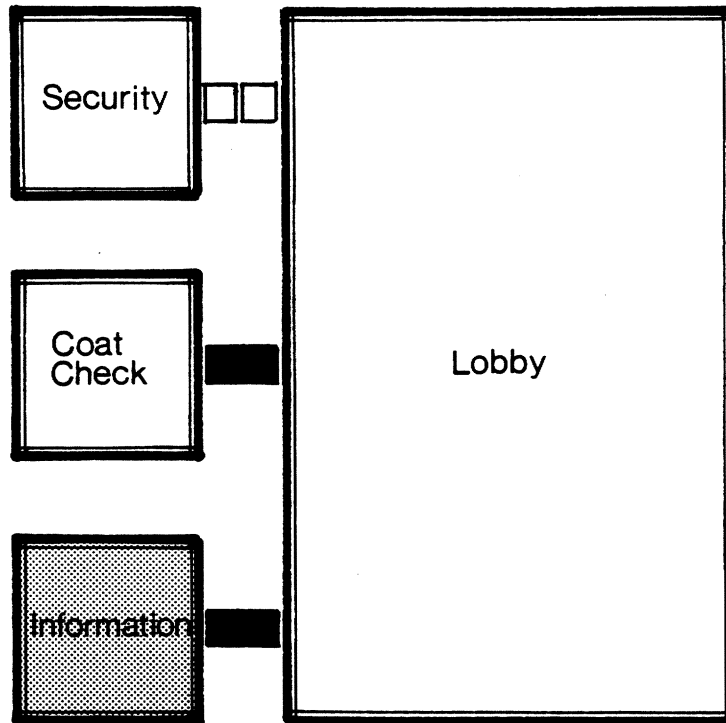
- Floor Hard
- Walls Hard
- Ceiling Hard



• T H E • P O R T L A N D • M U S E U M • O F • A R T •

<b>Users</b> Museum Visitors, Museum Staff	<b>Systems</b>
<b>Sq. Ft.</b> 1000	◦ Security Yes
<b>Function</b> A waiting area for visitors off which all pre-admission functions work.	◦ HVAC Yes
<b>Equipment</b> Bench Seating	◦ Plumbing No
<b>Special Considerations</b> A comfortable space for waiting and large group gathering.	◦ Electrical Yes
	◦ Lighting Yes
	<b>Finishes</b>
	◦ Floor Hard
	◦ Walls Hard
	◦ Ceiling Hard

# Information Desk



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Museum Volunteers, Visiting Public

Sq. Ft. 100

### Function

Information, Admission Charge,  
General Security Check

### Equipment

Desk, Storage Space

Special Considerations

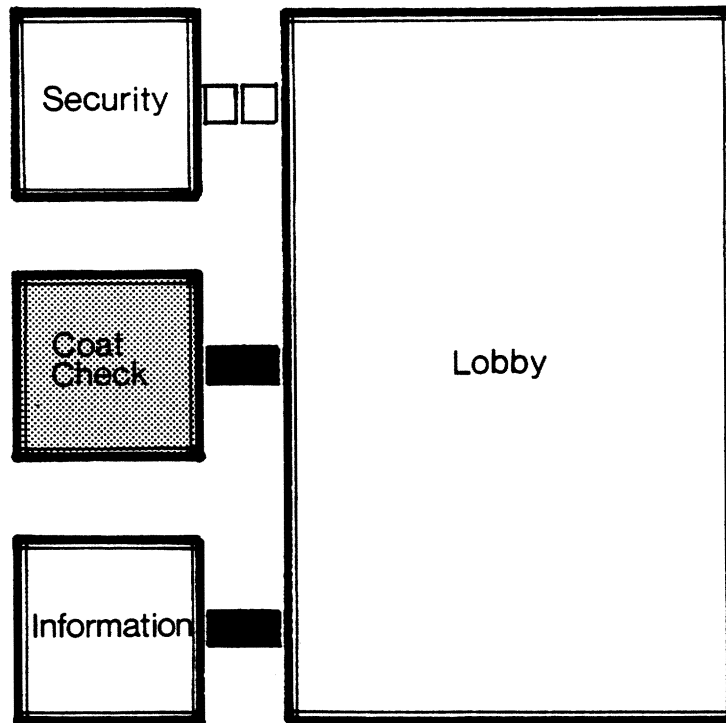
### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted BWB)
- Ceiling Lobby

# Coat/Package Check



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Museum Staff

Sq. Ft. 250

### Function

Storage of Checked Coats and Packages

### Equipment

Coat Racks and Package Shelves

Special Considerations

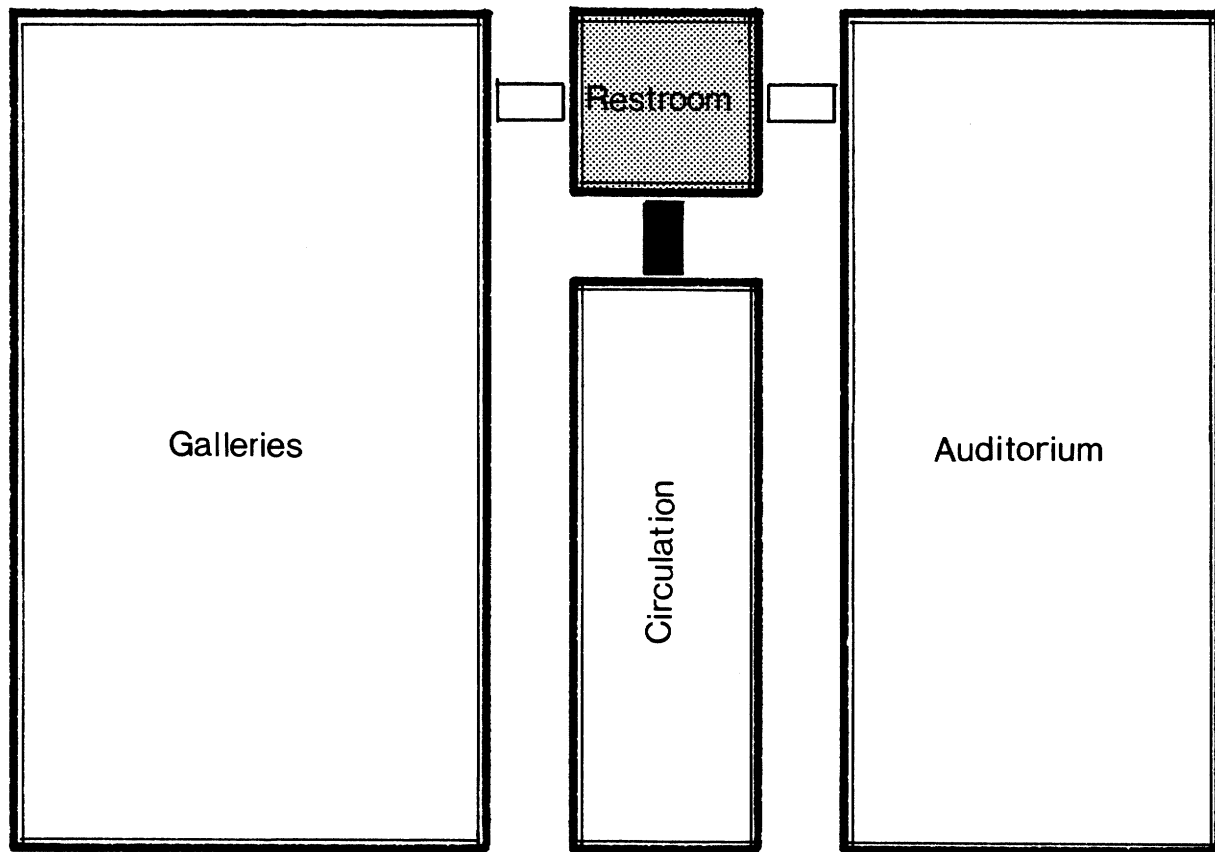
### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Hard
- Walls Hard (Painted GWB)
- Ceiling Hard

# Restrooms



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Visiting Public

Sq. Ft. 300 (2 @ 150 s.f. Each)

### Function

### Equipment Typical

### Special Considerations

### Systems

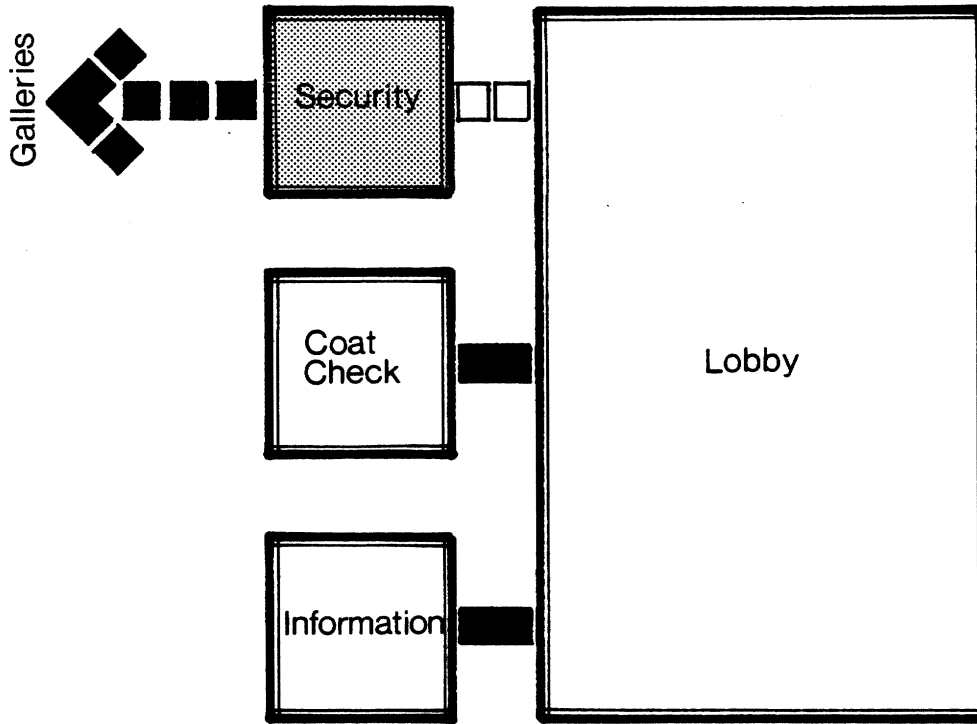
- Security No
- HVAC Yes
- Plumbing Yes
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Hard (Tile)
- Walls Hard (Tile/Painted GWB)
- Ceiling Hard (Painted GWB)



# Security Office



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Security Personnel

Sq. Ft. 100

### Function

Office for Gallery Security Personnel

### Equipment

Desk, Chairs, Shelves

Special Considerations

### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

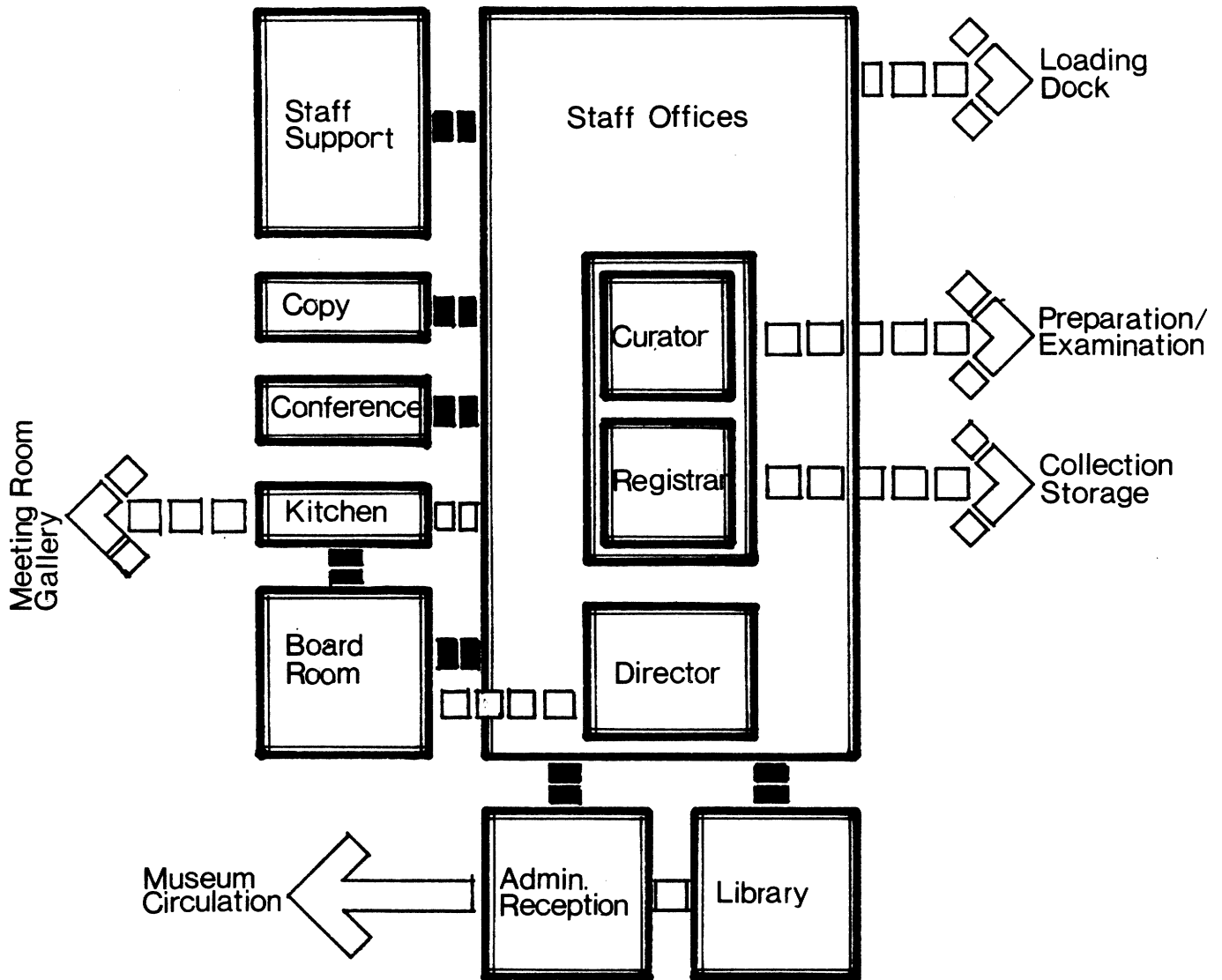
- Floor Soft (Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)

# Private Area Summary

## Private

<u>Administrative Offices</u>	<u>1675 s.f.</u>
Office of Director	250
Secretary/Receptionist	200
Office of Assistant Director	150
Museum Educator	200
Secretary	75
Curator	120
Registrar	120
Administrator	200
Business Manager	120
Public Relations (Publications)	120
Development Office	120
<u>Support</u>	<u>3300 s.f.</u>
General (Secretaries/Files)	400
Administrative Receptionist	300
Conference Room	500
Board Room	1000
Library	500
Kitchen	300
Work/Storage/Copy Area	150
Administrative Toilets	150
<u>Total Private</u>	<u>4975 s.f.</u>

# Private Area Diagram



## RELATIONSHIPS

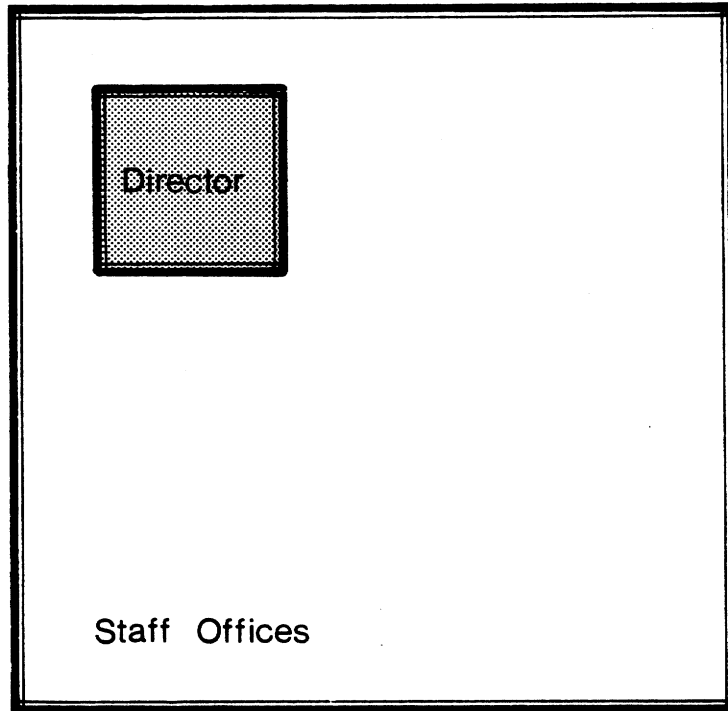
Public



Staff



# Director's Office



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Director, Staff

Sq. Ft. 250

### Function

Office of Director and small meetings with staff.

### Equipment

Desk, Chairs, Shelves, Couch, Side Chairs

### Special Considerations

Natural Light

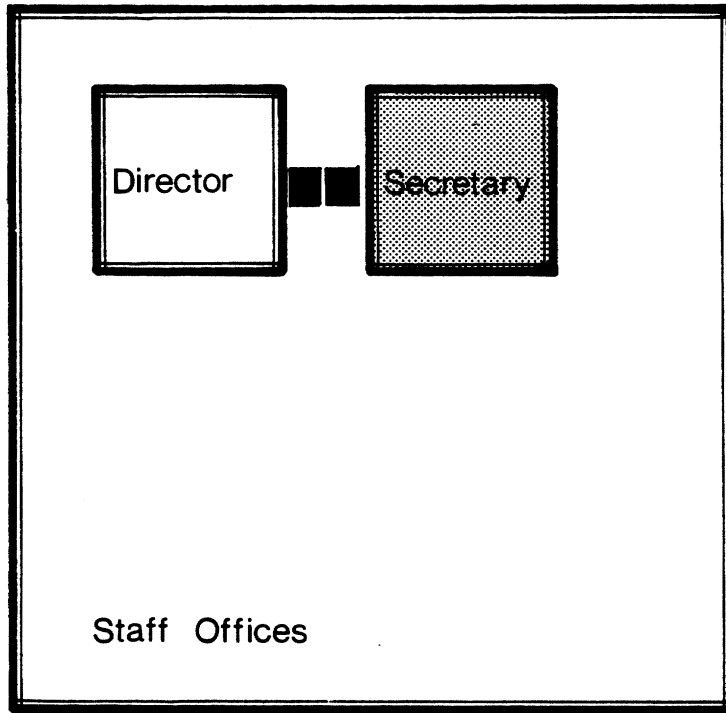
### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)

# Secretary of the Director



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Secretary of the Director, Visitors

Sq. Ft. 200

### Function

Secretarial area, waiting area for visitors to the Director

### Equipment

Desk, Chairs, Visitor Seating

### Special Considerations

### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)

# Assistant Director's Office



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Assistant Director

Sq. Ft. 150

### Function

Office of Assistant Director and small meeting space

### Equipment

Desk, Chairs, Shelves

### Special Considerations

Natural Light

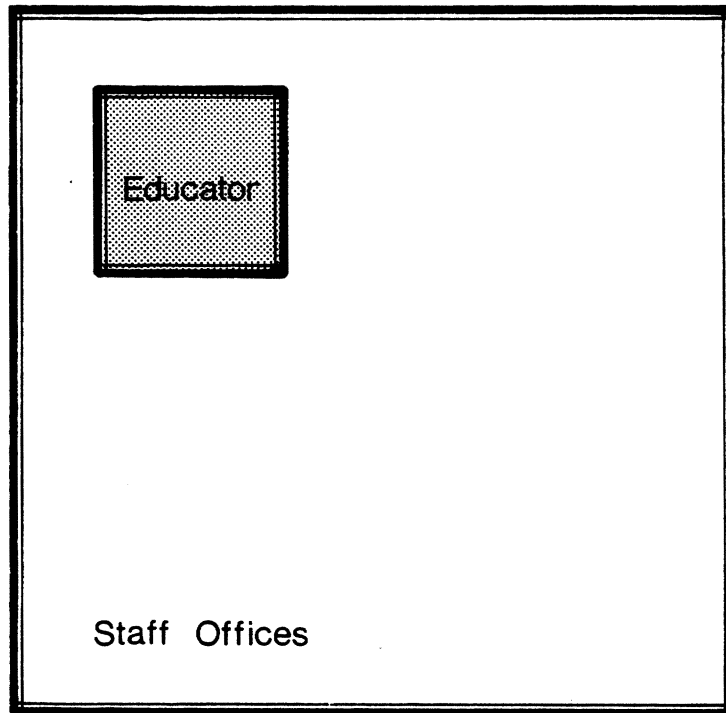
### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)

# Educator's Office



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Educator

Sq. Ft. 200

### Function

Office of Educator and Office Meeting  
Occupancy

### Equipment

Desk, File, Chairs, Shelves

### Special Considerations

Natural Light

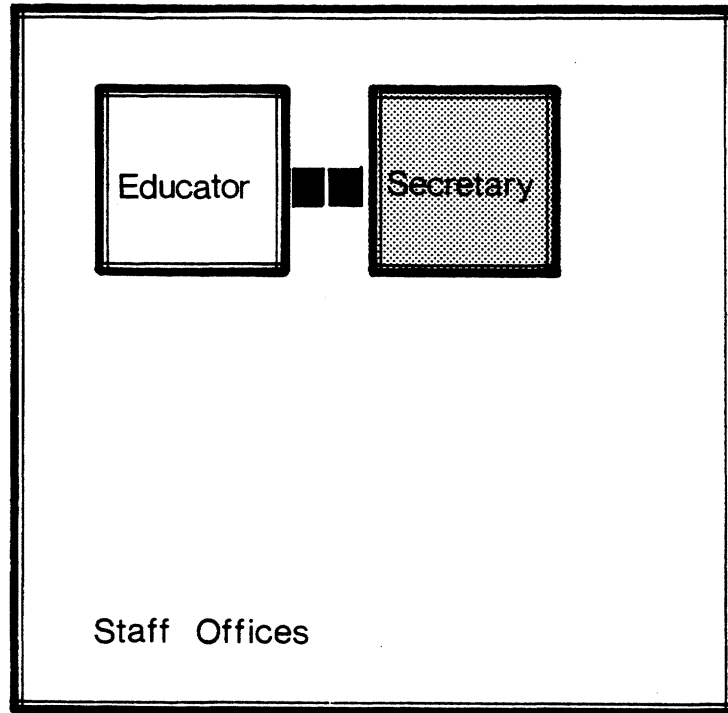
### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)

# Secretary of the Educator



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Educator's Secretary

Sq. Ft. 75

### Function

To provide clerical support for the museum educator

### Equipment

Desk, Chair, File

### Special Considerations

Secretary should be located in such a way as to receive volunteers.

### Systems

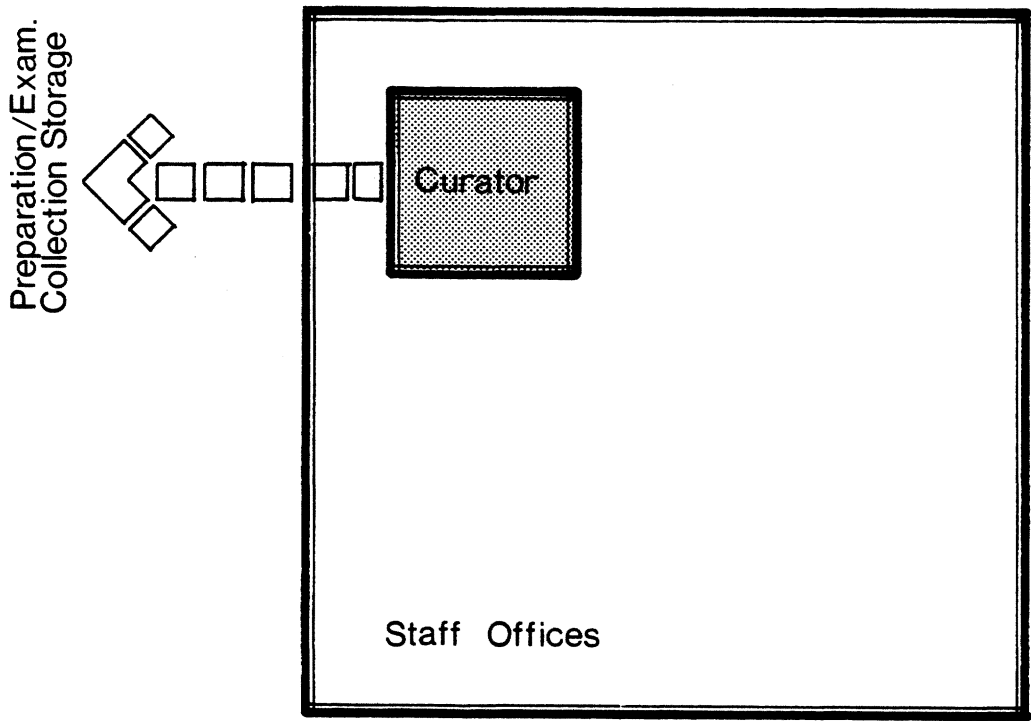
- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)



# Curator's Office



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Curator of the Collections

Sq. Ft. 120

### Function

Office Space for Curator

### Equipment

Desk, Chairs, Shelves

### Special Considerations

Natural Light

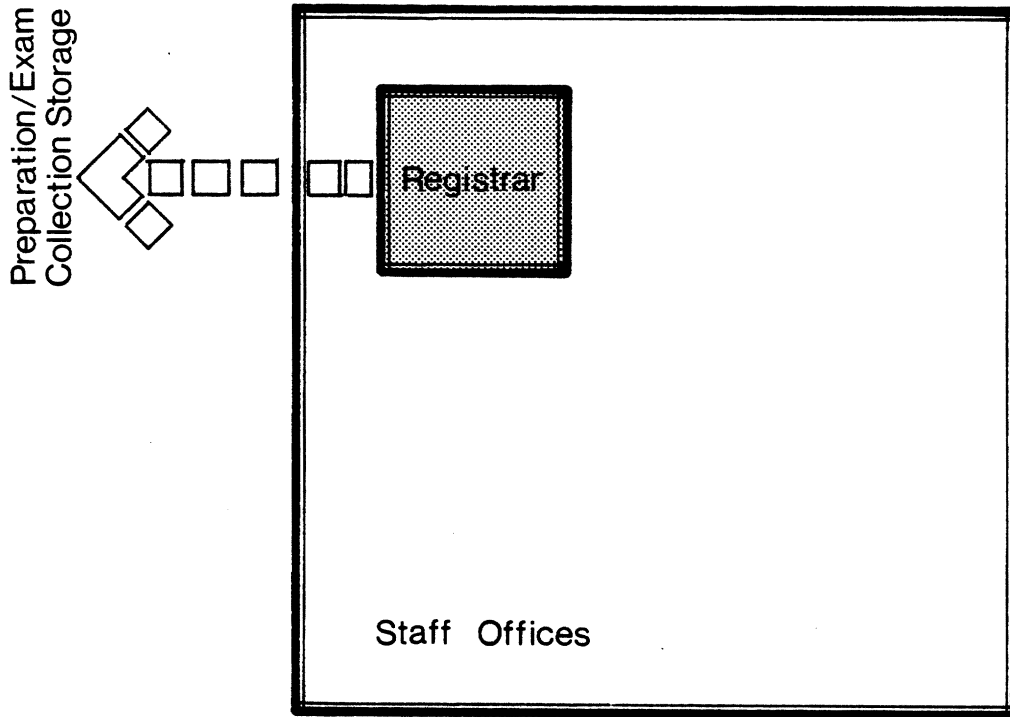
### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)

# Registrar's Office



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Registrar

Sq. Ft. 120

### Function

Office Space for the Registrar

### Equipment

Desk, Chairs, Shelves

### Special Considerations

Natural Light

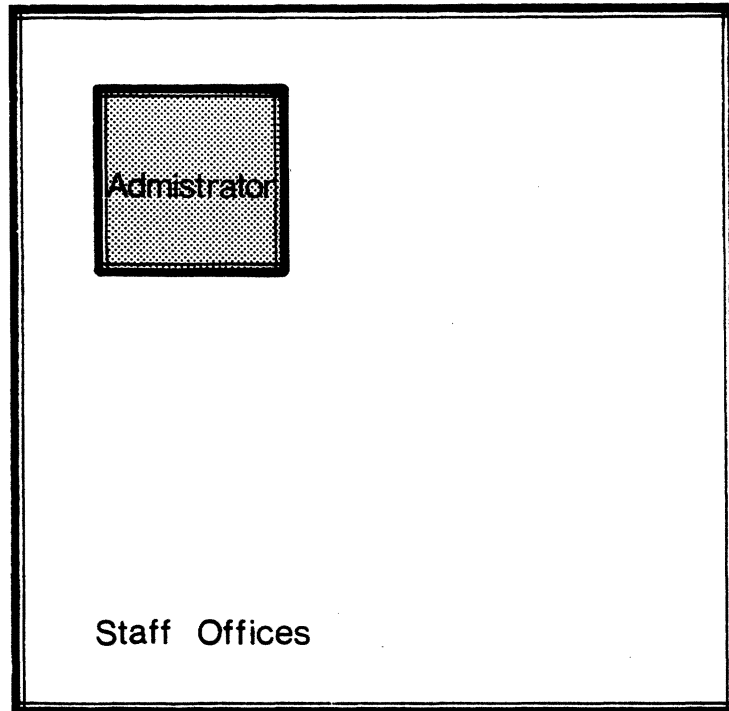
### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)

# Administrator's Office



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Administrator

Sq. Ft. 200

### Function

Office space for Administrator and small meeting space

### Equipment

Desk, Chairs, Shelves

### Special Considerations

Natural Light

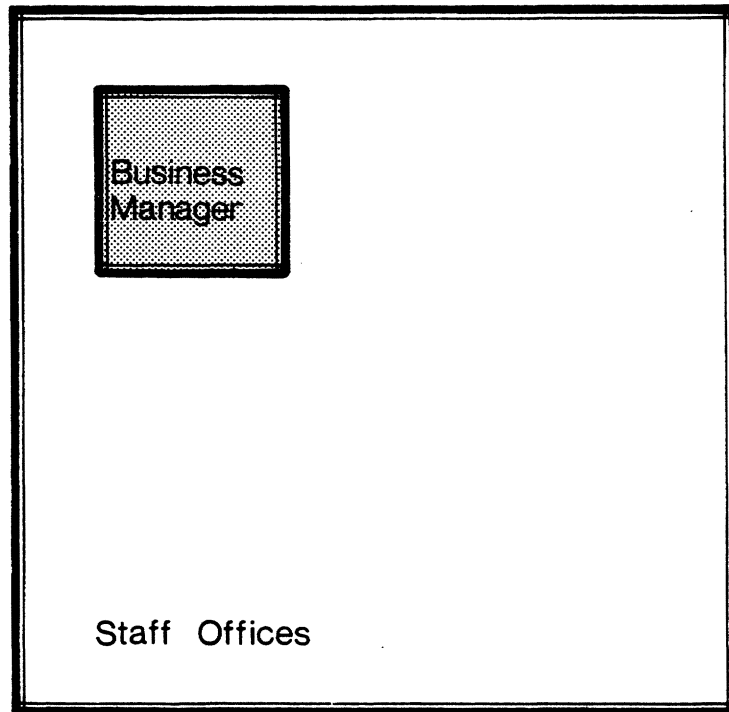
### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)

# Business Manager's Office



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Business Manager

Sq. Ft. 120

### Function

Office of Business Manager and brief meeting occupancy

### Equipment

Desk, Chairs, File, Shelves

### Special Considerations

Natural Light

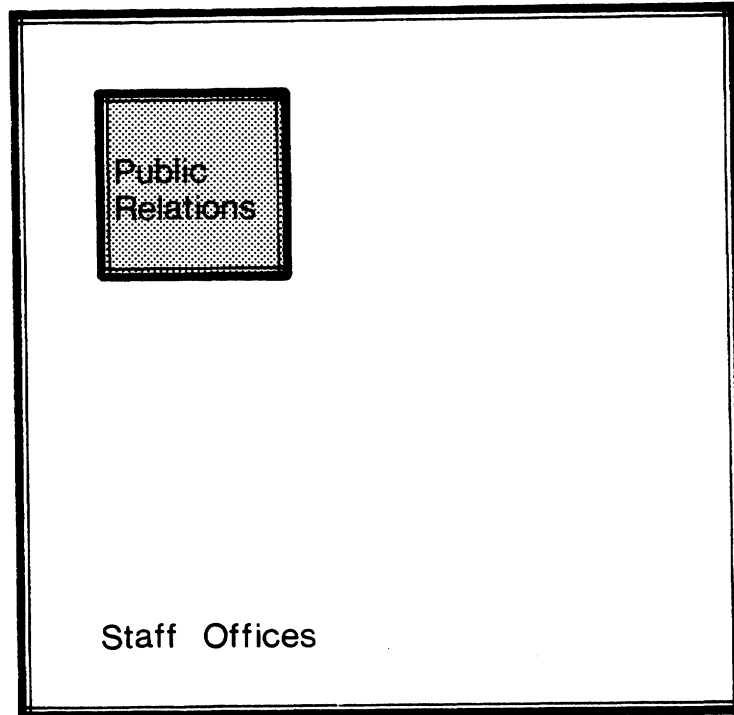
### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)

# Public Relation's Office



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Public Relations Staff

Sq. Ft. 120

### Function

Office of Public Relations and brief meeting occupancy

### Equipment

Desk, Files, Chairs, Shelves

### Special Considerations

Flat surfaces for layout of information, Natural Light

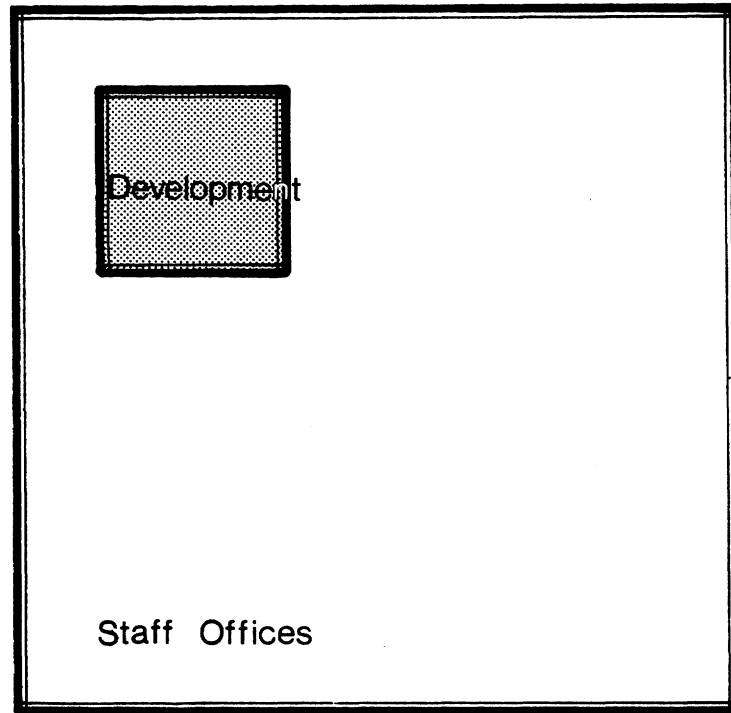
### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)

# Development Office



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Development Personnel

Sq. Ft. 120

### Function

Office Space for Development Personnel

### Equipment

Desk, Chairs, Shelves

### Special Considerations

Natural Light

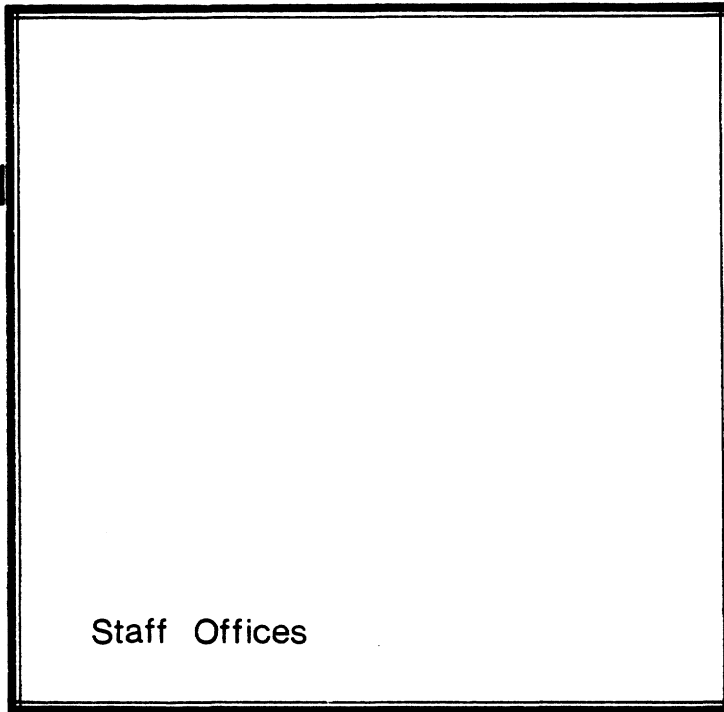
### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)

# General Support



Staff Offices

## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Staff

Sq. Ft. 400

### Function

Provide open office work space as well as file and storage area.

### Equipment

Desks, Files

### Special Considerations

Provide a sense of privacy within an open office area.

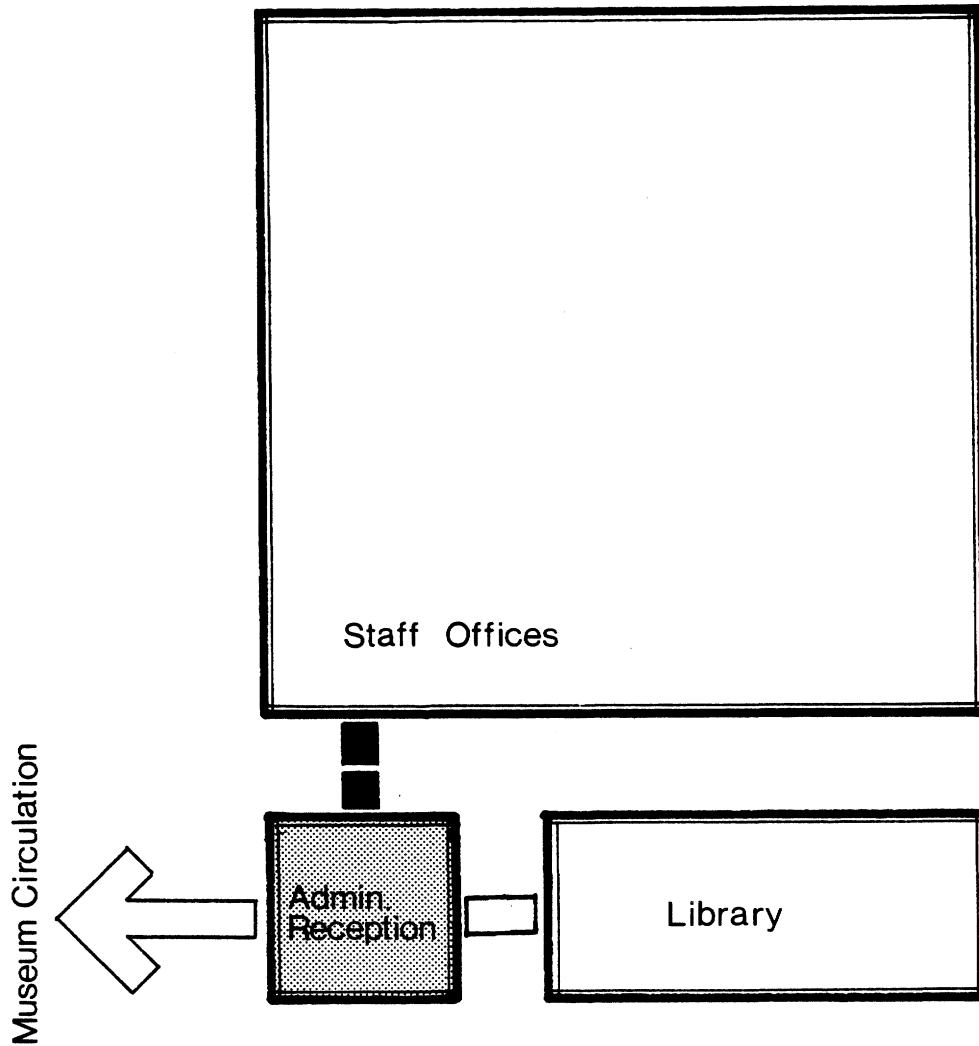
### Systems

- Security Yes
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes (Task/General)

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)

# Administrative Receptionist



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Public Visitors and Museum Staff

Sq. Ft. 300

### Function

Waiting Area and Receptionist Desk

### Equipment

Desk, Chairs

### Special Considerations

Possibly some exhibit to keep interest of visitors.

### Systems

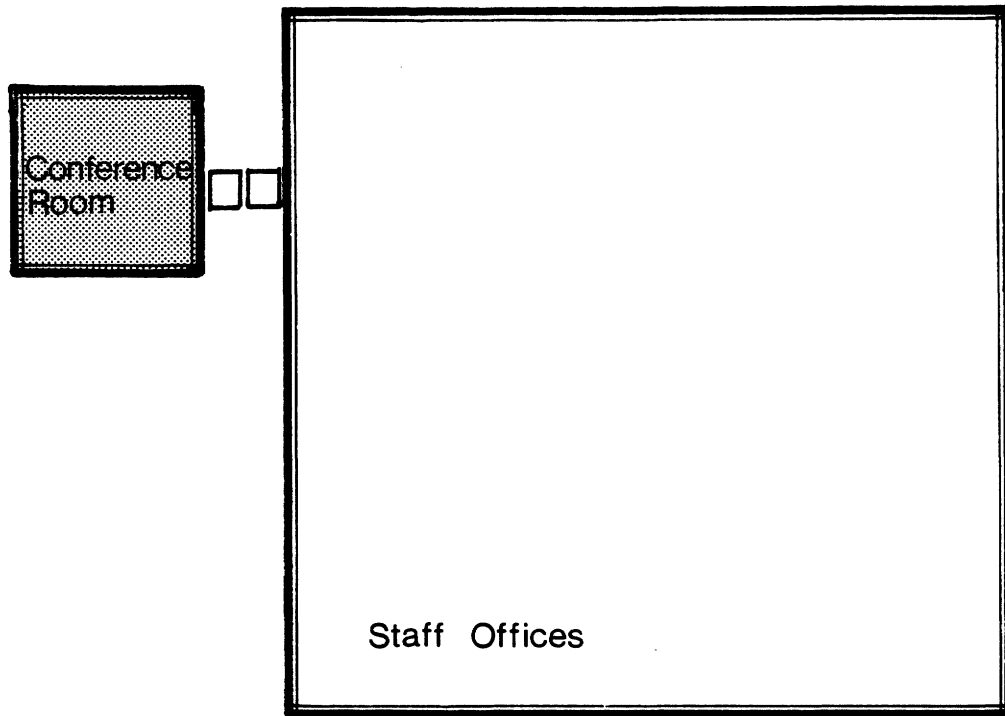
- Security Yes
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)



# Conference Room



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Museum Staff and Volunteers

Sq. Ft. 500

### Function

To provide meeting space for staff and volunteers.

### Equipment

Table, Chairs, Tackable Wall

### Special Considerations

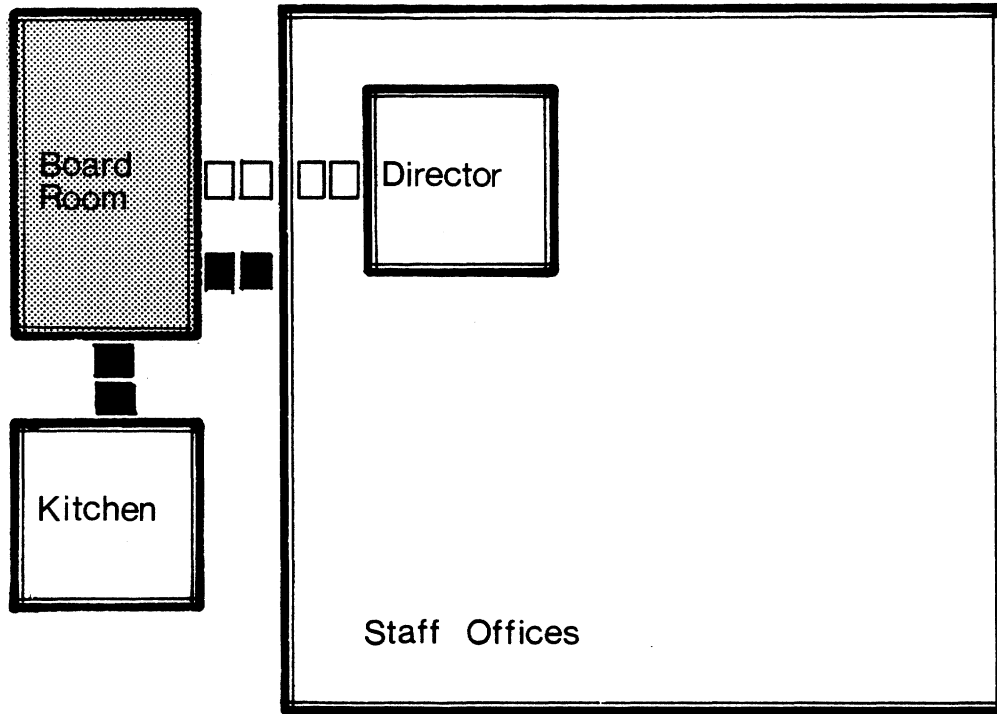
### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Hard/Soft (one Tackable)
- Ceiling Hard (Acoustical Tile)

# Board Room



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Museum Staff, Museum Board

Sq. Ft. 1000

### Function

Meetings for up to 40 people. Some use by Director. Small gallery space.

### Equipment

Conference Table, Chairs, Small Exhibit

### Special Considerations

Natural light. Should be able to be shut off from other offices.

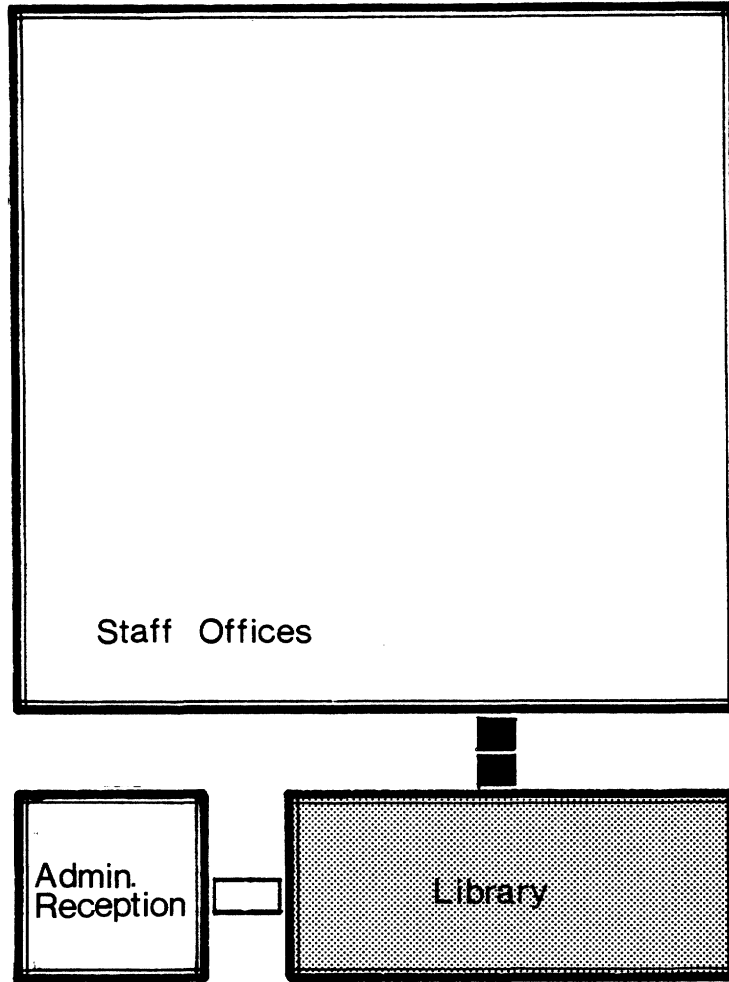
### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Soft/Hard
- Ceiling Hard (Acoustical Tile)

# Library



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Staff Volunteers, Public (by Appointment)

Sq. Ft. 500

### Function

To provide storage/reference for books, periodicals, and reports. Also slide viewing and storage.

### Equipment

Book shelves, tables, chairs, light table, slide storage

### Special Considerations

Should be a quiet atmosphere, natural light.

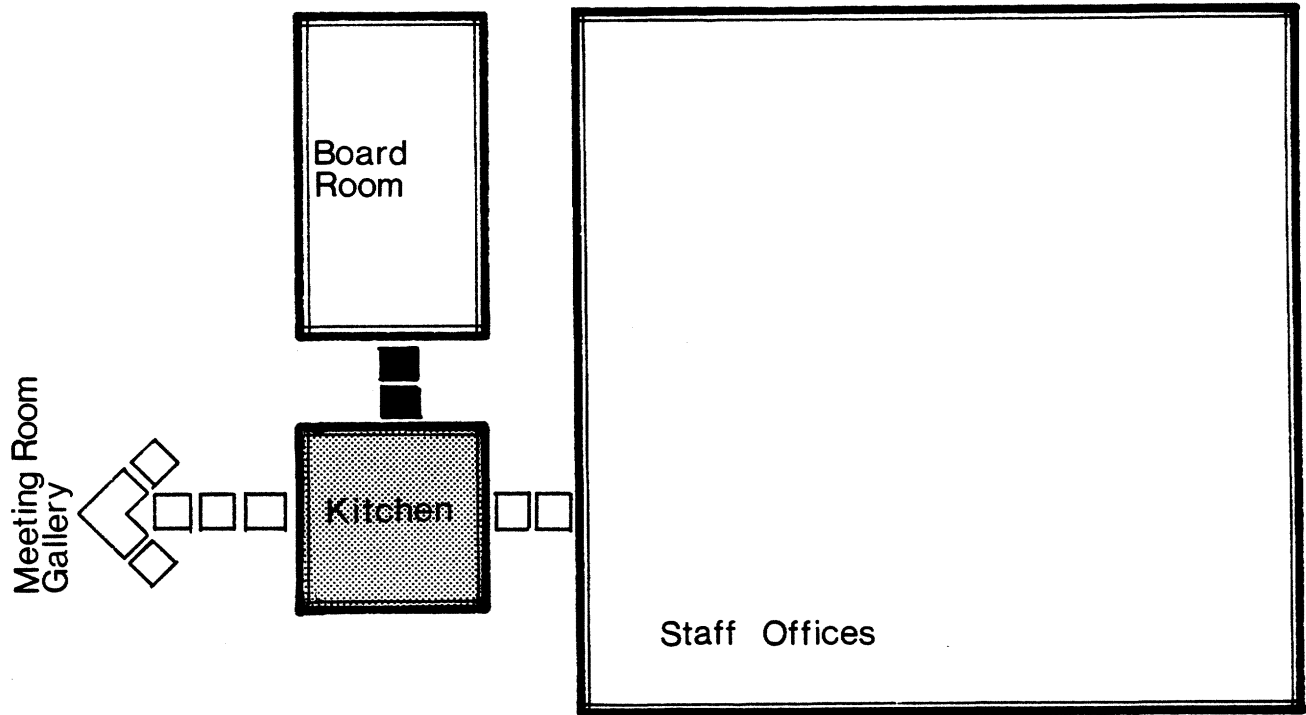
### Systems

- Security Yes
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes (UV Filtered)

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)

# Kitchen



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Museum Staff, Volunteers

Sq. Ft. 300

### Function

Food prep for exhibition openings, guild events, staff meetings, and some staff use.

### Equipment

Cabinet Space, counter space, refrigerator oven/range

### Special Considerations

Emphasize Quietness and cleanliness.

### Systems

- Security No
- HVAC Yes (Ventilation)
- Plumbing Yes
- Electrical Yes (Generous)
- Lighting Yes

### Finishes

- Floor Hard (Easy Cleaning)
- Walls Hard
- Ceiling Hard (Acoustical Tile)

# Storage/Copy



Staff Offices

## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Museum Staff

Sq. Ft. 150

### Function

Provide Supply Storage, Work Space, Coffee Area, Xerox

### Equipment

Cabinets, Counter Space, Table, Chairs

### Special Considerations

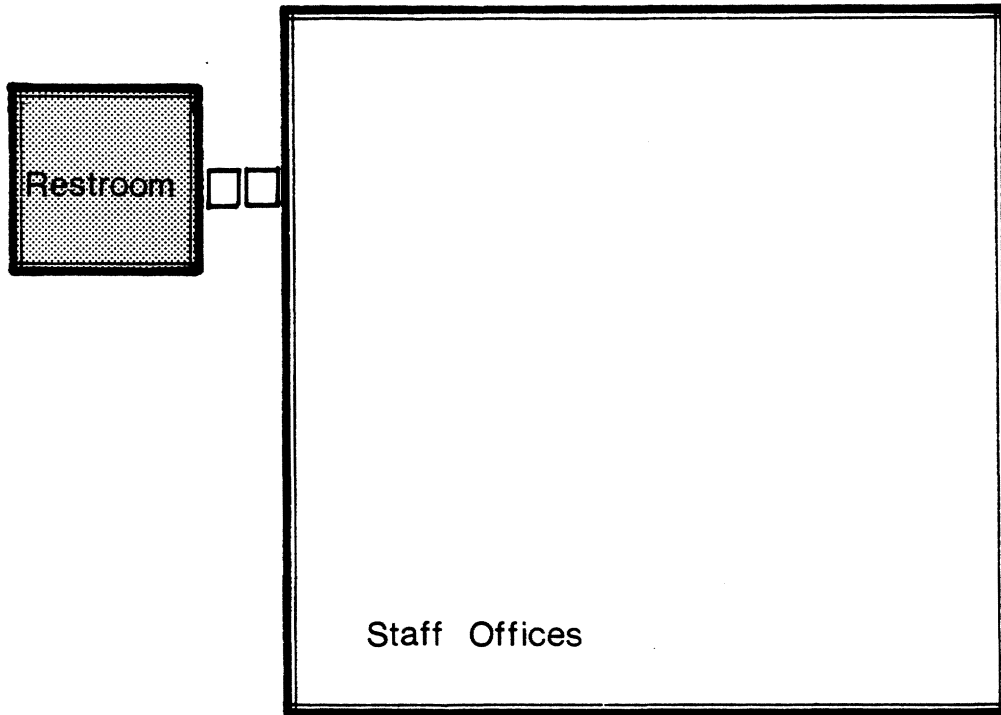
### Systems

- Security No
- HVAC Yes
- Plumbing Yes
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Hard/Soft (Tile & Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)

# Administrative Restrooms



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Administrative Staff

Sq. Ft. 150 (2 @ 75 s.f. Each)

### Function

Equipment  
Typical

Special Considerations

### Systems

- Security No
- HVAC Yes
- Plumbing Yes
- Electrical Yes
- Lighting Yes

### Finishes

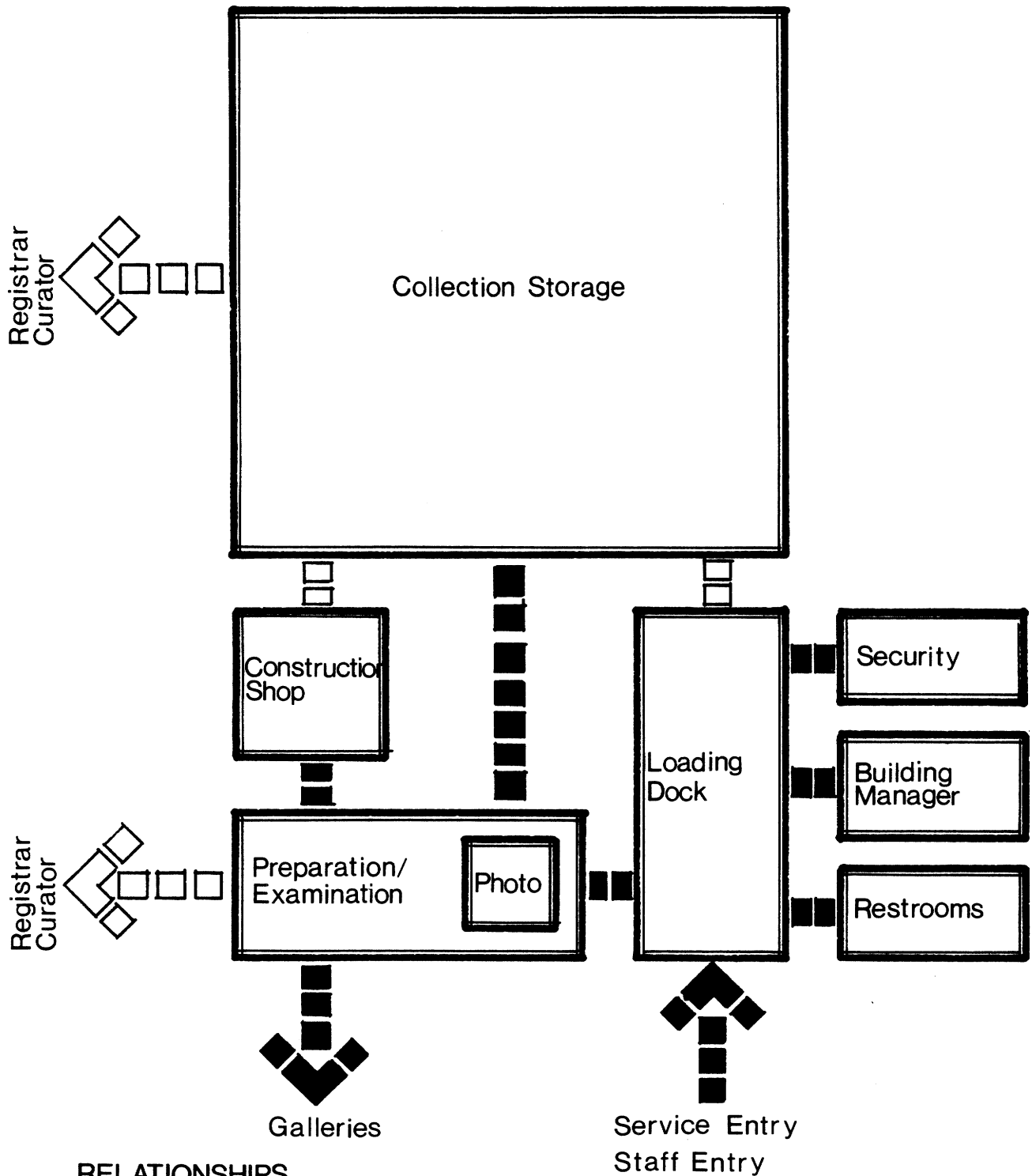
- Floor Hard (Tile)
- Walls Hard (Tile/Painted BWB)
- Ceiling Hard (Acoustical Tile)

# Collection/Service Summary

## Collection/Service

Collection Storage	10000 s.f.
Sculpture	
Painting	
Small Artifact	
Large Artifact	
Shipping/Receiving	2700 s.f.
Loading Dock	1500
Preparation/Examination	1000
Photography	200
Support	950 s.f.
Construction Shop	500
Building Manager	100
Security Office	100
Janitorial	150
Staff Toilets	100
Total Collection/Service	13650 s.f.

# Collection/Storage Area Diagram



## RELATIONSHIPS

Public

Direct

Indirect

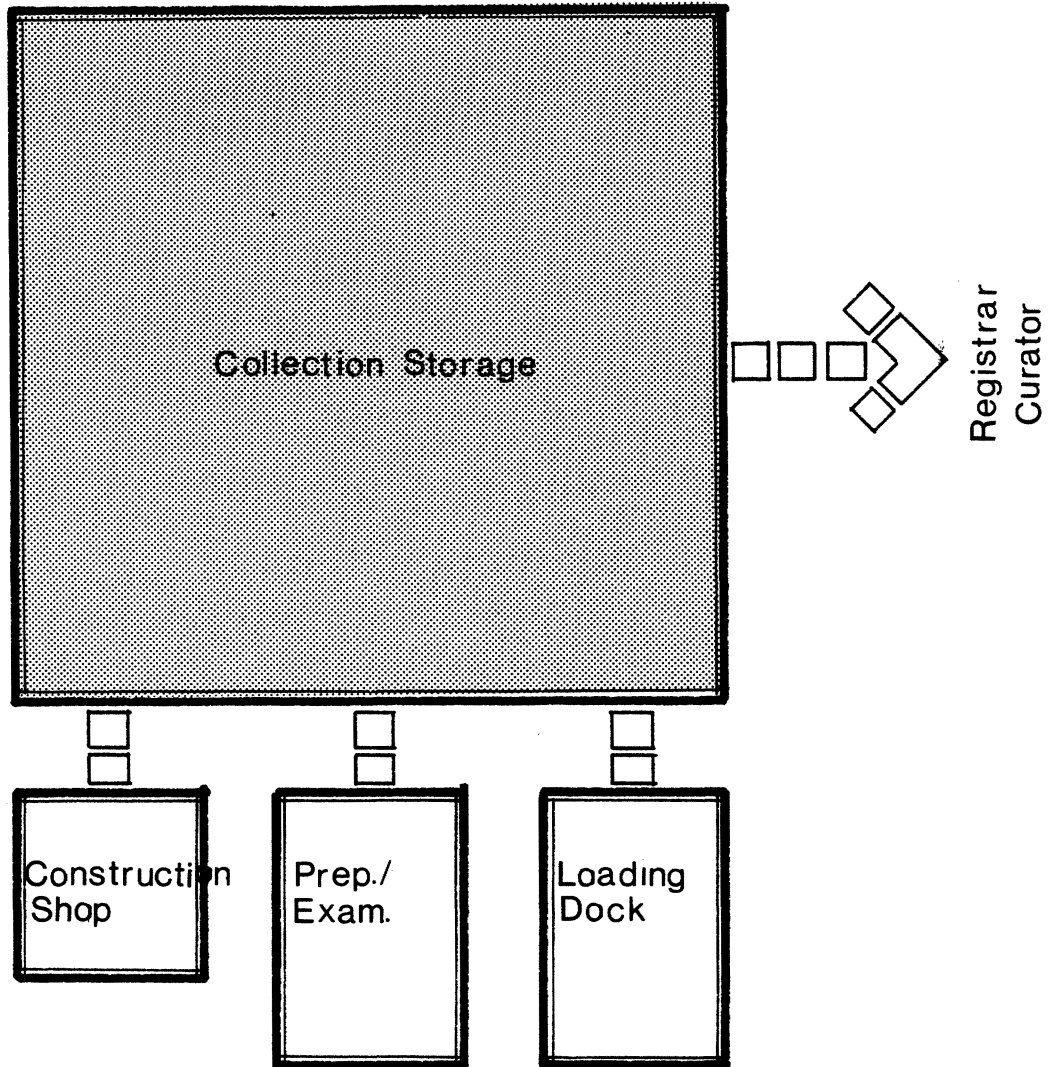
Staff

Direct

Indirect



# Collection Storage



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Preparation Staff as well as Curator, Registrar and other authorized staff

Sq. Ft. 10000

### Function

To provide temp. and permanent storage for the museum art work.

### Equipment

Movable Rack Storage, Flat File Storage Shelving, Cabinets, Tables

### Special Considerations

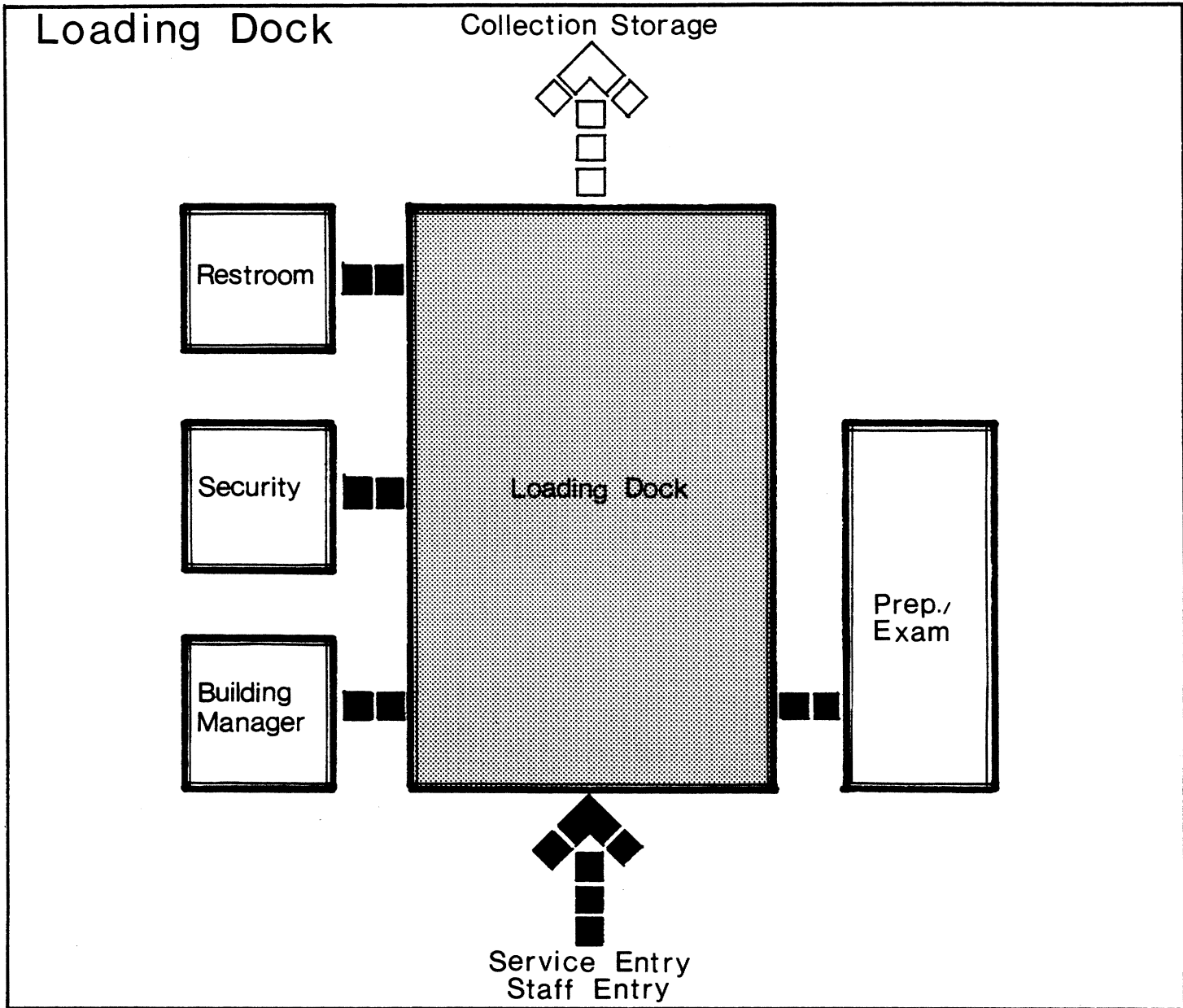
Must provide storage for every conceivable type of object (Sculpture, Painting, Small Artifact, Etc.). Space divided into various storage areas.

### Systems

- Security Yes
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes (UV Filtered)

### Finishes

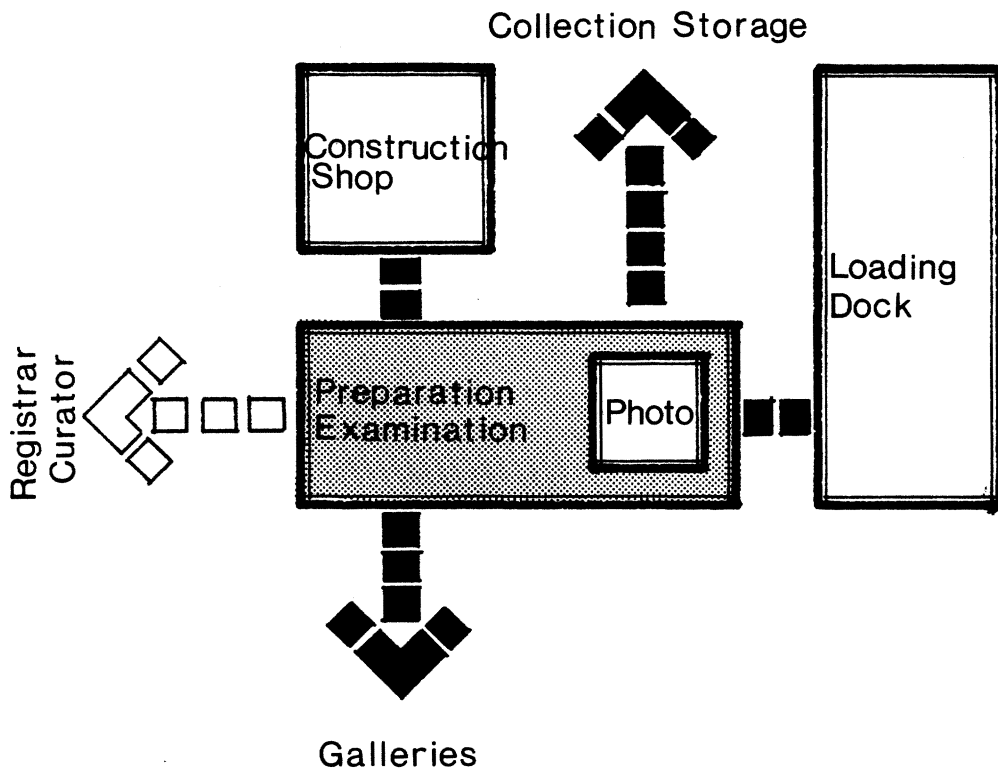
- Floor Soft/Hard
- Walls Hard (Painted GWB)
- Ceiling Hard



• T H E • P O R T L A N D • M U S E U M • O F • A R T •

<p><b>Users</b> Mainly Curatorial and Registration Staff but also used by all staff as an off hours entry Sq. Ft. 1500</p> <p><b>Function</b> Loading and unloading of art objects, off hours staff entry, temporary storage packing and unpacking</p> <p><b>Equipment</b> I-Beam Crane for heavy shipments. Hydrolic Dock</p> <p><b>Special Considerations</b> Space should be a high space to allow large shipments. Fire control.</p>	<p><b>Systems</b></p> <ul style="list-style-type: none"> <li>◦ Security Yes (Important)</li> <li>◦ HVAC Yes</li> <li>◦ Plumbing No</li> <li>◦ Electrical Yes</li> <li>◦ Lighting Yes</li> </ul> <p><b>Finishes</b></p> <ul style="list-style-type: none"> <li>◦ Floor Hard (Concrete)</li> <li>◦ Walls Hard and Durable</li> <li>◦ Ceiling Optional</li> </ul>
--	--

# Preparation/Examination



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Authorized Staff (Generally Curatorial and Registration)

Sq. Ft. 1000

### Function

Packing and Unpacking, Framing, Matting, Examination, Labeling, Cleaning, Polishing, Photography

### Equipment

Supply Storage, Tool Cabinet

### Special Considerations

Various work areas. Easy movement of objects from loading dock and art storage. Oversized doors. Fire control.

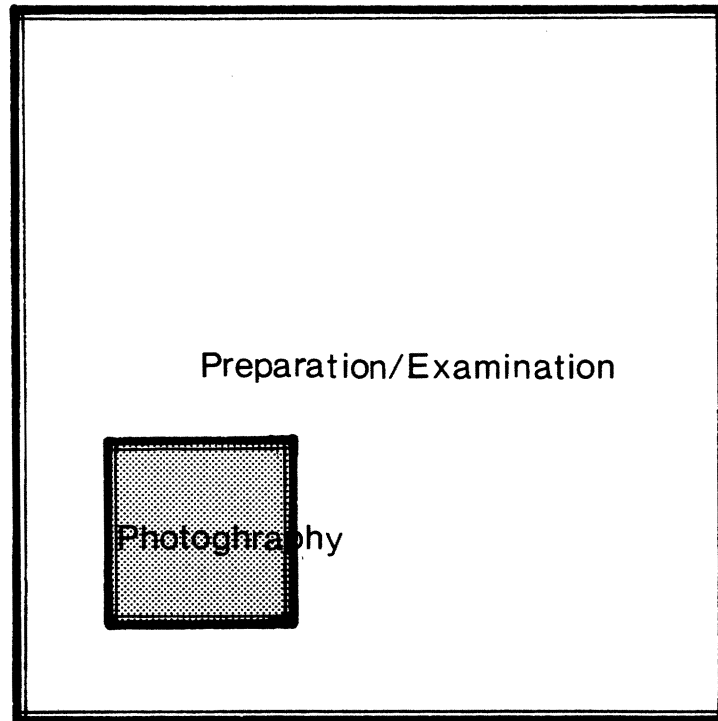
### Systems

- Security Yes
- HVAC Yes
- Plumbing Yes
- Electrical Yes (Generous)
- Lighting Yes (UV Filtered)

### Finishes

- Floor Soft/Hard
- Walls Hard (Durable)
- Ceiling Optional

# Photography



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Photographer/Darkroom Technician for the Registrar and Curator

Sq. Ft. 200

### Function

Photo Studio and Processing of Photographic Information

### Equipment

Special Sinks, Ventilation, Generous Shelving, Enlarger

### Special Considerations

Must be totally dark. Fire control.

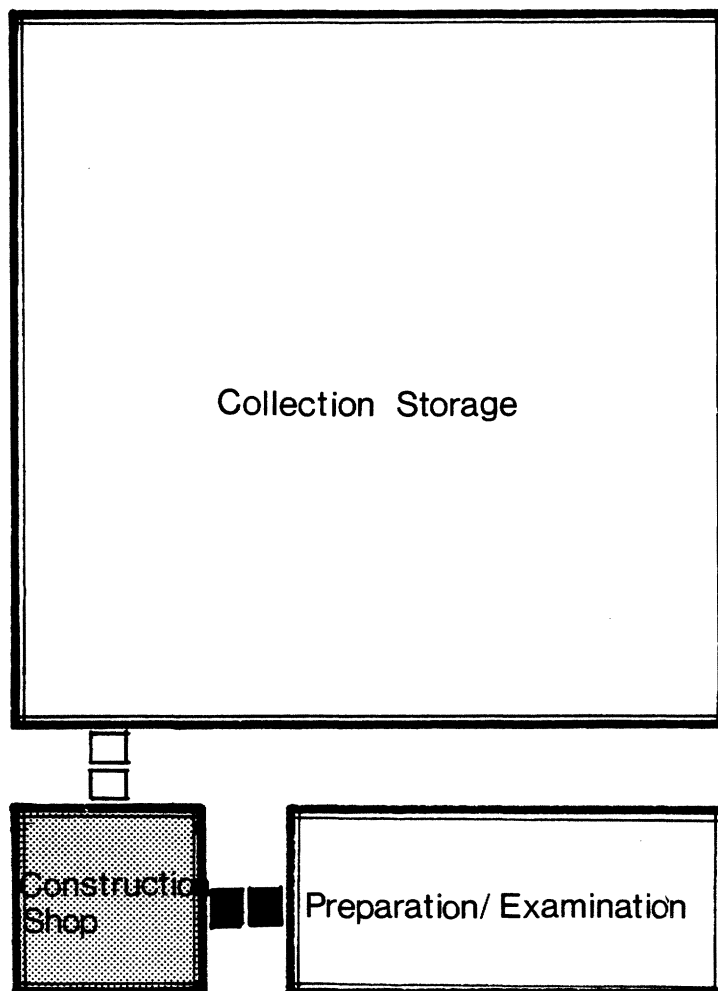
### Systems

- Security No
- HVAC Yes
- Plumbing Yes
- Electrical Yes (enerous Outlets)
- Lighting Yes (Separate Control)

### Finishes

- Floor Hard
- Walls Hard (Painted GWB, Tackable)
- Ceiling Hard (Painted GWB)

# Construction Shop



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Preparator, Asst. Curator, Registrar,  
Museum Staff

Sq. Ft. 500

### Function

Construction of Cases, Pedestals, Crates,  
Props, Partitions, etc.

### Equipment

Table & Circular Saw, Workbench, Cabinets

### Special Considerations

Dust and particulate control is a problem.  
Need an assembly area.

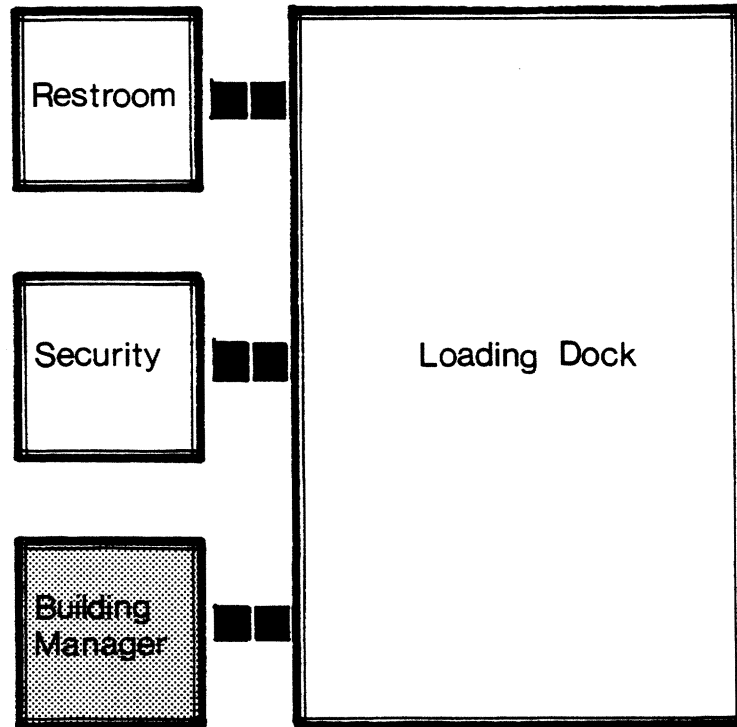
### Systems

- Security No
- HVAC Yes (Dust Control)
- Plumbing Yes
- Electrical Yes (Generous)
- Lighting Yes

### Finishes

- Floor Hard (Concrete)
- Walls Hard (Durable)
- Ceiling Optional

# Building Manager's Office



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Building Manager

Sq. Ft. 100

### Function

Office for the control of all building systems and building management.

### Equipment

Mechanical Systems Monitor

Special Considerations

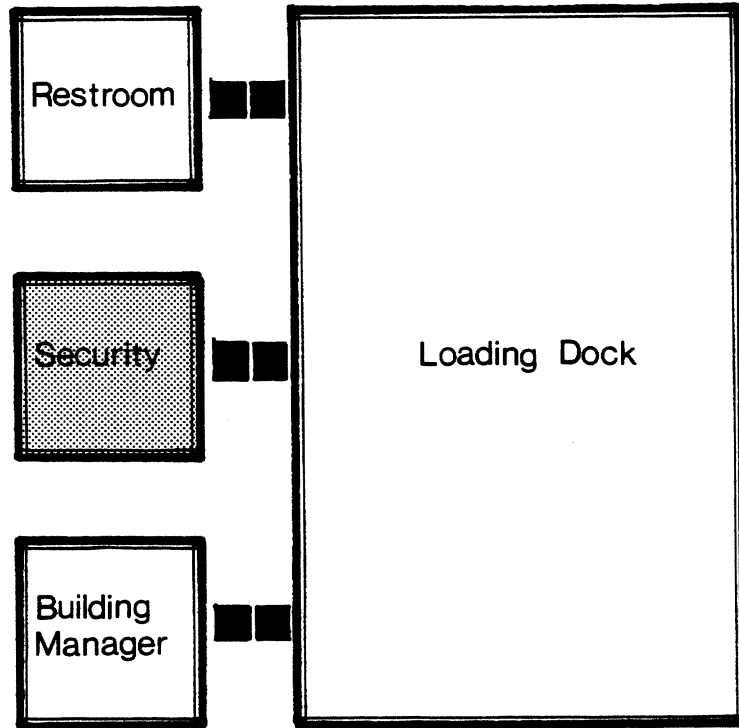
### Systems

- Security No
- HVAC Yes
- Plumbing No
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted GWB)
- Ceiling Hard (Acoustical Tile)

# Security



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

24 Hour Security Personnel

Sq. Ft. 100

### Function

To monitor security systems, entry, loading dock. Office of the Chief of security and entry guard.

### Equipment

Security System Control Board

### Special Considerations

Should have visual access to loading dock and entry hall (Window). Lighting should consider monitor location.

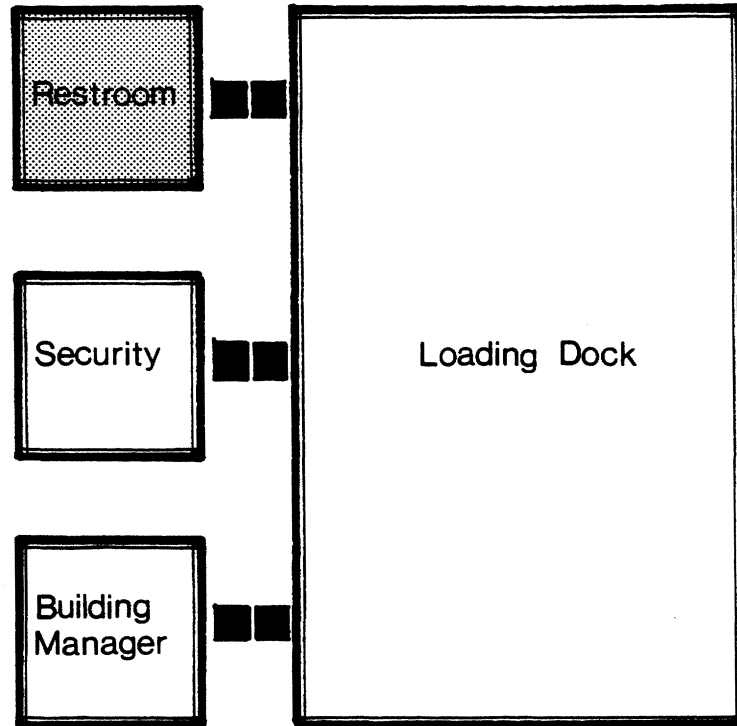
### Systems

- Security Yes
- HVAC Yes
- Plumbing No
- Electrical Yes (Special)
- Lighting Yes

### Finishes

- Floor Soft (Carpet)
- Walls Hard (Painted GWB, Tackable)
- Ceiling Hard (Acoustical Tile)

# Staff Restrooms



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Security, Custodial, Maintenance Staff

Sq. Ft. 100 (2 50 s.f. Each)

### Function

### Equipment

Typical

Special Considerations

### Systems

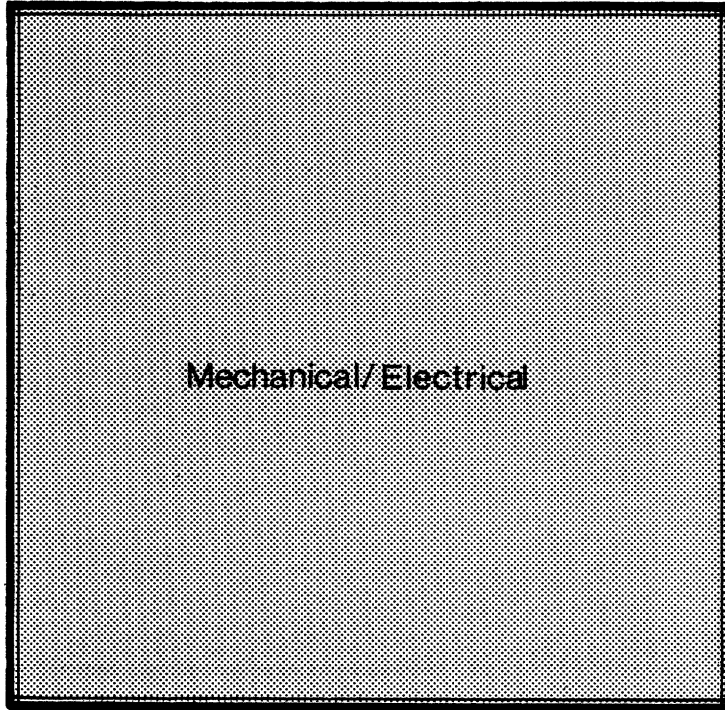
- Security No
- HVAC Yes
- Plumbing Yes
- Electrical Yes
- Lighting Yes

### Finishes

- Floor Hard (Tile)
- Walls Hard (Tile/Painted BWB)
- Ceiling Hard (Painted GWB)



# Mechanical/Electrical



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

### Users

Building Manager

Sq. Ft. 1350

### Function

To meet the HVAC and power needs of the museum

### Equipment

Special Considerations

### Systems

- Security No
- HVAC No
- Plumbing Yes (Special)
- Electrical Yes (Special)
- Lighting Yes

### Finishes

- Floor Hard
- Walls Hard
- Ceiling Optional

# Goals and Concepts

## Goals and Concepts



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

Goals are important for the designer who wants to know the what and why of things. They will give him the inspiration that he needs in order to produce an existing end product. Project goals are intended to state what the client wants to achieve and why.

Goals are the ends.

Concepts are the means.

Concepts refer to abstract ideas intended mainly as functional solutions to clients performance problems. Concepts are ways of achieving the clients goals. Goals are tested by whether they have concepts to accomplish them. If they do not, then they should be disregarded.<sup>4</sup>

## Function

- Goal - The preservation of significant cultural assets.
- Concept - Preserve the existing historical building as a "House Museum".
- Concept - Preserve and protect art by the control of environmental conditions (light, temperature, humidity, etc.).
- Goal - The new part of the Museum should be the visitors first experience.
- Concept - The main entry should be through the new Museum.
- Goal - An easily maintained security system for each level of security.
- Concept - Security zones should be layered to provide maximum security and multiple check points.
- Goal - The administrative group should be free from public distraction.
- Concept - Separation should be provided to place a buffer between administrative and public space.
- Goal - Flexibility of display space.
- Concept - Allow the closing of a gallery without disrupting other galleries by use of common circulation.

## Function/Form

- Goal - The Museum should lead the way for the future development of Congress Square.
- Concept - The furtherance of the Congress Square development should be provided by amenities which enhance the usability of the square (pedestrian space, gathering space - interior and exterior, attractive facade, etc.)
- Goal - The identity of the individual pieces of art work should be maintained.
- Concept - The scale of display areas should be such that the individual art is not lost in the vast numbers of art.

## Form

- Goal - The Museum image should be visually integrated with the surrounding context.
- Concept - Materials should be chosen which complement the context.
- Concept - Forms should also integrate into the existing vocabulary.

- Goal - The Museum exterior should clearly reflect that which it houses.
- Concept - The exterior character and expression should reveal to the visitor what awaits him inside.
- Goal - The existing historical buildings and the existing tree should be carefully integrated into the scheme.
- Concept - The existing Museum building should remain as a highlight of the Museum experience.
- Concept - The existing Beech tree should remain because of its character and prominence.
- Goal - The complex should reflect the Museums past, present, and future.
- Concept - The new Museum should reflect the present with a contemporary architectural statement while the old Museum represents the past.

## Economy

- Goal - Secure the Museums interest with regards to the adjacent properties.
- Concept - The aquisition of the Chamber of Commerce Building should be studied to determine its suitability.
- Goal - Reduce the cost of maintaining public spaces.
- Concept - The materials for public spaces should be low maintenance and have a long life-span.

## Time

- Goal - Existing historic buildings should be handled in a way which preserves their intended character.
- Concept - Preservation should be an important priority in the relationship of the old and new.
- Goal - The possibility of expansion should not be excluded by the design.

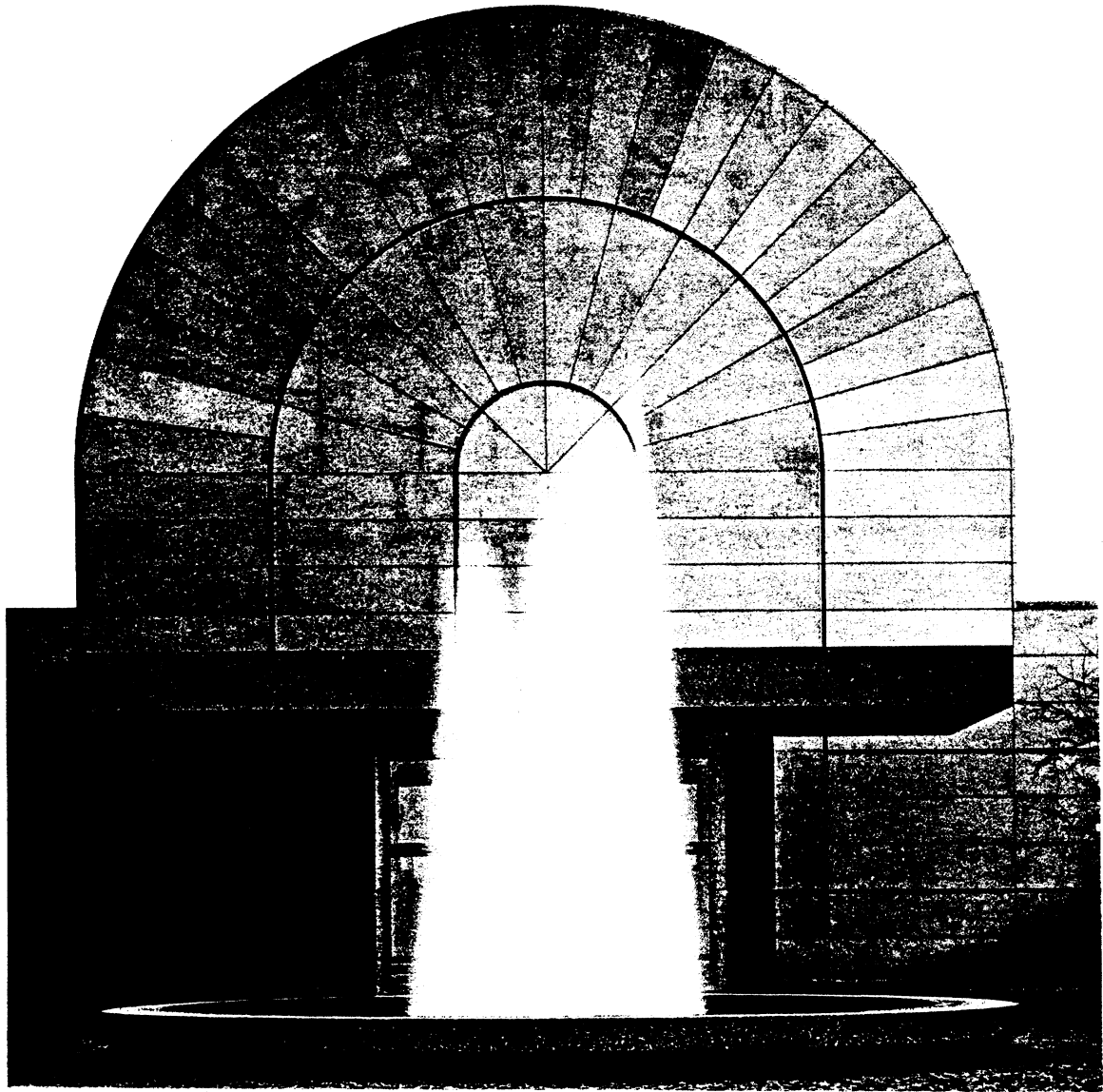
# Appendix

State of the Art: Museums



• T H E • P O R T L A N D • M U S E U M • O F • A R T •

# Dallas Museum of Fine Arts

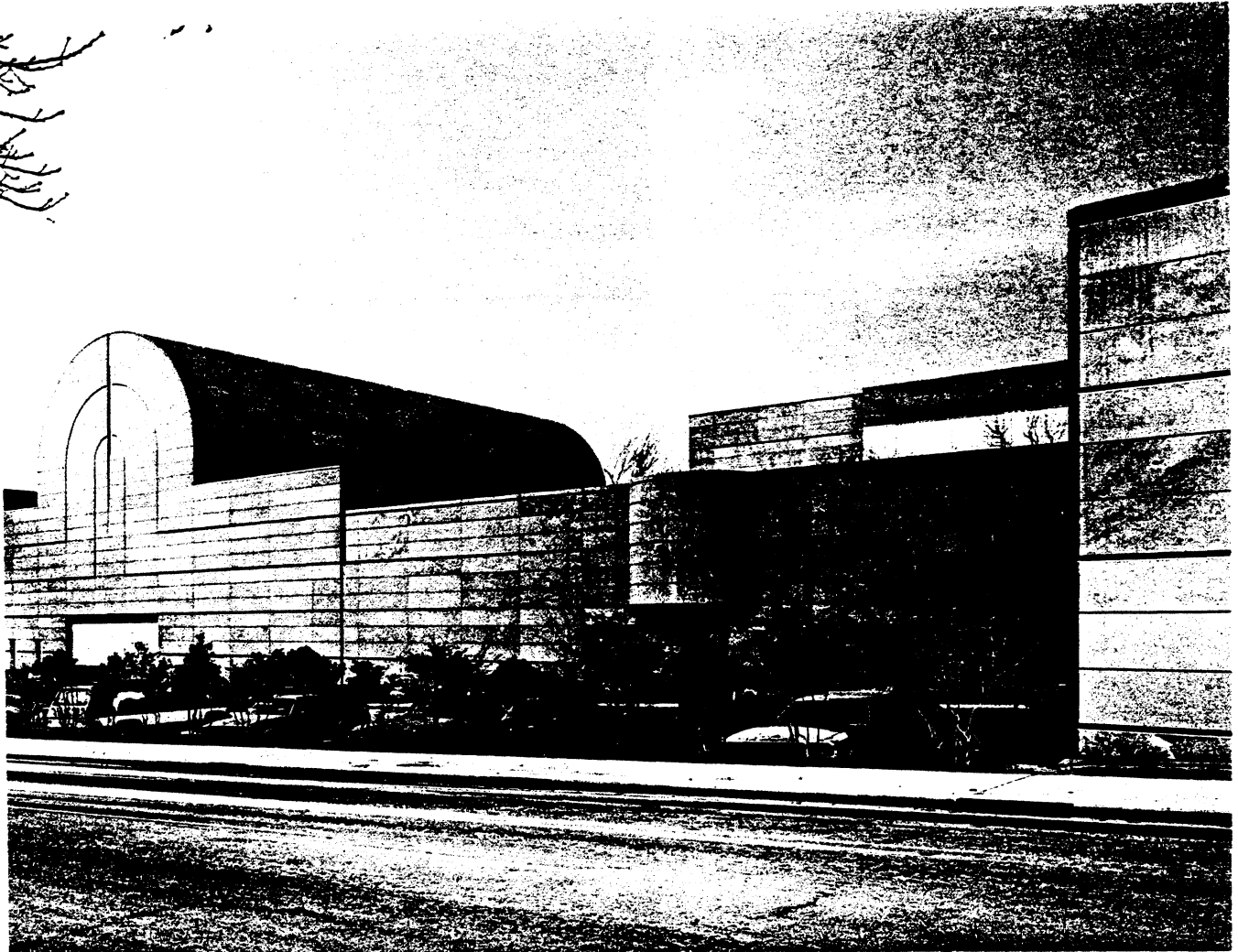


## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

The Dallas Museum of Fine Arts is a place of calm in the midst of a busy high rise core and teeming freeways. In a smaller context, the museum is part of a proposed arts district which includes a symphony hall and opera house within walking distance. It is situated at the terminus of this new district with its vaulted atrium being on the main axis. The whole complex was designed to invigorate downtown and spur investment and development.

The concept of the museum is an architectural composition involving time. The arrangement of the galleries chronologically along a central spine that ramps down the site provides the basis of the concept. The arrangement is similar in some aspects to shops along a street where visitors can circulate through them (galleries) in either direction (chronological or reverse chronological order). The character of the building concept is quiet except for the vault. The building material (limestone) gives a neutral character which helps accomplish the clients request for a serene setting which supports the art rather than competing with it.

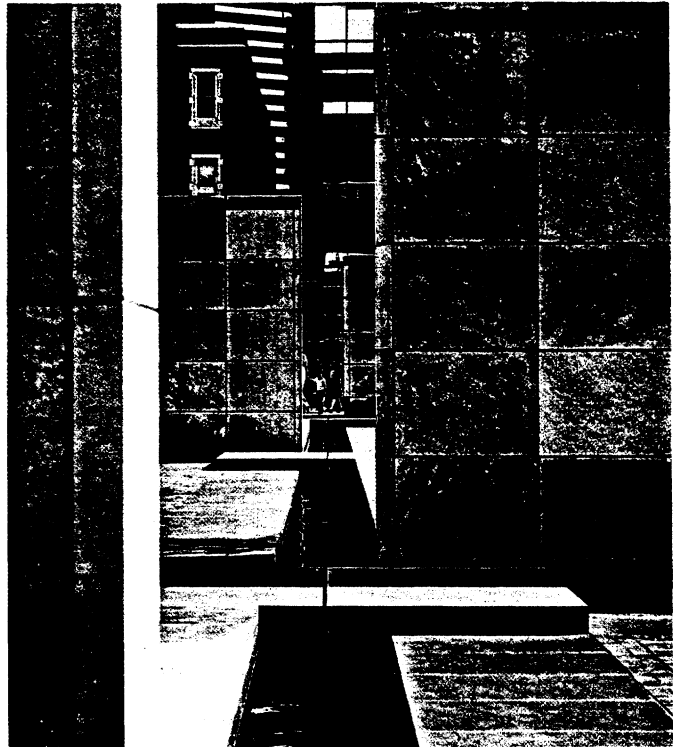
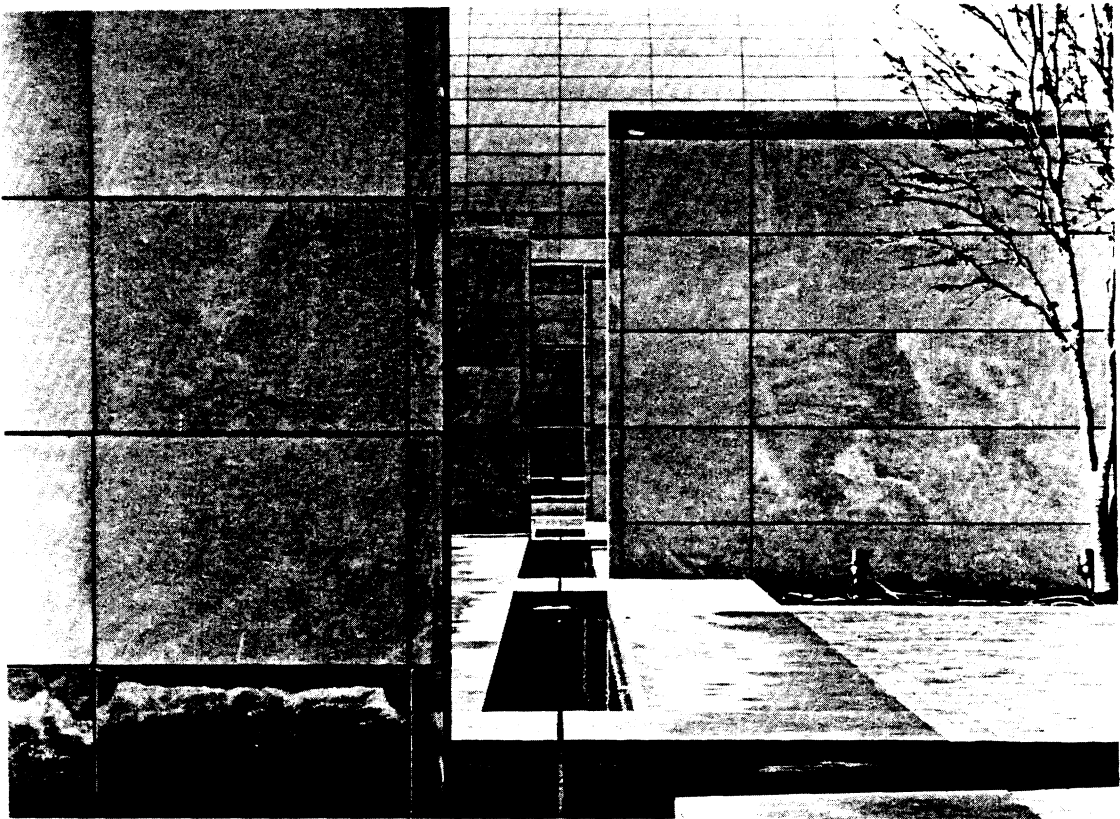


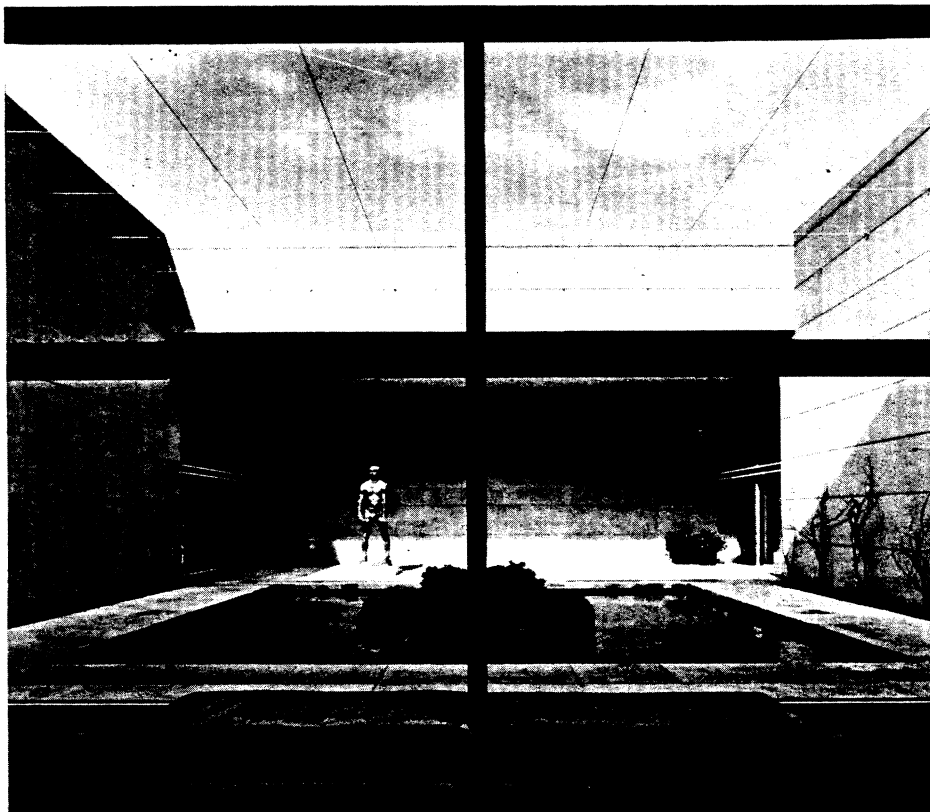


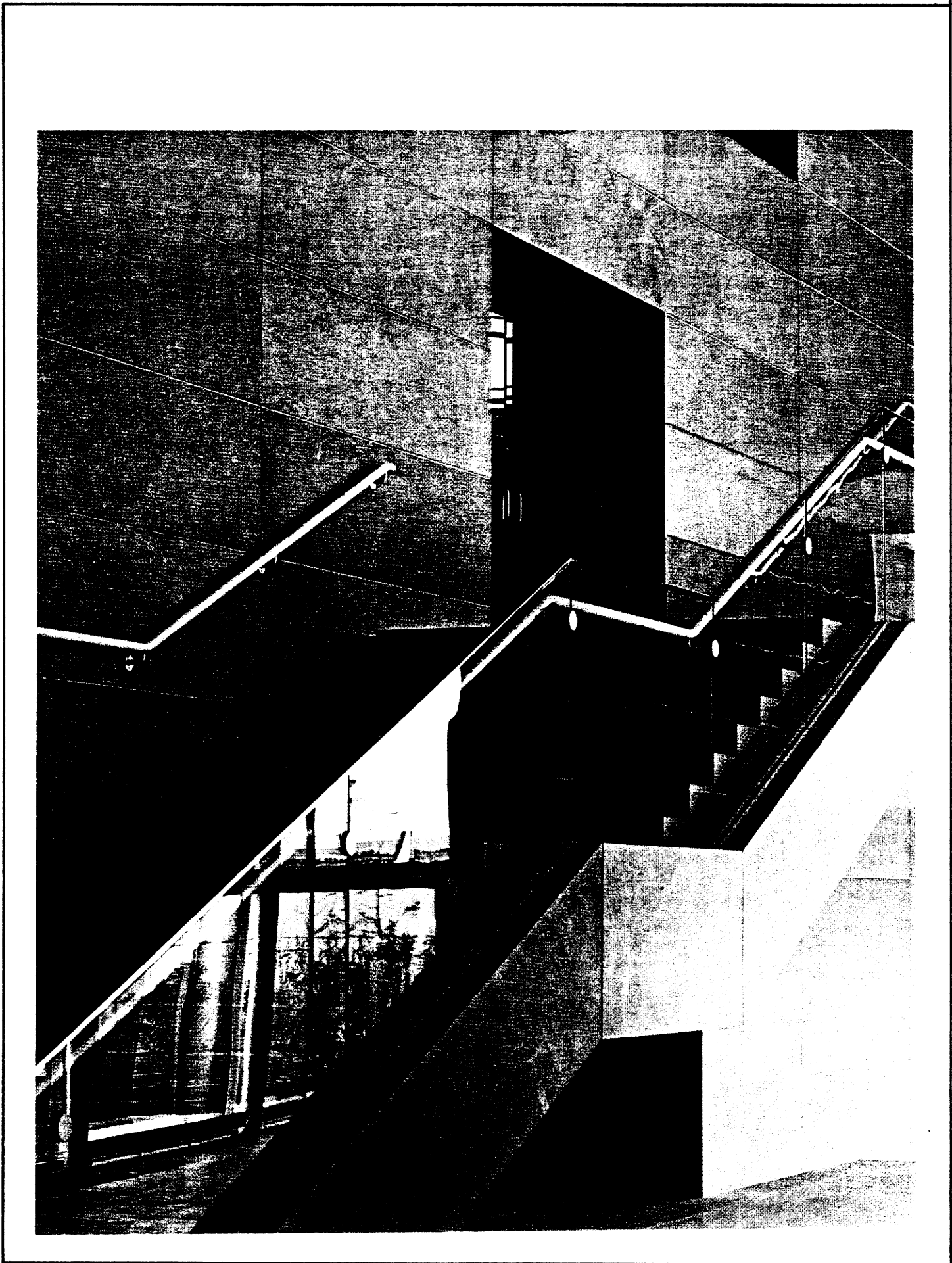
## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

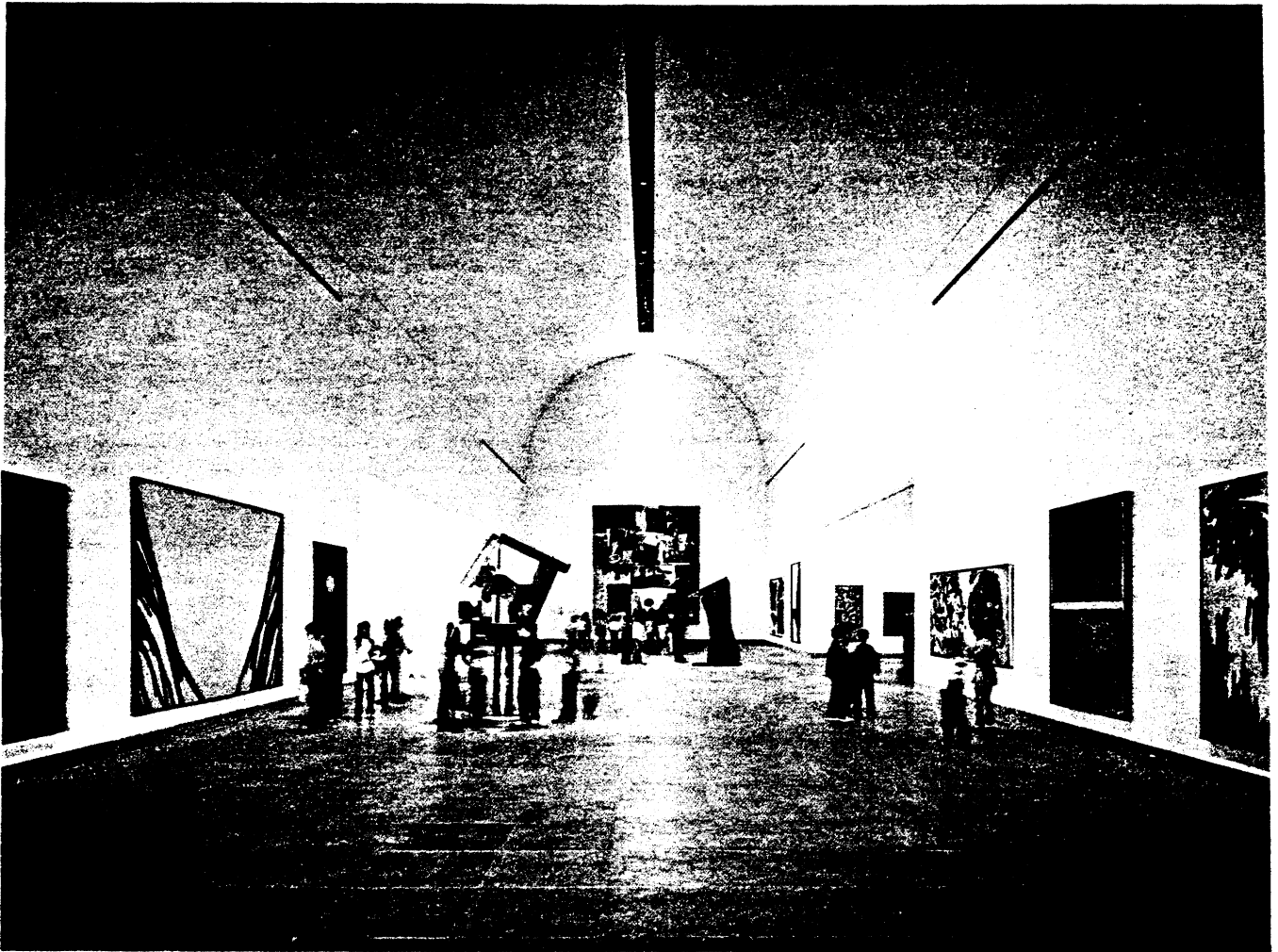
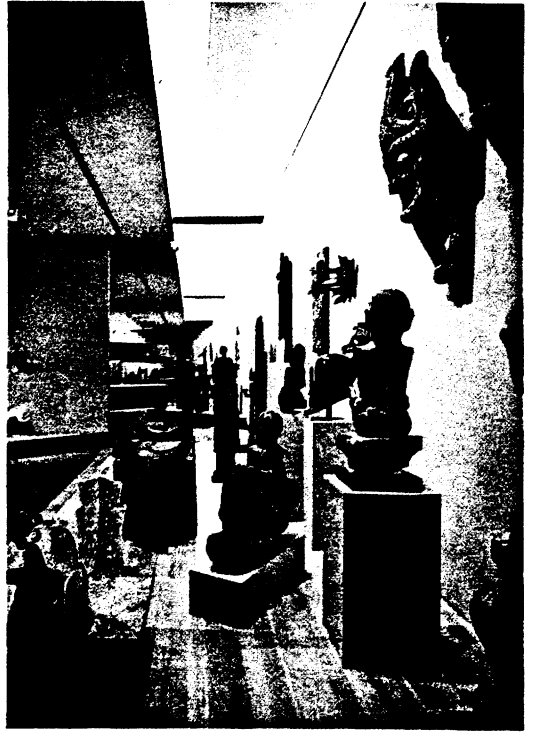
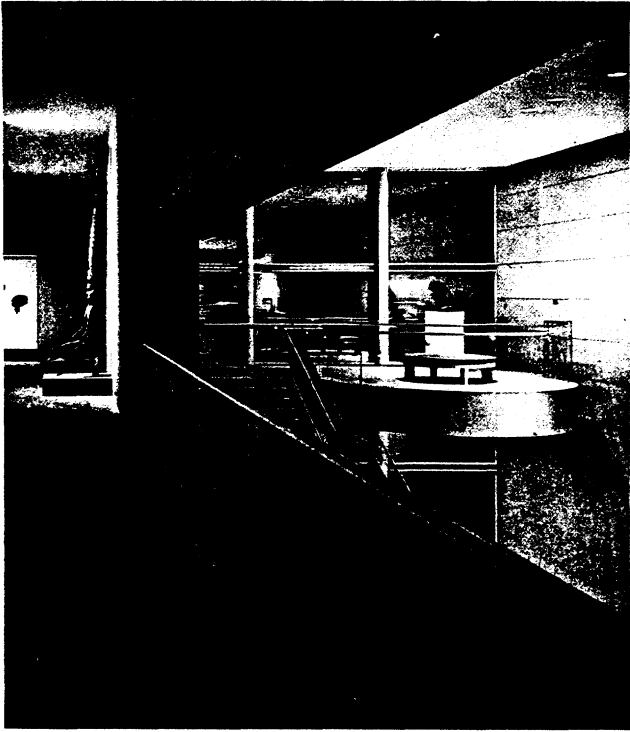
The key to the display of the art is variety. The museum is laid out in such a way that it is rich with options and incidents. Stairs, courts, and partitions are positioned to yield calculated views of prominent works of art. Soft, indirect daylight and splashes of daylight from windows, garden courts, and patios enhance the works and add to the varied character.

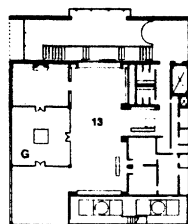
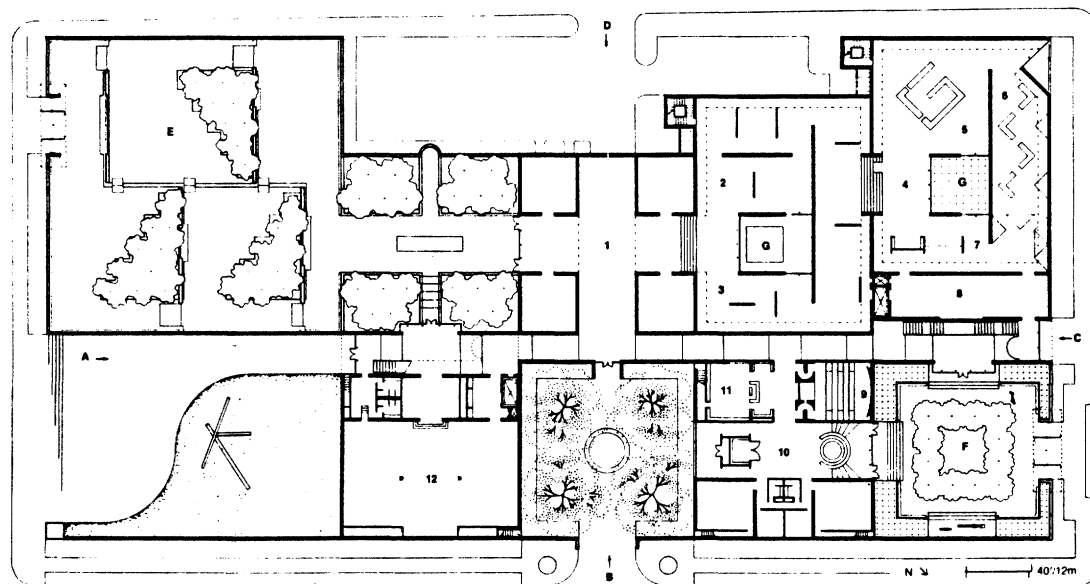
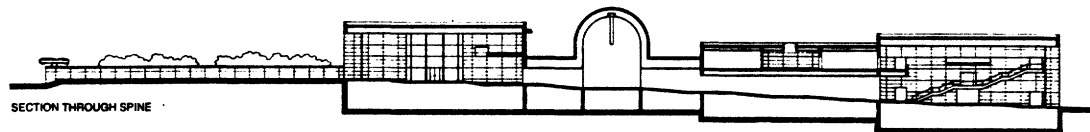
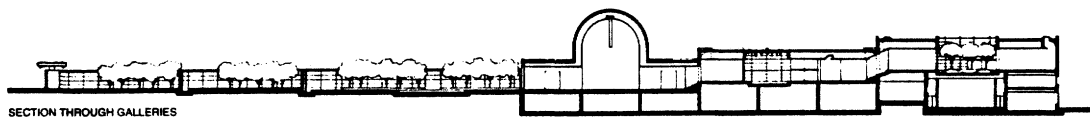
The Dallas Museum of Fine Art is a careful balance between a background building and one which takes attention from the art. It is varied, yet subdued; fun, yet quiet. It is both an experience in itself and a place to experience art.<sup>25</sup>



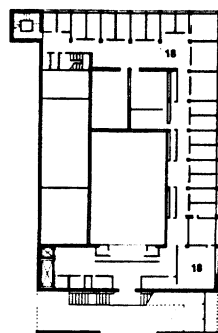




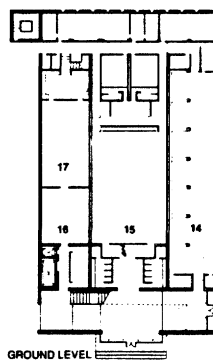




RESTAURANT LEVEL



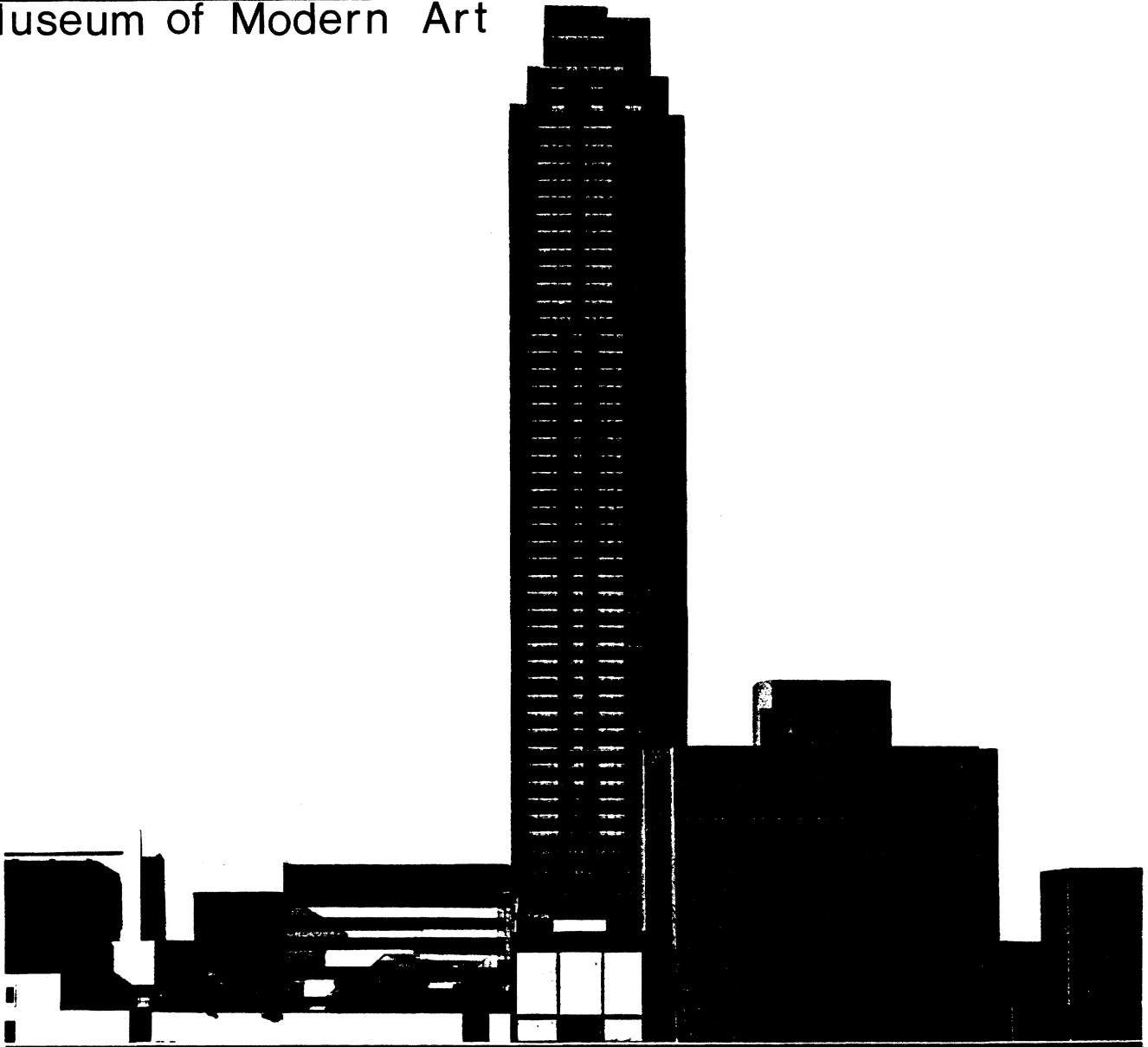
MEZZANINE



GROUND LEVEL

- |                       |                           |
|-----------------------|---------------------------|
| 1 Contemporary        | 15 Auditorium             |
| 2 European            | 16 Prints & photographs   |
| 3 American            | 17 Print & textile study  |
| 4 Classical           | 18 Offices and conference |
| 5 Pre-Columbian       | A Pedestrian ent.         |
| 6 African             | B Arts district ent.      |
| 7 Asian               | C Parking ent.            |
| 8 Ethnic              | D Service ent.            |
| 9 Orientation         | E Sculpture garden        |
| 10 Education          | F Education court         |
| 11 Bookstore          | G Court                   |
| 12 Temporary Exhibits |                           |
| 13 Dining             |                           |
| 14 Library            |                           |

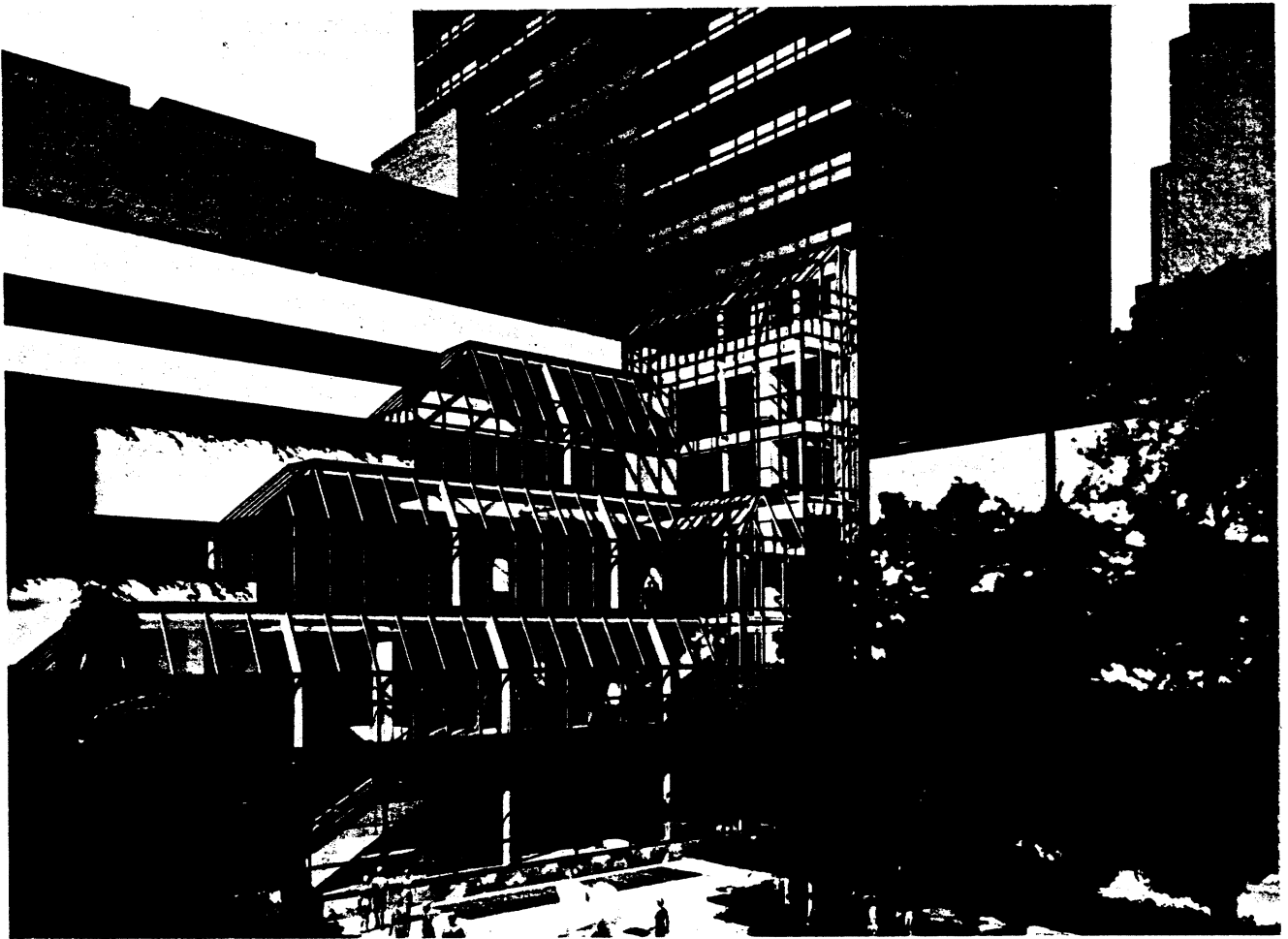
## Museum of Modern Art



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

The Museum of Modern Art Expansion is a unique solution to a complex set of design constraints. The original concept for the museum was a "large house" with a backyard (sculpture garden). Later Philip Johnson modified the front entry to handle the growing crowds. When Pelli came to the project he was asked to design a museum twice the original size and add a 500,000 square foot apartment tower on the already limited site. The apartment tower was added to the program as an attempt by the museum to alleviate their deficit budget and also utilize the air rights they had above the museum.

Pelli's solution was able to meet all the museums requirements in an elegant and sensitive way. The apartment tower sits lightly on Johnson's original building with the new garden hall being the link between the tower and the museum. His solution also remains consistent with the museums modernist philosophy to "study the modern arts and the application of such arts to manufacture and practical life" and "to establish a collection of the immediate ancestors of the modern movement . . . and the most important living masters!" Now the museum building itself is becoming a collection of the great masters of modern architecture.



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

The circulation concept which is expressed by the garden hall is also a creative solution to the problem of handling the immense amount of visitors to the museum. This hall contains a series of escalators which are lined up to emphasize the horizontal circulation that handles the crowd. All galleries enter and exit into the garden hall which acts as a light and airy transition between galleries. In exterior form the garden hall steps back away from the sculpture garden in order to maintain its original character. One new element that the hall introduces is daylighting. Art is displayed in natural light within the greenhouse atmosphere, which is something that the museum has never done.

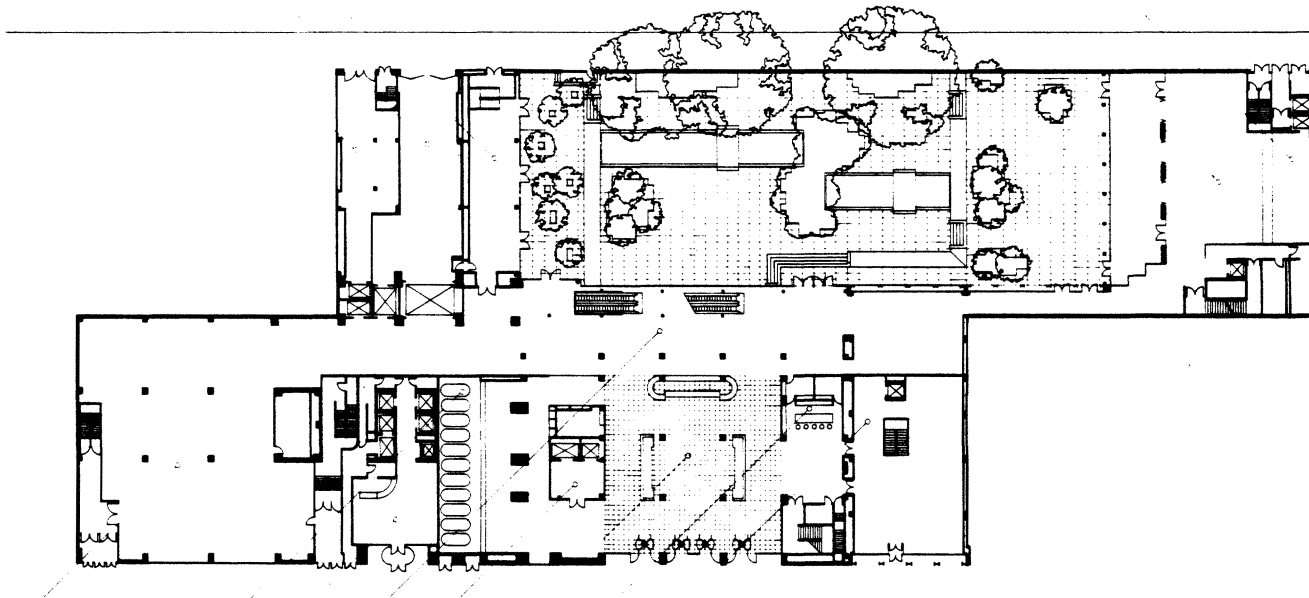
In all the M.O.M.A. is a creative addition to an existing building. It does not mimick the old structure but a reinterpretation of it and a utilization of the positive aspects.<sup>5</sup>





• Tower Service • Service • Group Reception

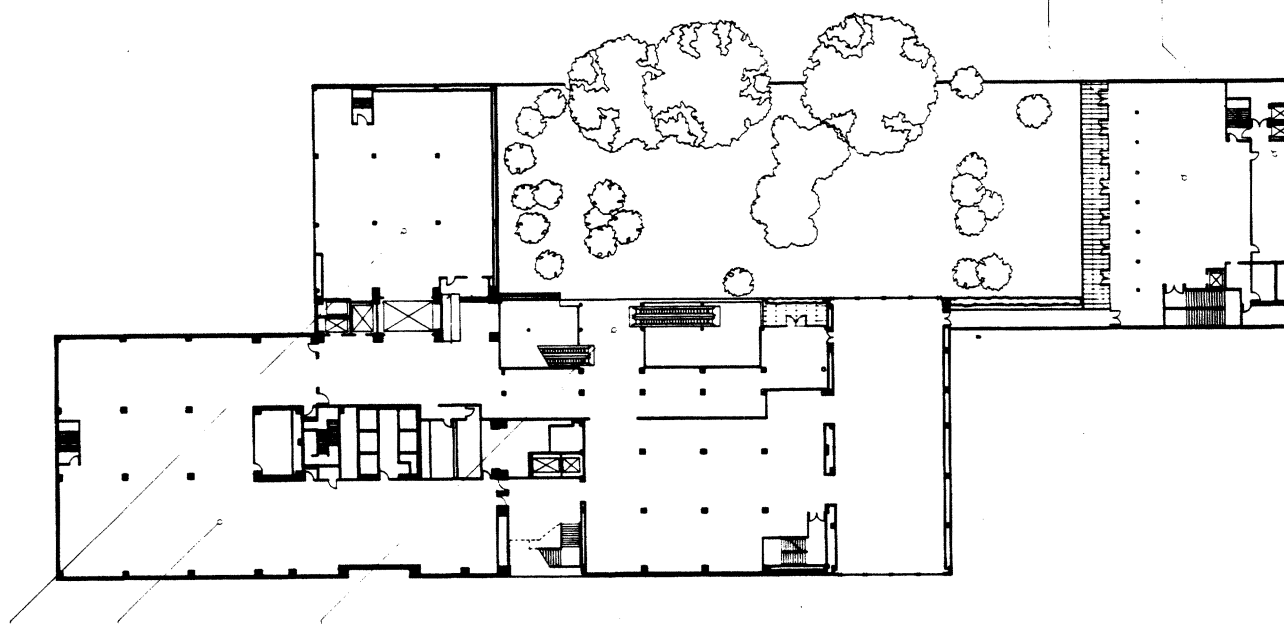
• Public Restaurant • Kitchen



• Temporary Exhibition Gallery • Corridor • Tower Lobby • Garden Hall • Staff Reception • Public Lobby • Membership • Bookstore

Plan of ground floor.

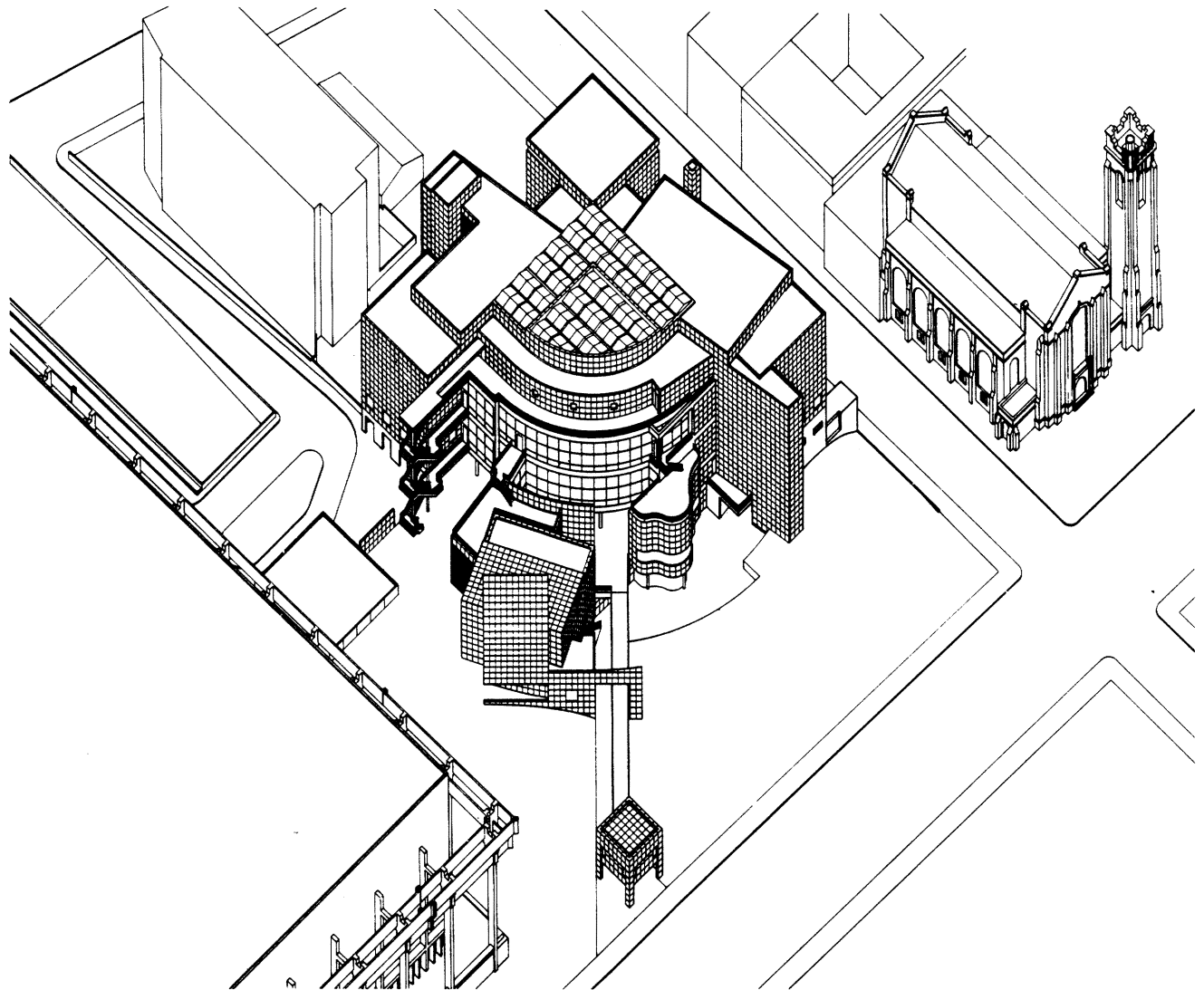
• Member's Restaurant • Kitchen



• Photography Gallery • Permanent Painting and Sculpture Gallery • Garden Hall

Plan of second floor.

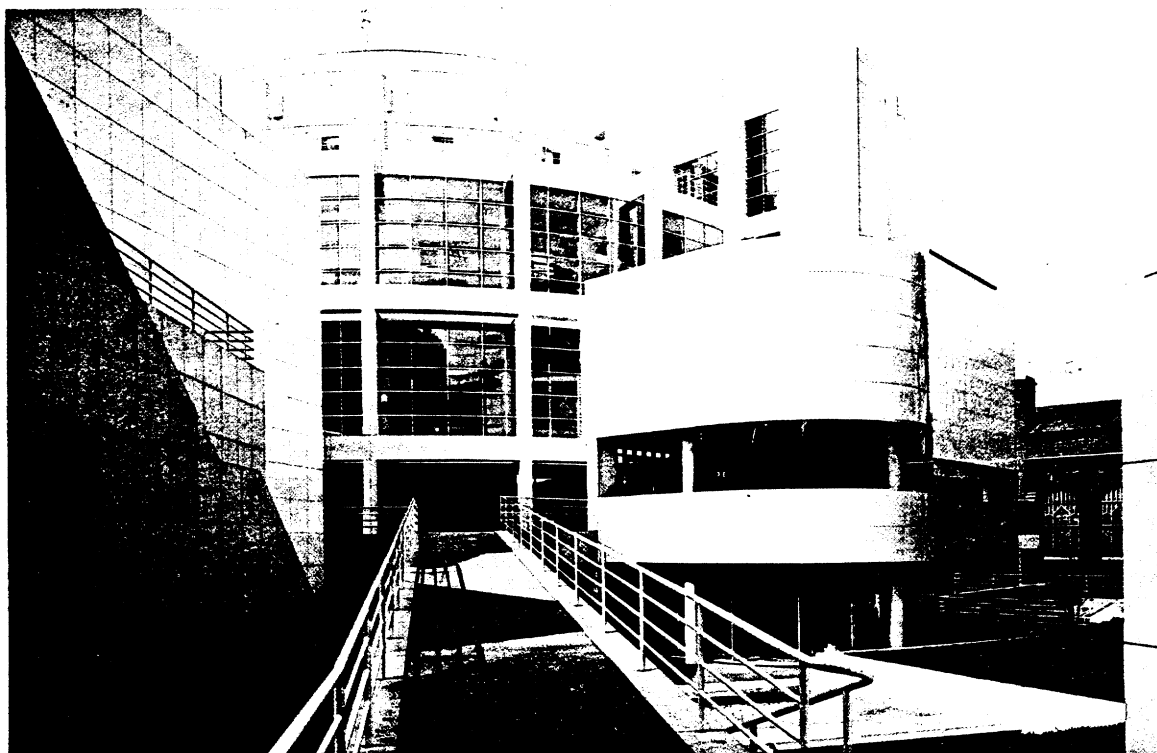
## High Museum



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

The High Museum was designed with light as the critical component. It was meant to be both physically and metaphorically "radiant." Everything radiates from the semi-circular circulation space. The entry also radiates from the drum as a ceremonial procession which penetrates the inward focusing balance facade. This radiant character also enables the museum to be an open inviting civic space rather than an enclosed fortress for protection of the art from the public.

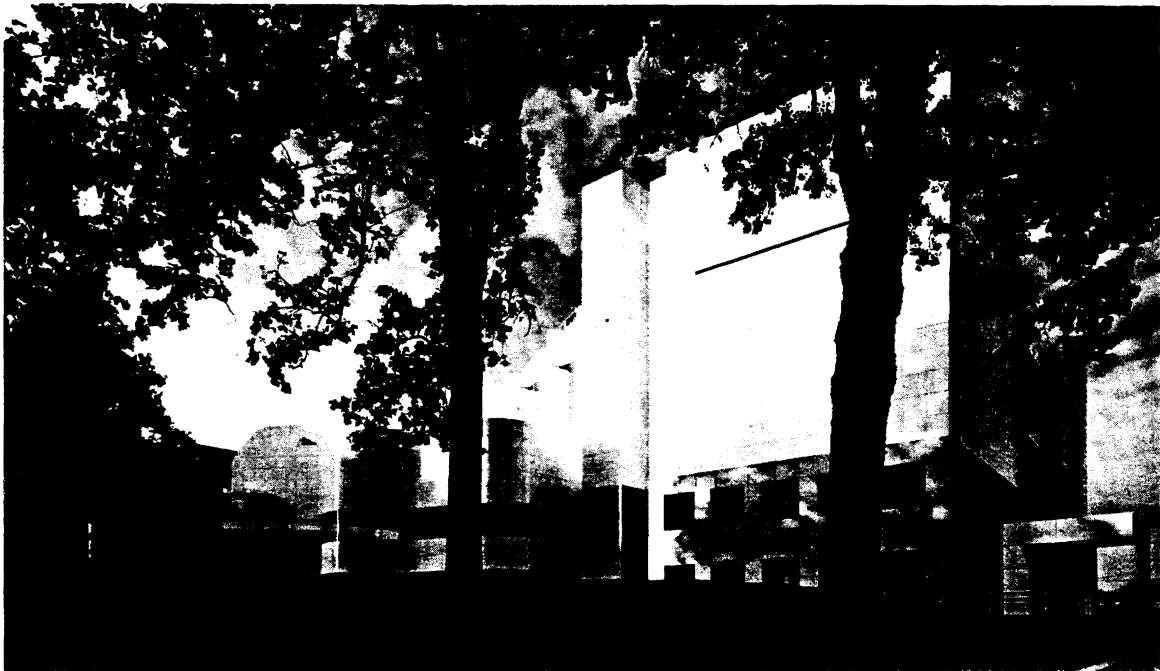
The function of the building is relatively simple with the vertical circulation being the main reference point. The vertical circulation (semi-circular ramps) has been compared to the Guggenheim Museum in New York, but Meier notes that the ramps of the Guggenheim induces a propelling motion which is inappropriate to contemplation. The ramps of the High Museum are confined only to the grand circulation between levels so that the visitor is not viewing art on a sloped surface. Another important aspect of the museum is the separation of the auditorium space. This allows 24-hour access to it without sacrificing security. Its form also helps frame the entry processional. These functions provide the setting for a "slow, processional dance through light and space performed by the visitors."

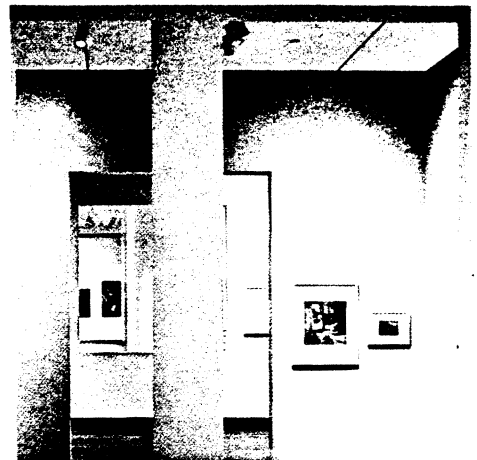
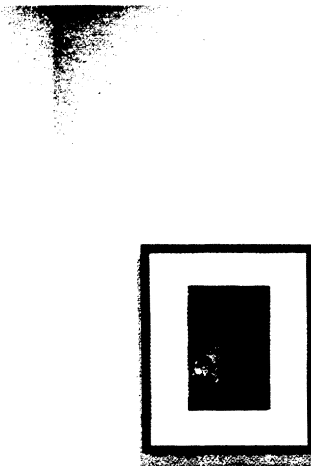
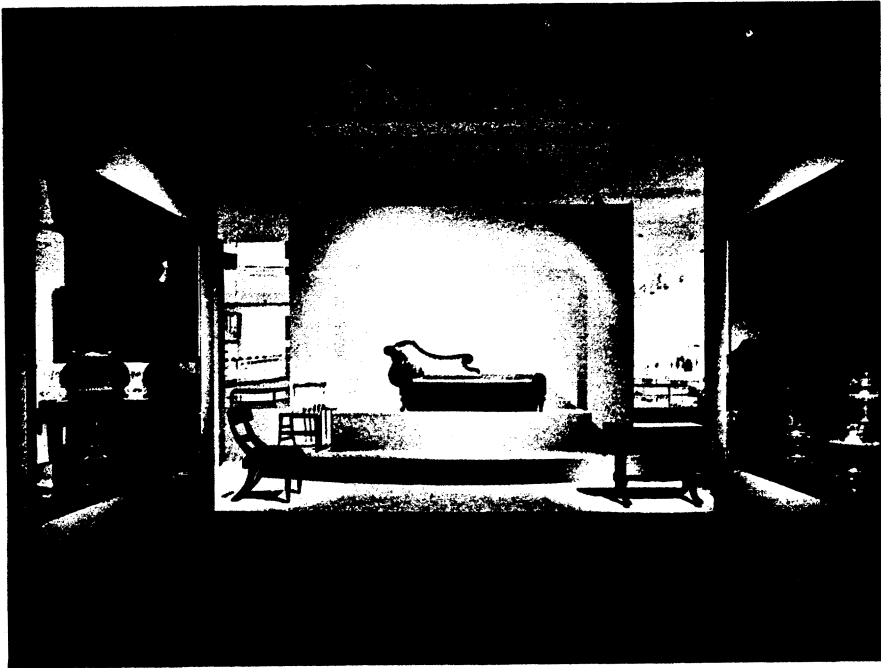


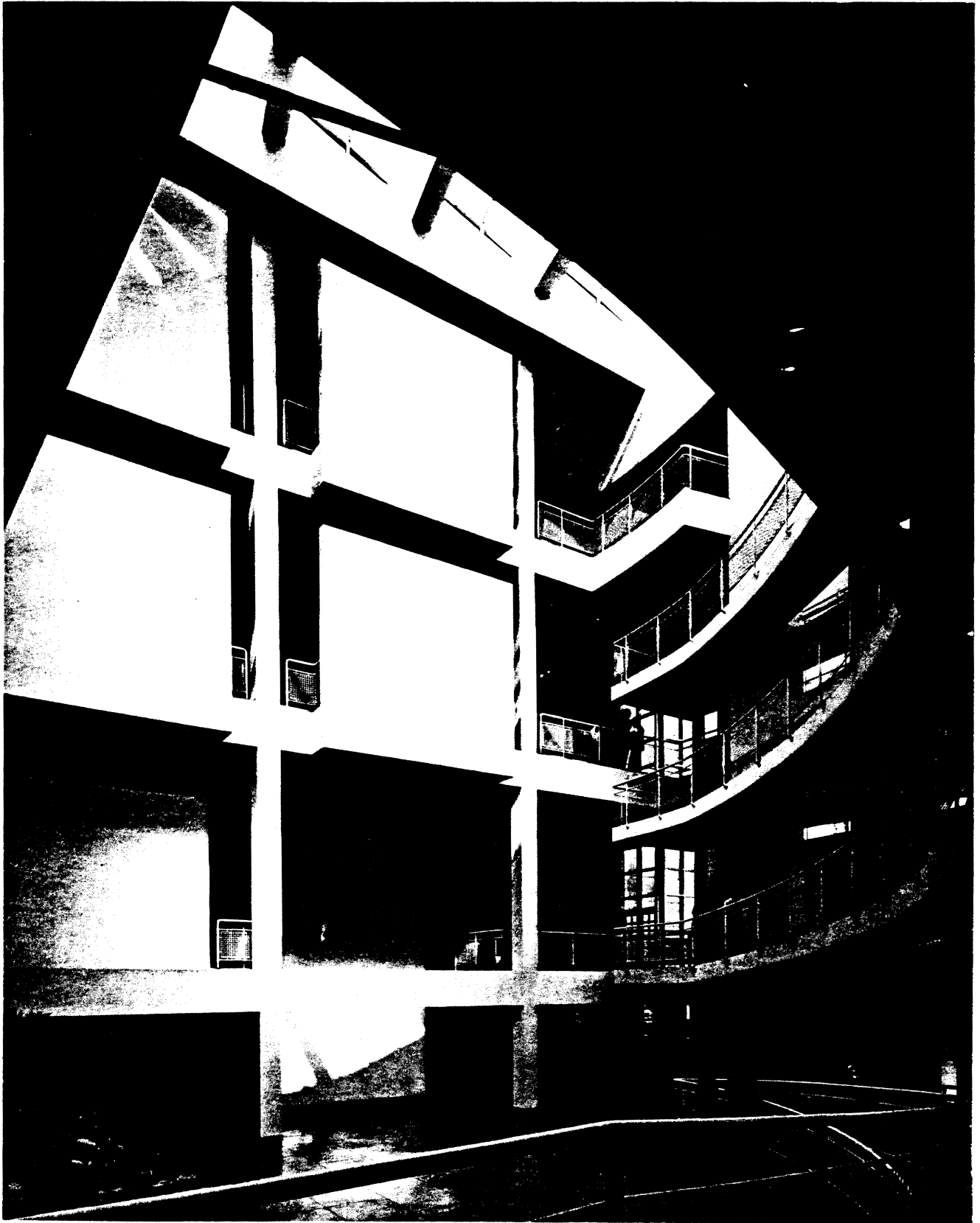
## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

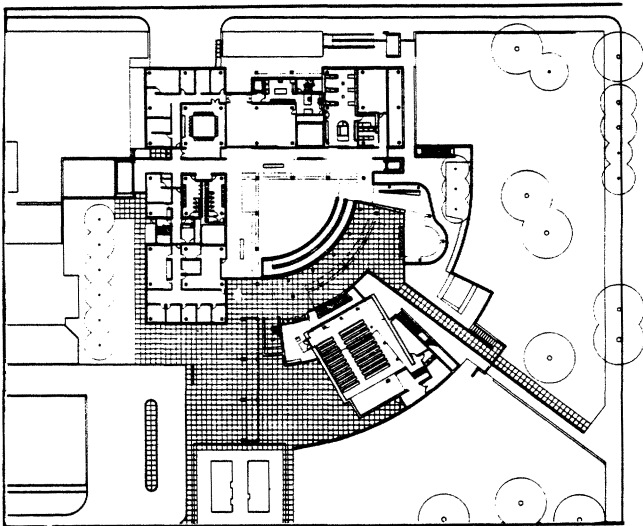
The display system allows a realistic and varied experience of viewing the art. As was stated earlier, light is an important component in the display of the art. Natural light spills into the galleries from the circulation drum. This light and the scale of the galleries allows the artwork to be displayed in the environment for which it was originally intended. The display panels, which are painted in more than 80 different tones, are the only elements that define the galleries. These panels have carefully placed cutouts and notches which at time line up to give vies and glimpses of artwork in other galleries. These allow visitors to reference paintings they have already seen or to look ahead and see some of what awaits them. The building is designed in such a manner that people experience the art of architecture as well as the art displayed.

The High Museum has become a gathering place for the community. It is a showplace for people. A place to see and be seen by others. Museums in general, because of their universal appeal are becoming central elements in the functioning of community life.<sup>1</sup>

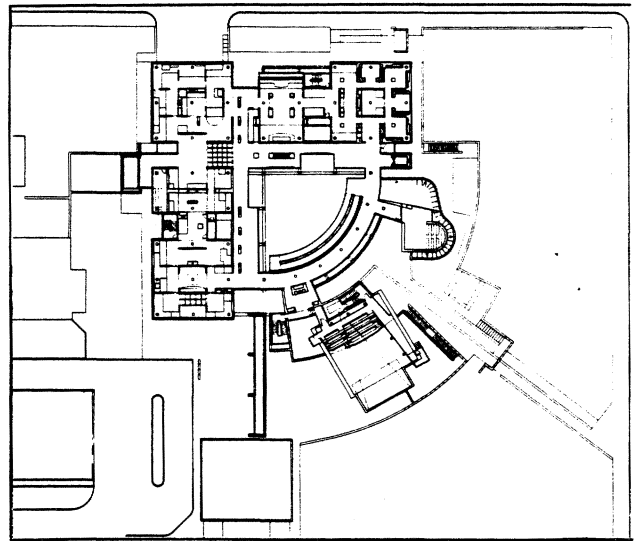




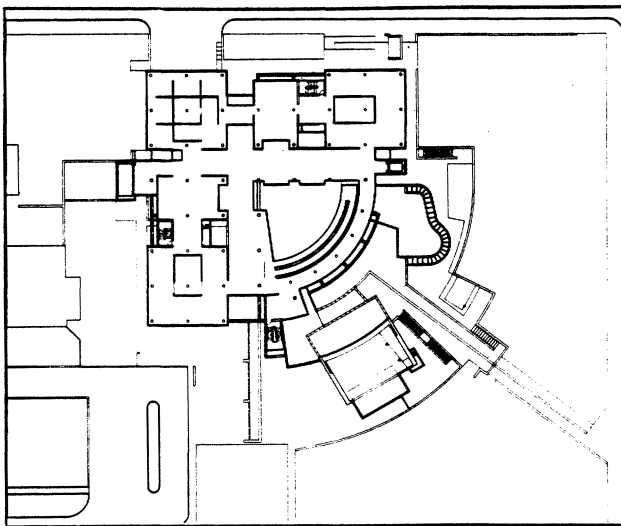




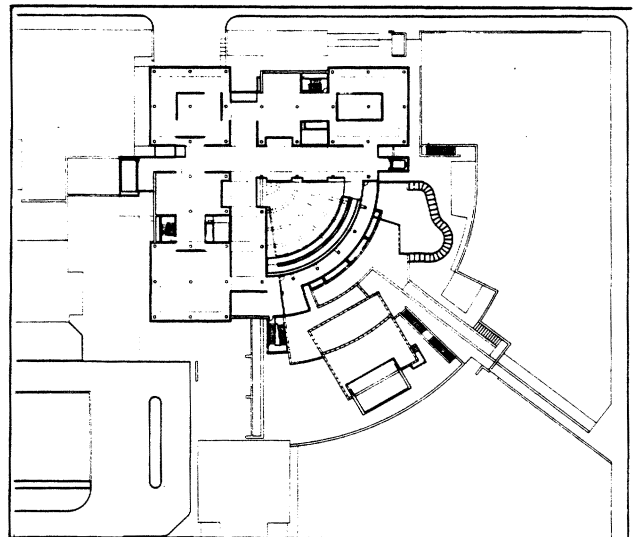
Main floor



Second floor



Third floor



Fourth floor



State of The Art: Daylighting



• T H E • P O R T L A N D • M U S E U M • O F • A R T •

## Daylighting



## • T H E • P O R T L A N D • M U S E U M • O F • A R T •

We destroy art in the very process of viewing it. Most artwork, especially that made of organic materials, will deteriorate under all but the smallest amounts of light - amounts sometimes too small to adequately see the art. Thus lighting artwork is a compromise of visual needs verses preservation. In order to protect art from too much light, we must take three factors into consideration: length of exposure, intensity of light, and the spectral composition.

Length of exposure and intensity are directly proportional to the deterioration of artwork. Exposure of the art to low levels of light for long periods of time has the same effect as high levels of light for short periods of time. The intensity of light that artwork of organic materials can handle is far less than that of stone, metal, or ceramic objects. Maximum light intensities that organic materials can stand are around 5 footcandles while oil and acrylic can average 15 footcandles and stone galleries or circulation space can often attain levels up to 30 footcandles.

The spectral make up of light must also be considered in the effects

on art deterioration. Much of the damage to artwork comes from light in the infrared and ultraviolet range. Infrared (sunlight, Tungsten lamps, and to a lesser extent fluorescent) generates heat that dehydrates many dyes and fibers. Ultraviolet light causes even greater damage than infrared. This type of light, which is generated by sunlight, fluorescent, and Tungsten halogen lamps, because of its short wave length, can alter the molecular structure of organic materials, burn or embrittle paper and textiles, and fade or discolor dyes and oils.

Problems with infrared light can be handled by excluding direct sunlight from the galleries and by keeping electric lamps away from the surface of the art. Ultraviolet light can easily be filtered by specially formulated acrylic sheets which are placed over the light source.

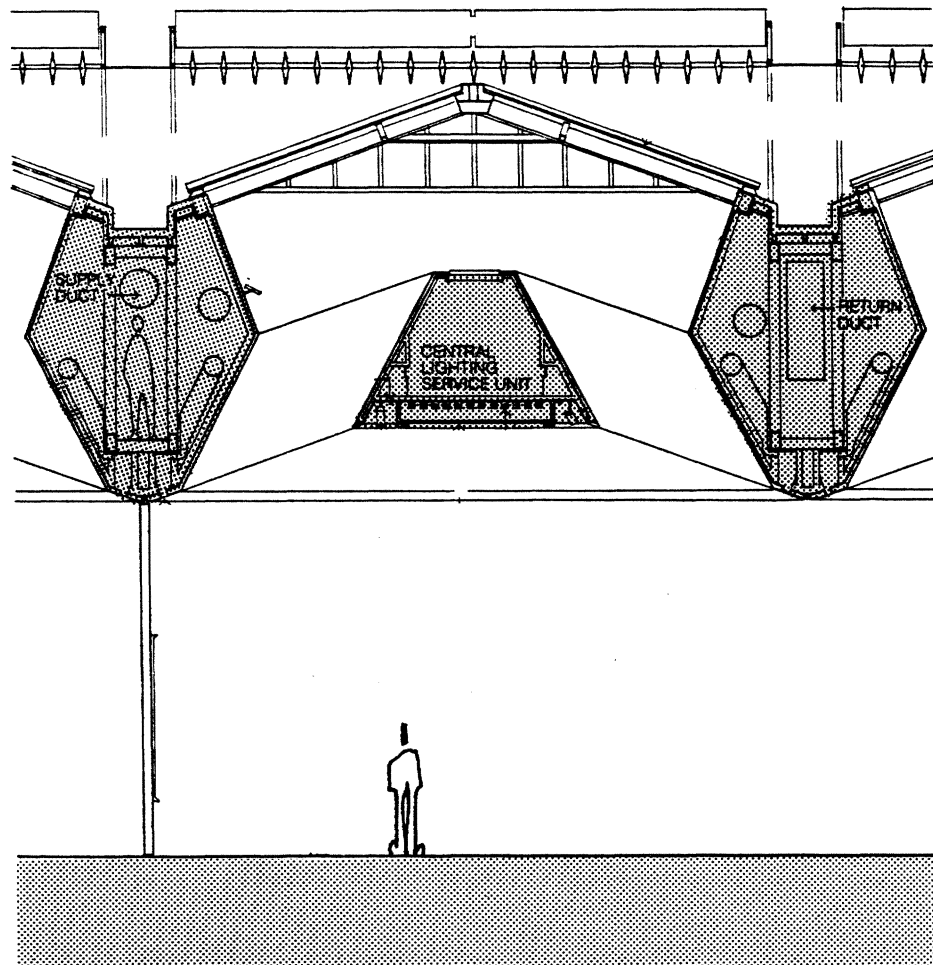
Another problem that can occur in the display of art is the contrast between galleries and the contrast between artwork and back ground. When too much contrast occurs in moving from a bright gallery to a darker one, the darker will appear too dark and gloomy and it reduces the ability to see details. Also contrast between art and background can drastically alter the image of the museum.

Another consideration in lighting design that must be considered is light color. Light color can cause an altering of the color rendering of the art. This can easily be corrected by the use of color filters or color corrected bulbs. Correction can also be achieved by the mixing of light sources. The Tungsten lights should illuminate the artwork and the fluorescent lights or daylight should be used as ambient light.

One last general consideration is the glare that light produces. There are two kinds of glare - direct and reflected. Both types result in reduced visibility and eye fatigue or discomfort. Direct glare occurs most often when a light source is within our field of vision. This can happen when there are low partitions lighted from the ceiling on both sides or windows directly beside or above a painting. Direct glare is almost impossible to get rid of but it is unacceptable when directly in front of a piece of art. Glare which is reflected off the art is a more difficult problem. Reflected glare from ceiling mounted lamps can be handled by aiming the lamp about 60° off horizontal, with the focus about 5' - 6" above the floor.

In recent years daylighting has begun to increase in popularity. This is partly in response to the monotonous windowless galleries of the 1940's and 50's. Daylighting appeals to architects because of its formal and energy conservation possibilities as well as to curators because of its varied light qualities and accurate color rendition. Daylighting can be controlled by architectural means as well as by special equipment and it is usually augmented by Tungsten lamps for night lighting.

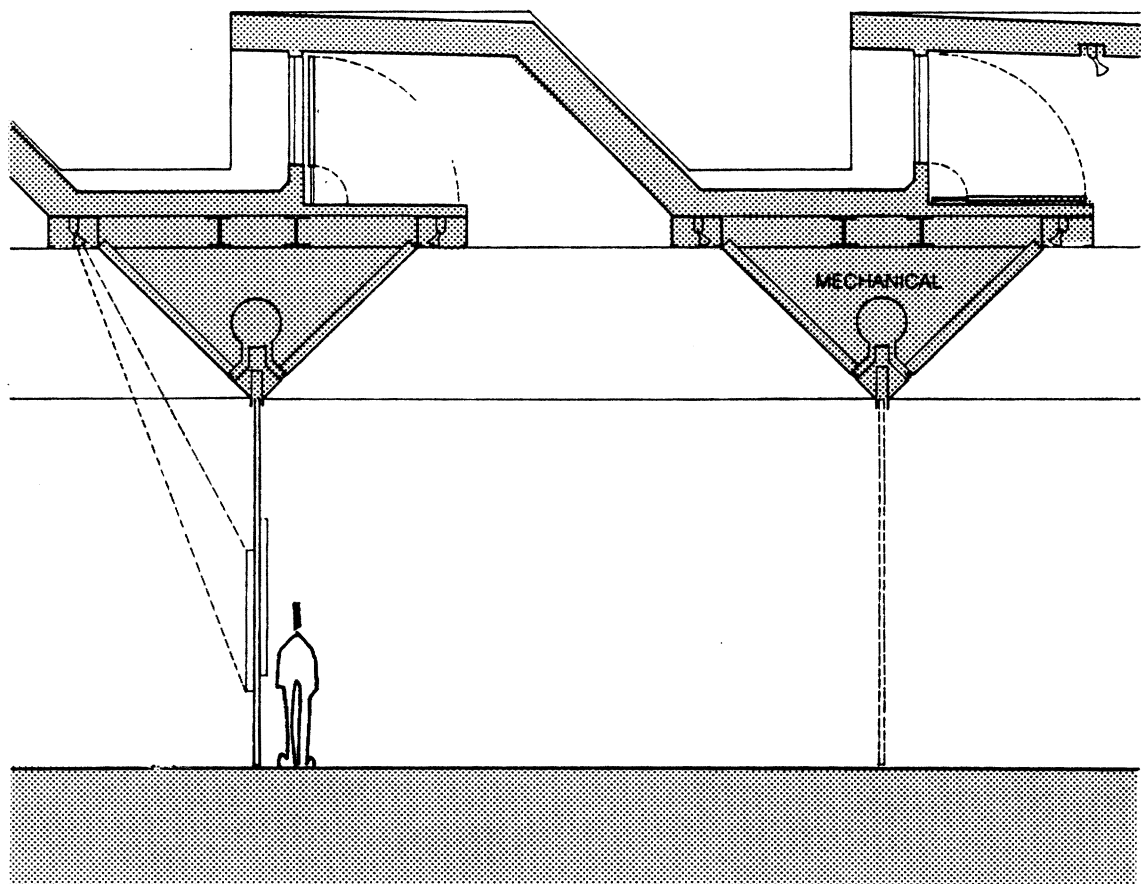
The following pages show some of the varied ways that daylighting has been incorporated into museums. They represent some of the most advanced techniques of our time.<sup>3</sup>



• THE • PORTLAND • MUSEUM • OF • ART •

The Tate Gallery

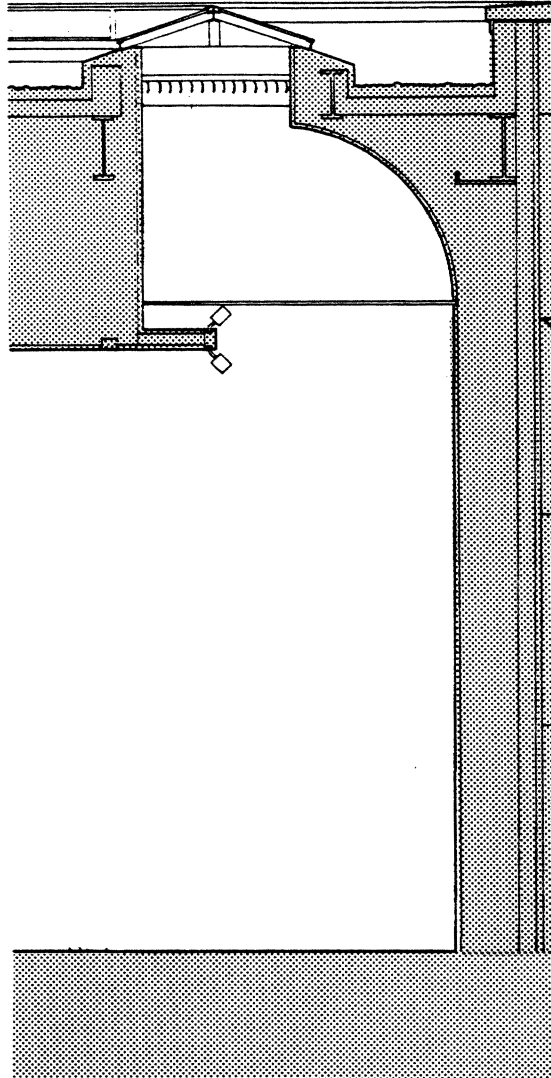
"The most high-tech of recent museum daylighting solutions, Llewelyn-Davies Weeks' Tate Gallery addition, designed in conjunction with Ralph Hopkinson, Newton Watson & Partners as lighting consultants, is a machine for sun control. Two sets of movable louvers, located above the UV-filtering skylights, operate with light sensors and electronic controls. The upper louvers are seasonally adjusted according to the sun's angle; the lower louvers control daily changes in daylight levels. The doubly truncated light well has a central lightbox housing both fluorescent lamps behind a translucent diffuser and incandescent lamps on a track. The system provides light intensities under the recommended limits, with the truncated forms directing the light to the artwork without shadows or glare. Nevertheless, it seems to be an overly complex solution for the control of daylight."<sup>3</sup>



• T H E • P O R T L A N D • M U S E U M • O F • A R T •

Tarble Arts Center

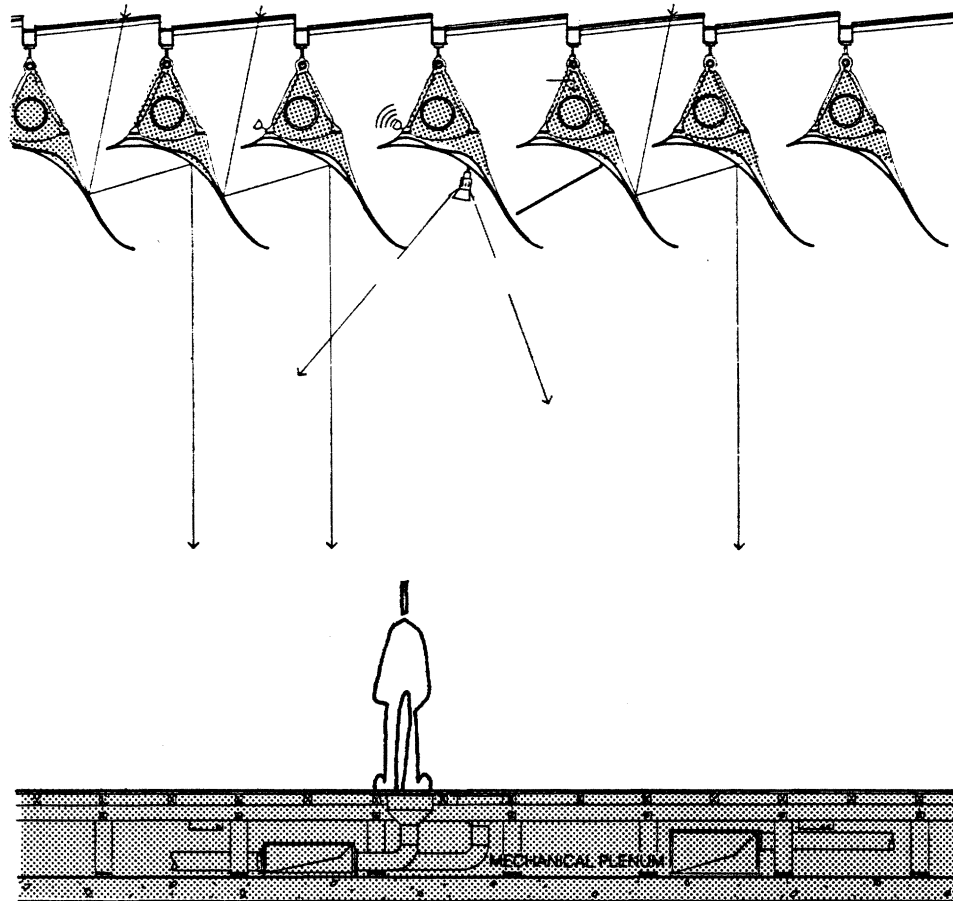
"E. Verner Johnson & Associates' Tarble Arts Center at Eastern Illinois University has south-facing clerestories. Lighting designer William Lam thinks that 'south light has a better color and more variety than north light. It's also easier to control with overhangs and movable panels.' The clerestories at Tarble have deep overhangs to shade the glass. Inside, movable panels can be raised to reduce the daylight opening on very bright days or completely closed to reduce the artwork's light exposure when the museum is not open. The light shelf and angled back wall of the clerestories are painted white to reduce the ultraviolet component of the daylight as it bounces off each surface. Incandescent lamps hang from pockets at either side of the clerestory opening. That, along with tapered duct chases, prevents the casting of shadows on the demountable partitions while ensuring that the light all strikes the wall at the proper angle. With a small amount of glazing and simple daylight controls, the designers of the Tarble Arts Center have achieved a lot with very little."<sup>3</sup>



• T H E • P O R T L A N D • M U S E U M • O F • A R T •

The Dallas Museum of Fine Arts

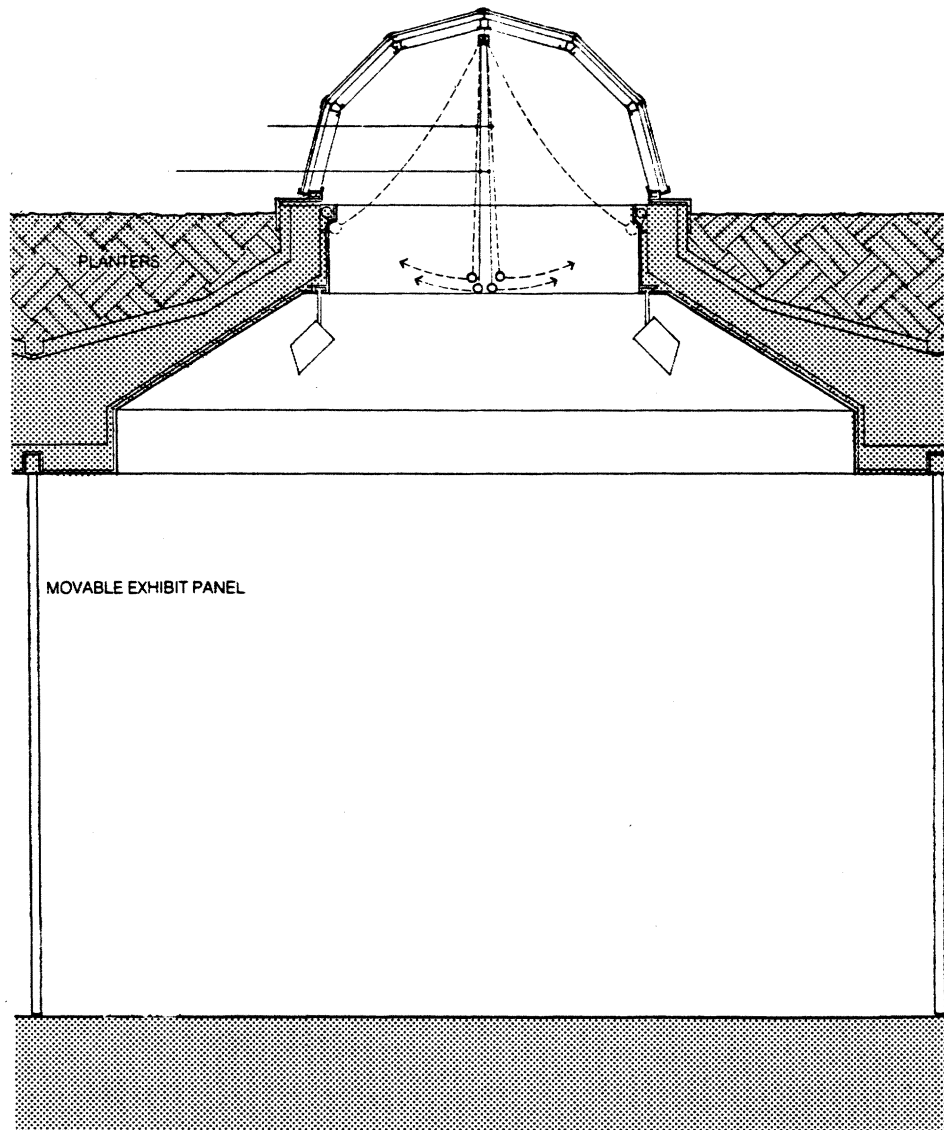
"The large galleries at the Dallas Museum of Fine Arts by Edward Larrabee Barnes Associates, with Jules Fisher and Paul Marantz as lighting designers, have perimeter skylights that wash the walls with controlled daylight. Curators can vary the amount of daylight in the galleries by manually operated louvers that will be seasonally adjusted. (Paul Marantz thinks that few museums in this country are willing to pay for and maintain elaborate automatic louver systems.) A light shelf further interrupts any direct sunlight and supports track lighting along its upper and lower edge. The skylight's reflecting mechanisms, along with the coved display walls, promise a well diffused ambient daylight."<sup>3</sup>



• T H E • P O R T L A N D • M U S E U M • O F • A R T •

Menil Collection

"Designed by Renzo Piano and Richard Fitzgerald & Partners with Ove Arup & Partners as engineers, the Menil Collection galleries have a glazed roof above large, white, ferrocement louvers that diffuse all but the early morning light. The fixed louvers or 'leaves' hang from a ductile iron space frame through which run return air ducts. Incandescent lamps hang from a tract along the underside of the fixed louvers, and panels fit between the louvers to close off all natural light. The roof glazing has a stainless steel coating and ultraviolet filters to reduce the transmission of damaging wavelengths without changing the spectral quality of the daylight, while the window glazing is shaded by the louvers that extend 12 feet beyond the walls of the building. The windows in the galleries are four feet wide and kept to a minimum; only those areas intended for sculpture have full-height glazing. Because of high light levels in the galleries, object will be on display for only brief periods, when brought out from an artificially lighted storage viewing room. (Some artificially lighted galleries can accommodate the most light-sensitive objects).<sup>3</sup>

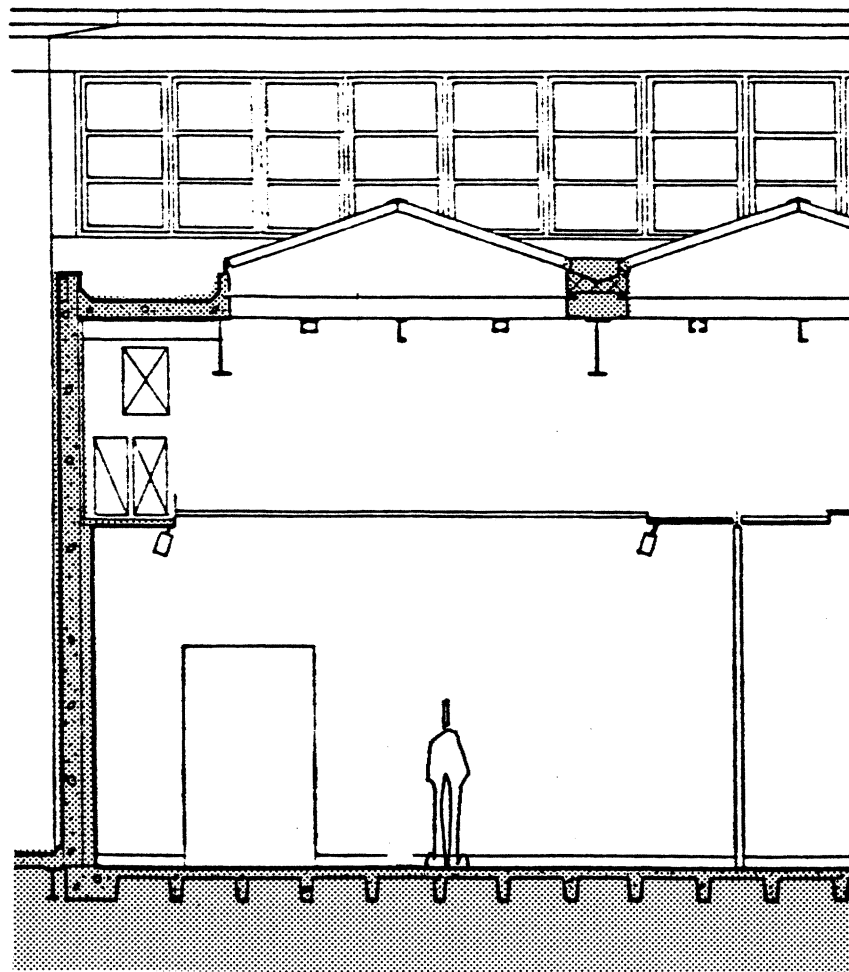


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Mayer Art Center

"The barrel-vaulted skylights at Phillips Exeter Academy's Mayer Art Gallery have an ingenious shading device developed by architects Amsler, Hagenah & MacLean with Jules Horton, lighting designer. The shading system consists of four shades - two opaque and two translucent. The shades can hang free at the center of the barrel vault or, in various combinations, can be attached via cables to the spring line of the vault. Lamps hang from continuous tracks at the base of the skylights, illuminating the artwork with a minimum of shadow since the ceiling slopes down to the walls. Like other linear skylight solutions, this gallery's best lighting conditions occur along the long walls, thus limiting artwork display options."<sup>3</sup>

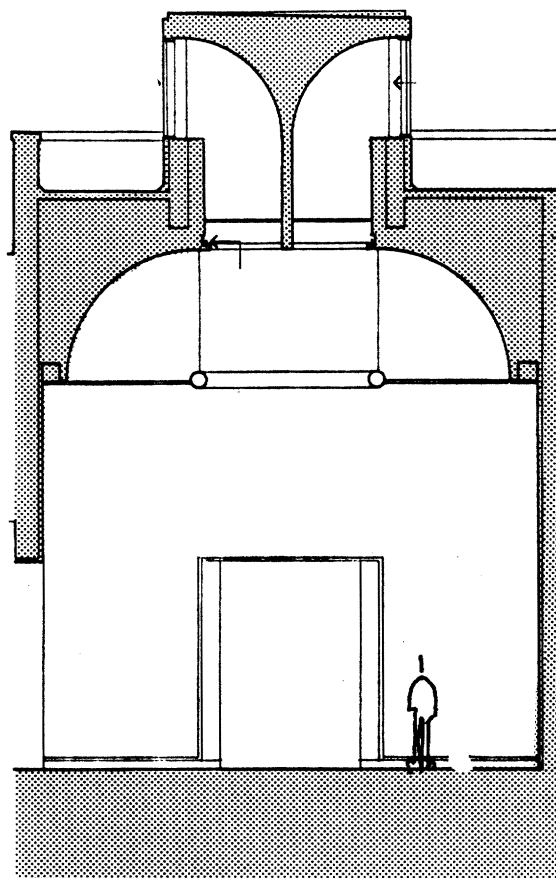




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Cleveland Art Museum

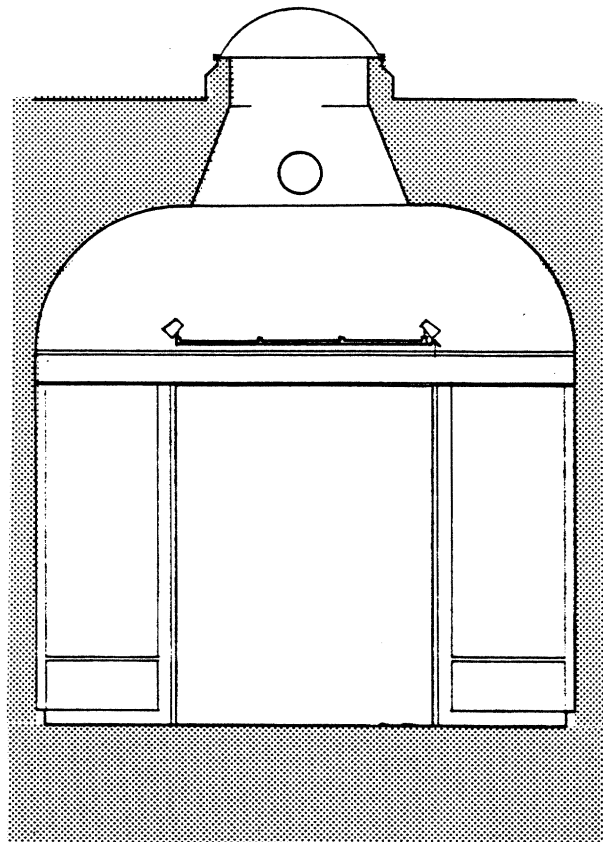
"This gallery addition to the Cleveland Art Museum by Dalton, Van Dijk & Johnson has gabled skylights with ultraviolet filters and a ceiling of translucent, acrylic laylights to further filter and diffuse the daylight. Structural and mechanical elements above the laylights were carefully placed to minimize any shadows. Fluorescent lamps above the laylight ceiling are used for night lighting; suspended track lighting is used during the day. The laylight system, similar to those used elsewhere in the Cleveland museum, offers flexibility in the arrangement of partitions as well as an even, shadowless light, although some people consider such systems to be visually monotonous."<sup>3</sup>



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### Anchorage Historical and Fine Arts Museum

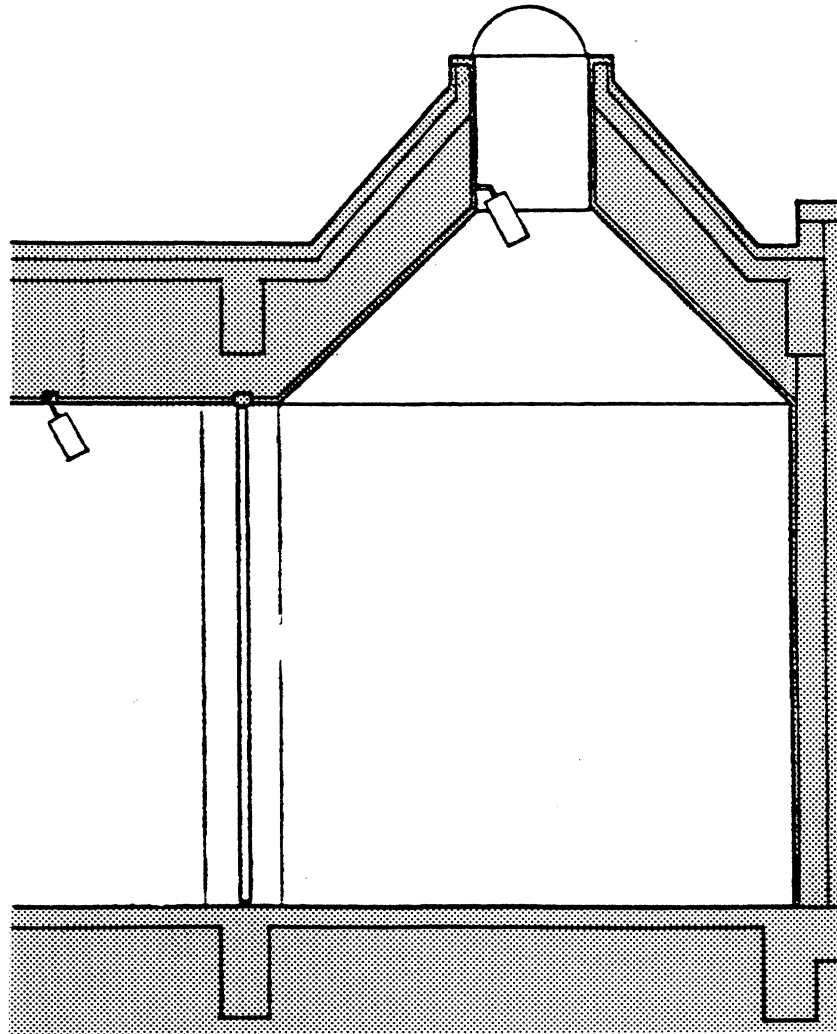
"At the Anchorage Historical and Fine Arts Museum by Mitchell/Giurgola and Maynard & Partch, architects, with Howard Brandston, lighting designer, two central art galleries have back-to-back light scoops with deep light wells painted white to reflect the low Alaska sun. The dimensions of the light scoops were determined after extensive sun studies and model testing. The gallery ceilings curve to cast minimal shadows on the walls. Suspended in the center of the galleries are incandescent lights concealed within metal tubes, eliminating what Howard Brandston calls 'the clutter of lamps' in many galleries. Concealed fluorescent lamps light the scoops at night."<sup>3</sup>



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The Speed Museum

"In few museums has the building's plan and form been so influenced by daylighting as in the Speed Museum addition by Geddes Brecher Qualls Cunningham. Each gallery has UV-filtered skylights, a truncated and covered lighting well to spread the daylight down the walls, and a suspended laylight to prevent the focusing of light in the center of the gallery. Incandescent lamps sit on a track along the upper edge of the laylight. The design makes the display of objects in the center of the gallery more difficult, but lighting designer Claude Engle thinks that such limitations are the price for good lighting. 'When we sought total flexibility in museums, the light proved too even and unexciting.'"<sup>3</sup>



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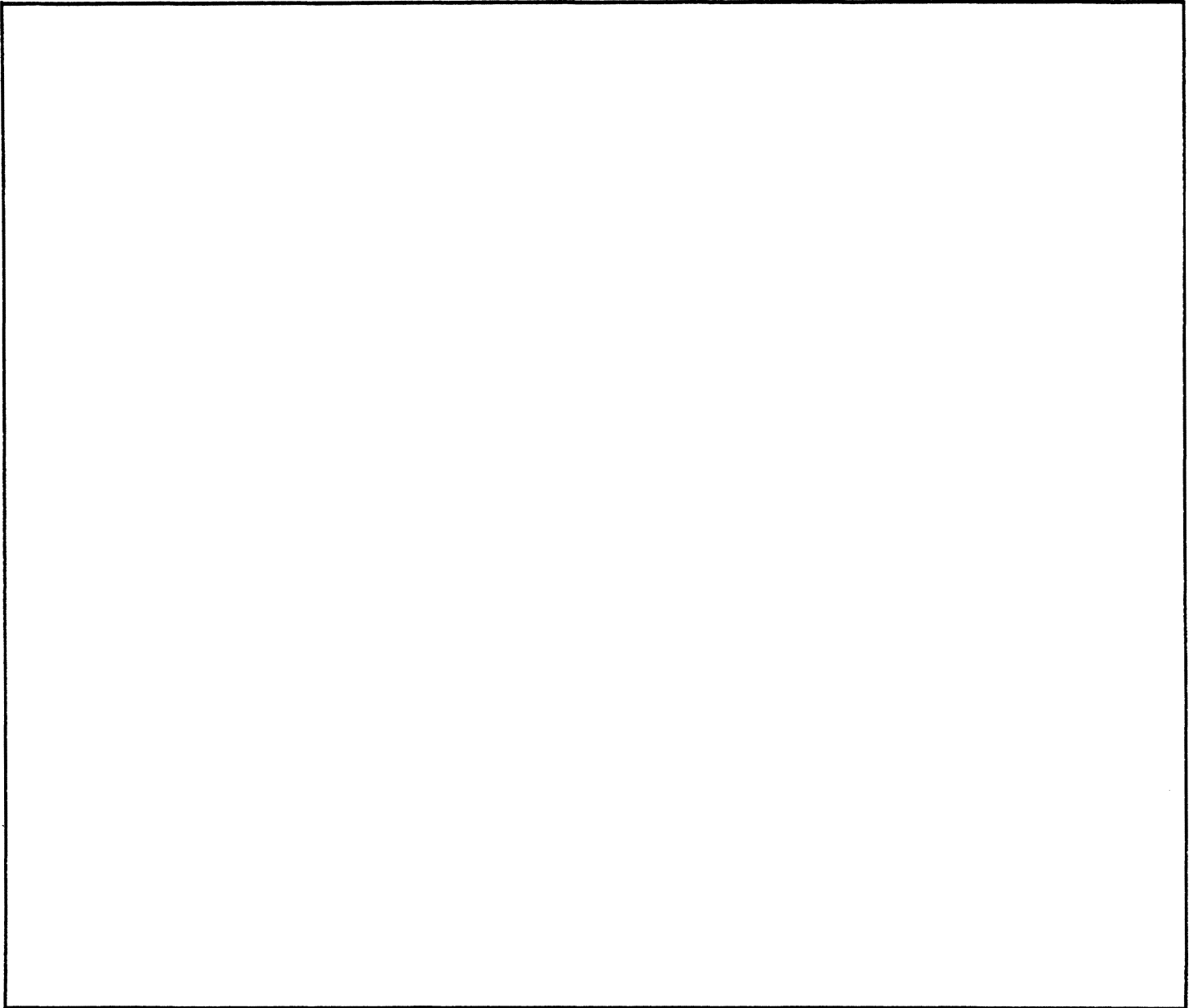
Korean Museum of Modern Art

"Tai Soo Kim of the Hartford Design Group, along with lighting consultants King Lui Wu and John Powell, use both sawtooth and hip roof skylights in the Museum of Modern Art in Korea. Of the two, it is the east-facing sawtooth skylights, proportioned to block out all the highest southern sun (which may require some exterior shading in summer), that, in the opinion of Mr. Wu, 'are the most exciting. They do not need computerized louvers to make them work. They also allow the use of clear glass and a view of the sky.' While the unshaded hip-roof skylights demand that light-sensitive objects be displayed elsewhere in the museum, the skylight designs show how simple the best daylighting can be."<sup>3</sup>

## End Notes

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- <sup>1</sup>Robert Campbell, "Forms 'Exploding' From a Drum," *Architecture*, May 1984, pp. 222-229.
- <sup>2</sup>John Morris Dixon, "Art Oasis," *Progressive Architecture*, Apr. 1984.
- <sup>3</sup>Thomas Fisher, "Sheading Some Light on Art," *Progressive Architecture*, Feb. 1984, pp. 105-111.
- <sup>4</sup>William Pena, Problem Seeking: An Architectural Programming Primer (Boston: CBI Publishing Company, Inc., 1977); pp. 58-59, pp. 62-63, pp. 80-81.
- <sup>5</sup>Helen Searing, New American Art Museums (Los Angeles: University of California Press, 1982), pp. 79-91, pp. 107-113.



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