Gallery Environment

The acoustics of the Fort Wayne Art Museum do not play a major role in the design; however, "white noise" may be desired to mask the incidental noise and to encourage the discussion and conversation about the artwork without being heard by every other visitor in the gallery.

The movement of the building, even in the slightest amount, will damage the artwork present. Care must be taken in the design for possible vibration of the building's mechanical systems. The proximity of the railroad to the site must be studied in order to determine its effect on the design.

The air quality of the gallery must control the temperature and the humidity of the space. The improper control of either will irreparably damage the art. With the accompanying psychrometric chart shown in Figure 12, one can see the difficulties of balancing the temperature with the relative humidity. According to the figure, Zone 1 - Winter comfort zone; Zone 2 - Summer comfort zone; Zone 3 - Safety zone for paintings; Zone 4 - Safety zone for archives; Zone 5 - Safety Zone of diverse collections. (See Figure 12 on next page)

The purity, or the amount of dust in the air is also important in preventing the deterioration of art. Air purifiers on the ventilation equipment can easily correct this problem.

Lighting is one of the most critical issues in gallery design. The lighting must be capable of showing the exact color and relief of the exhibits. If natural lighting is utilized, the damaging effects of
of the ultraviolet light on paint pigment must not constitute a major cause of deterioration. The proper control and utilization of natural light is not done. Many natural lighting options do exist however. (See Figure 13 on following page)

Artificial sources of light must be chosen according to their degree of flexibility of intensity, location, and color quality. The angle of illumination is important for the most effective viewing of the art. It is dependent on the type of art, finish of art, and the depth and size of frame. (See Figure 14 & 15 on the following page)

The visual presence of a security person would for all practical purposes be sufficient for most exhibits. Special shows may require additional security. The use of ropes for security
Fig. 13.: Natural Lighting Options

Fig. 14.: Sculpture Lighting Options
1. Central Axis of Gallery
2. Visitor's Circulation
3. Upper Concealment Zone
4. Limit of Reflected Field
5. Lower Concealment Zone
6. Approximate Viewing Minimum

Fig. 15: Portrait Lighting Options

would also be used. The visual environment must not compete with the art works and is highly dependent on the collection shown. The elimination of any piping carrying liquid through a gallery area is to be strived for. The possible bursting of a pipe would totally destroy an art work that may be present in the space.

**Gallery Furniture**

The only furniture possibly needed in the gallery area is benches for seating. Care must be taken that the inclusion of these benches do not contend or in any way interfere with the viewing of the artwork.
Gallery Areas

The gallery/exhibition spaces will be divided into four categories: the permanent collection, the non-permanent exhibition, a sales/rental gallery, and a children's wing.

Many of the same principles will be applied to each of the four areas. The permanent collection will definitely need some form of flexibility since the exhibition of the total permanent collection would be unfeasible and unwise. The non-permanent exhibition must require great flexibility. The sales/rental gallery will use the same general gallery/exhibition presentation formats. The techniques of display should be of a more temporary nature due to the fact that art works may be sold and should be replaced quickly with new works. The children's wing will be the least structured of the four gallery/exhibition areas. This area will be geared to the discovery of art by young people; however, some of the same principles of viewer/participant circulation, exhibition scale and, to a lesser extent, the environmental requirements of the objects on display.

Work Environment

The work/storage area will need the same measure of protection for the art work as the gallery/exhibition area. These areas will be much easier to control in regards to air conditioning, lighting, and security. The storage areas in particular will have a very small number of employees ever in those rooms. The air conditioning would be most
critical with the air purity, the amount of dust in the air, a large concern in a storage area where a piece of art may be stored for many years. Even when stored for many years, a piece of art must remain in a respectable state with no deterioration.

**Work Spaces**

Dock Area - This area will include one overhead door 12' x 12' with a dock leveler and dock seals with the needed exterior dock requirements. A covered dock area would afford an added measure of protection for the crated art work. A forklift is necessary for a modern museum, thus ramps or no level changes must be present. Room for a forklift to maneuver with a load must be present.

Outer Vault - This space will be used for the temporary storage of the crated art work and must afford some measure of physical and environmental protection. It may also be used for empty crate storage. It should be directly related to the dock area.

Center Vault & Storage - This area will constitute the largest of the three vault areas. Approximately 80 - 90% of the art work in uncrated storage will be in this area with the remainder in the inner vault. While this is one space, separation into smaller areas will be needed for the control of each art form's air quality environment, security, and fire separation. Storage of two dimensional art is most easily accomplished by movable wire mesh screens. These are large screens on horizontal tracks where the paintings, graphics, and tapestries can be stored in the least
amount of floor space. Sculpture and other three dimensional art are normally stored in lockers or small enclosures. This area should be adjacent to the outer vault.

Center Vault - Inspection - This will be part of the center vault and will be used for the inspection of uncrated goods. A high light level and some furniture that is needed for inspection must be present. Easels for the paintings and a table for sculpture inspection must be present.

Center Vault - Registrar's Office - This room will be the registrar's office in and among the art. The registrar will need a desk and a few file cabinets. This area should have visual supervision of the inspection area and an entry to the central storage area. The registrar will register all incoming works and their condition into his files.

Inner Vault - This will be the most secure room in the museum. There will be some art storage, but on a very small scale and only for the most valuable pieces. The registrar's master records will be stored in this area. The inner vault will be the equivalent of a bank's vault. It must be near the registrar's center vault office.

Design Studio / Shop - This area will consist of a small wood and metal shop which will be used to construct needed items for an exhibit. Items needed for the display of new exhibits or those materials needed for the repair of incoming or existing exhibits. This area will be under the control of the preparator and his workers whether they be permanent or temporary. A small room for the storage of raw materials e.g. wood, metal, and canvas will also be needed.
Design - Preparator's Office -
This office will be the preparator's only office. It will contain his reference materials, his desk files, and a design drafting area needed for his layouts of new exhibitions. The office may also include two smaller desk areas for the temporary personnel needed.

Curator's Shop - This shop area will be used only for small, simple immediate repairs. Director Krushenick stated that due to the high level of expertise needed in restoration and repair, qualified personnel are difficult to obtain. Also the Fort Wayne Museum of Art, even in its expanded capacity, would not warrant a fully equipped curator's shop for all art forms. All difficult tasks will be sent to regional art centers. Some elementary or temporary tasks would be done in this shop. Examination tables and surfaces, hot tables, sinks, washing tanks, fumigation chambers, ultraviolet lamps, drying ovens, microscope and excessive storage would be needed on a limited scale. Adequate ventilation would be necessary. This area should be close to the center vault's inspection area.

Curator's Office - Two small work offices for the two curators located adjacent to their shop should include a small desk or work surface with visual access to the shop.

Lecture Environment

This area should be more environmentally suited to the human occupants than to the art work. While the separation will exist between the art and the occupants, there can not be a total separation, or you risk the isolation of either the lecture space or the art exhibition areas.
Lecture Spaces

Lecture Hall / Classrooms - There will be three smaller gathering spaces which when opened will form one large lecture/ gathering space. These spaces must be flexible enough to be usable for the classroom lectures, classroom demonstrations, social gatherings, and perhaps private art showings. These spaces must be of a scale and quality that are as effective in their smaller roles as they would be with two or three combined to form larger spaces. With the flexibility that will be needed in these spaces, fixed furniture and equipment would be impractical. Movable seating in each of the three classrooms would be approximately 150 - 200. Movable bulletin boards, chalk boards, and exhibition aids could be moved in when needed. Acoustic needs in these areas would be of a high priority.

Studio Workshop - While the three larger classrooms will be utilized for the mere demonstration of art techniques, the studio workshops will actively involve the class. Work tables for each person or group of persons will be needed. Clean-up facilities will be needed for each person involved. Possible use would be in all art form instruction (e.g., painting, sculpture, drawing, design, wood carving, and so forth.) The Fort Wayne Community Schools would be using these spaces for some of their pupil visits, with adult evening instruction being a definite possibility. Lighting, in a general use, will be needed for classroom use. Task lighting may be needed for the instructor's use and perhaps for the individuals in the class. Power sources will need to reflect this option. Natural lighting will also provide additional options. Control of the natural will be required.
Office Environment

The following areas will be used almost exclusively for human comfort. All spaces are of a small scale with the lighting requirements reflecting this. Power requirements will be more rigid with more outlets required. Natural lighting should be used in many of these areas for its light and the visual and aesthetic environment. Security will need to be of a moderate to heavy nature. The display of art will be used for the enjoyment of the employees. A private entrance will be a requirement.

Office Spaces

Director's Office - This office should be a workable environment yet convey to the public this most important position. An executive desk and chair, a conversation area with sofa, three chairs, and a coffee table will be required. A private closet, 200 linear feet of bookshelves, two full size file cabinets, and some large plants would complete the environment.

Primary Personnel - An open office system will be utilized for the primary personnel. Each area will need acoustic privacy. A desk and chair, a file cabinet, fifty feet of bookshelves and two side chairs will be needed for each of these six areas.

Support Personnel - These six areas would need little acoustic privacy and would not need the five foot walls of the primary personnel. A small desk and chair with a side chair would be needed for each area. A central area with six files and 100' of books will be a necessity.
Waiting / Entry Area - Only a small waiting area for eight to ten people will be necessary. The supervision of this area by the secretary will be required. A place for magazine and coat storage will be needed.

Boardroom - This area, like the director's office will also be of a higher quality than normal. A large table and chairs for 15 -20 people will be needed. A display, chalk, or bulletin board will be needed in some capacity. This room will be used by the board of directors and for executive meetings.

Conference Rooms - Two smaller rooms with seating for 8 -10 with the same needs, but of a more simple nature will be needed. These will be used for staff meetings and for employee visitors.

Registrar's Record Room - This room will enclose the duplicate permanent records of the museum holdings. It will include a small work table, and a small desk and chair. 6 -8 fireproof files will be needed. The museum master plan (duplicate set) will be located here. The enclosed records will be the work sets of those master sets included in the inner vault.

Staff Library - This will be used exclusively by the staff. It will contain museum owned books and should include four chairs, two large tables, and 400+ of books.

Printroom / Duplication - This will include two large tables, four file cabinets, metal shelving, a Xerox machine, ditto machine, and storage cabinets. The museum will do some in-house printing.

Staff Restrooms - Since the employees will be about ½ men and ½ women the rooms should be approximately the same size. The mens should include
three sinks, two urinals, and two toilets. The women's should include three sinks and four toilets.

Staff Showers & Lockers - Identical rooms adjoining the staff restrooms will include two showers and lockers for staff use only.

Staff Lounge - A couple of sofas and a few chairs in a relaxed atmosphere will be adequate. It should be adjacent to the office and restrooms.

Security Room - This would be the base of security operations. It would include the master control panel, two desks for the officers, and some security storage.

Volunteer Center / Office - This will be the base of volunteer operations. Three desks and chairs with coat storage and adequate storage and display space will be necessary. Proximity to the employee offices, print room, and members' facilities would be desired.

**Other Spaces**

Giftshop / Bookstore - This area will be located within the building's walls but outside of the official museum gate. It should be a very visible area with a very unconfined circulation pattern. Some security must be present to prevent shoplifting. It should be adjacent to the sales / rental gallery and should offer books, pamphlets, stationery, cards, slides, prints, and some children's articles.

Kitchen - The kitchen will service the public cafeteria and also the member's banquets. The kitchen must serve cafeteria and also specific menus. Total serving capacity will be approximately 200. Total staff will be 3 - 4 people.
Public Cafeteria / Lounge -
This area will function as a combination of a cafeteria eating area and lounge. It will include small tables with chairs and some waiting areas with only seats. Capacity will be about 250 people. A visually open environment will be required for this waiting area. Different areas may be provided to eliminate one large space.

Orientation / Tour Information -
This small very open area should be located directly within the entry. This area should include guides to the museum and provide a reference point to anyone within the museum. Here groups will meet their volunteer guides or as an individual obtain museum pamphlets. At the orientation center, people will have an opportunity to donate to the museum. Here workers will obtain an official head count of the number of visitors. Here membership information will also be available.

Checkroom - This will be used by the visitors to check in their coats and other personal belongings. Coat and hat racks are necessary.

Public Restrooms - One set of large restrooms for use while in the museum and a smaller set in the non-gallery public areas should be present. The large men's room will include 3 toilets, 3 urinals, and three sinks. The women's would include 6 toilets and 3 sinks. The small restrooms would include in the men's, 1 toilet, 1 urinal, and 1 sink. The women's would include two toilets and one sink.

Members Lounge and Gallery -
This area would be used for member receptions when a new exhibition would open and for other membership functions. Membership meetings will also be held here in a relaxed atmosphere. Four or five sofas with
20 side chairs should be present. Adequate room to set up chairs for a membership meeting with storage space for those chairs. This area must be nice enough to entice people to become members of the Port Wayne Museum of Art. The exhibition of art will be present. This art work will include both museum owned goods and member's private art work. This area may also be used for members' banquets.

Members Support Kitchen - While the public kitchen will be utilized for food preparation, a small area immediately adjacent to the members lounge/ banquet area will be needed for dish and silverware storage, drinks bar, and a small food salad bar.

Members Conference Room - These two rooms will each include a large table with seating for about 12 - 15 each. These rooms may combine to form one large area.

Members Restrooms - The mens room will include three toilets, three urinals, and three sinks. The womens restroom will include five toilets and four sinks.
Space Relationship

Space Relationship 34
Fig. 16.: Space Relationship Diagram

- Strong Relation
- Moderate Relation
- Weak Relation
General Env. Criteria

Function 36
Interior Flexibility 36
Interior Circulation 36
Building Core 37
Building Expansion 37
Economic Efficiency 37
Code Requirements 38
Security 39
Special Criteria 39
Parking 40
Loading & Lighting 40
Sculpture 40
Function

The aim of Director Krushenick is to educate the largest number of the public in the visual arts. He regards the arts as a right and not a privilege. The building should reflect this educational theme and the highest quality of a viewing environment should be held foremost in the general building criteria.

Interior Flexibility

Interior flexibility is vital in the gallery/exhibition areas. It would also be a highly useful feature in the office area, perhaps utilizing office landscaping. The storage area that will be part of the center vault should also be highly flexible.

Interior Circulation

Interior circulation is vital in the workings of a well designed museum. Circulation must be a clear and logical path to the visitor. (See Gallery/Exhibition Space and Activity Performance Requirements)

Employee movement must not in any way interfere with the visitor’s viewing of the art. Changes of total exhibitions or a single artwork must not alter visitor flow dramatically.

Some groups of people may require separate or special entry points. The employees, the general public and the members of the museum may require these private entries.
Building Core

The central area of the Fort Wayne Museum of Art will definitely be the gallery/exhibition areas. Visitors, members, and the employees all must interact directly with these areas.

Building Expansion

The plans for the Museum must extend itself as far as possible in the original design. This approach has usually been proven to be the most economical for the client.

The site that has been chosen for the Museum may be restrictive in its possibilities for future expansion due to the fact that it is bounded on all four sides by "permanent" elements. Those elements are two major downtown streets, an elevated railroad, and Lou Kahn's Center for the Performing Arts.

Economic Efficiency

The Fort Wayne Museum of Art, as is the case with most museums, is not a profit making institution. Since it must depend on gifts and grants, the public image and membership facilities are an important money obtaining issue.

The following represents an approximate budget for the Museum of Art in 1977 - 1978:

Debits:  Salaries $58,000
         Programs 13,000
         Administrative Costs 11,500
         Debt Retirement 15,350

         Approximate Total $100,000
Credits: Fine Arts Foundation 32,000
P.W. Community Schools 16,000
Endowment Funds 30,000
City Budget 13,000
Approximate Total $100,000

A 1975 study of Art Museums and their funding by the National Endowment for the Arts classified all museum income as 63% from the private sector, and 37% from the public sector.\textsuperscript{15}

Private: Private Support 21%
Operating Revenues 29%
Investment Revenues 13%

Public: City / County Gov. 18%
State Government 7%
Federal Government 12%

The Fort Wayne Museum of Art should work to somewhat match these income averages.

The annual general membership fees are $15.00 and the lecture series that are offered cost from $10.-15. No general admission is currently being charged; however, a small admission price could be charged in a new museum. This point has sparked numerous discussions and adequate studies should be done before an admission charge is implemented.

\section*{Code Requirements}

Adequate exits must be provided for lecture areas, general gallery areas, and the building as a whole. The fireproofing of the vault areas with the CO\textsubscript{2} extinguishing system may require special code variances.
Security

Security for the different building areas may have many variances. With the four basic areas of gallery, lecture hall, employee work areas, and the membership facilities, many different options exist. The following chart illustrates the option existing for the first three areas from the above list.

<table>
<thead>
<tr>
<th>Gallery</th>
<th>Lecture</th>
<th>Work Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open</td>
<td>Open</td>
<td>Closed</td>
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<td>Open</td>
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</table>

All Areas Open
All Areas Closed

Special Criteria

Director Krushenick expressed the opinion that an art museum should be in the forefront of all new ideas. His suggestion for the integration of energy conscious and solar energy design would satisfy this.
Parking

The downtown site that has been chosen warrants a complete parking study. With preliminary calculations, on site, on grade parking would not satisfy the proposed needs of approximately 200 cars and 6 school buses. Proposed parking garages in the downtown area vital in the Fort Wayne Redevelopment should satisfy the needs.

Loading & Lighting

One loading dock will be needed for the shipping and receiving of artwork and other building needs.

Exterior lighting will be needed both for security purposes and to maintain the high public image and visibility needed by any museum.

Sculpture

The Fort Wayne Museum of Art should extend its art beyond the walls of its building. The present facility on West Wayne Street has an inadequate 2,000 square feet of sculpture garden located in the back yard. A doubling or even tripling of that area would be sufficient and may be a desirable link to the Center for the Performing Arts.
Site Data

Site Data
Macro-scale Climate
Downtown Analysis
Immediate Area Analysis
Site Description
Site Photos
Site Analysis
Site Priorities
Site Data

The site is located in downtown Fort Wayne, Indiana on Main Street directly east of Lou Kahn's Fort Wayne Center for the Performing Arts. The trapezoidal plot is formed with an elevated railroad making its skewed side. (See Figure 17 on next page.)

The reasons for the choice of this site from the Vincent Melzac Feasibility Study are as follows:
1. Space is immediately available.
2. The site has no acquisition costs since the Fine Arts Foundation already owns it.
3. The new facility could utilize existing utility systems of the Performing Arts Center. The utility systems were built beyond the needs of the center for a proposed arts center.
4. The museum could utilize the Center's facilities, for example, the auditorium.
5. Administrative services could be shared by the two buildings.
6. The proximity of both facilities would enhance attendance to both.
Fort Wayne, Indiana

Fort Wayne, Indiana, population 185,000, is the second largest city in Indiana. It is located at the intersection of the St. Marys and St. Joseph Rivers which form the Maumee River. It was because of this fact that it became such a strategic location in 1795 when "Mad" Anthony Wayne built a stockade.

Fort Wayne is known throughout the Midwest as a town with a very stable economic base of industrial and commercial enterprises. It was recently rated by a University of Nebraska study as the thirteenth most ideal city in which to reside in the U.S.

It is linked to the rest of the state by a strong interstate system and is located approximately equidistant from Chicago, Illinois, Detroit Michigan, and Cincinnati, Ohio.
Fort Wayne, Indiana is linked to the interstate system by Interstate 69. The major streets through Fort Wayne are:

- North - Lafayette Street
- South - Clinton Street
- East - Jefferson Street
- West - Washington Boulevard

The very congested US 30 attempts to be the north end by-pass. An east-south by-pass is planned for the 1980's.

Fort Wayne has typical Midwestern weather with the hot, humid summers and very cold winters. Fort Wayne has a moderate amount of rainfall for the year.
The downtown of Fort Wayne is typical of many large cities. The retail stores have all left the downtown for the suburbs and malls. Offices located downtown are still thriving due to the government offices, the good restaurants, and Friemann Park.

With the construction of the new convention center, new parking garages, the new I & M Tower, and the formation of a semi-mall on Calhoun Street, the downtown situation should improve greatly.
A. The Landing (30-60')
B. City-County Building (90')
C. Freimann Park
D. Fine Arts Center (70')
E. Proposed Site
F. Historic Ft. Wayne (25')
G. 3 Rivers Apartments (140')
H. #1 Fire Station
I. F.W. National Bank (270')
J. County Courthouse (120')
K. Anthony Wayne Bank (150')
L. Means Auto Sales (20')
M. General Telephone (60')
N. Lincoln Bank Tower (230')
O. Ayres Department Store (40')
P. Old City Hall (50')
Q. Barr Street Market
Site Description

The site is located in downtown Fort Wayne next to Lou Kahn's Fine Arts Center and Freimann Park. It is bounded on the east and west by Lafayette Street and Clinton Street respectively. They are the main north and south one way arteries through Fort Wayne respectively. They both contain four lanes of traffic and carry an average daily traffic flow of over 28,000 cars. Main Street, a two way street, on the south edge of the site carries a daily average of 17,000 automobiles.

The site is located near the intersection of Fort Wayne's three rivers. It is not in the flood plain and did not flood during the worst flood in 100 years that occurred in the spring of 1977. The soil is Martinsville loam and has good bearing capacity; however, this site was previously two and three story structures which were demolished 10 to 15 years ago. The soil conditions of the site are therefore unknown and soil borings should be taken to determine the exact conditions.

The Fort Wayne zoning ordinances pertaining to required minimum parking spaces for the auditorium and eating areas are waived being that the site is located within specified limits of downtown Fort Wayne. Since the site is presently zoned for the Fine Arts Center, the Museum of Art should not pose any great zoning difficulties.

The present mechanical systems for the Fine Arts Center are large enough to handle the proposed Museum of Art. The systems are located in the detached building from the Fine Arts Center that is northeast of the main building.
The wind patterns will be highly irregular in this urban site. The summer winds from the southwest will be highly influential, with the west northwest winds being hindered or blocked by Kahn's building.
View to the East from Site ( #1 )

Three Rivers Apartments, far left.
# 1 Fire Station, center.
Commercial Buildings, right.

View to the Southeast from Site ( #2 )

Commercial Buildings, left.
Beauty Shop, center.
View to the Southwest (#3)

General Telephone Tower, left.
Davis Car Sales, center.
Anthony Wayne Bank, far right.
Proposed office tower, in gap.

Courthouse & FWNB Tower, center.
City/County Bldg. & Park, right
Fine Arts Center, far right.

View to the West (#4)
Preimann Park with Fine Arts Center & Railroad Elevation.

Proposed Site with Fine Arts Center & Three Rivers Apartments.

Aerial View from Lincoln Tower (See Area Analysis)
View of Fine Arts Center from Freimann Park.

South Facade of Fine Arts Center from Freimann Park.

View of Railroad Elevation from Site.
Above: East Facade of Fine Arts Center.

Fine Arts Center from Lafayette & Main Street Intersection.

South Facade of Fine Arts Center from Main Street.
Two Dimensional Program on Site
Site Conditions
Site Priorities

1. The first priority is to not infringe upon the character of Kahn’s Fine Arts Center (Center for the Performing Arts). Differing degrees of infringement are possible with the south facade’s preservation being most critical.

2. The second goal is to make it a visible entity in relation to the main pedestrian focal point in the city, Freimann Park, located adjacent to the site. It should be accessible and present an inviting image to the park goer.

3. Another critical view to be preserved is the Lafayette and Main Street corner view. The street carries an unusually heavy amount of traffic and the Kahn facade is still very important. The Museum of Art must present an attractive view from this intersection.

4. The connection to the Fine Arts Center mechanical equipment and perhaps loading dock facilities is necessary. A direct link or close proximity will be needed.

5. The railroad elevation at the site’s north rear edge is a large infringement onto this site and must be addressed visually, audially, and in respect to the vibrations involved.
Space Summary

Tally of Spaces  61
Space Totals  63
**Tally of Spaces**

With the very inadequate space of approximately 20,000 square feet, a new facility calling for 50,000 to 60,000 square feet is not excessive.

The following breakdown of spaces was compiled from previous attached studies, conferences with Director Krushenick, general space standards from the reference material, and the personal experiences of the programmer.

<table>
<thead>
<tr>
<th>Tally of Spaces</th>
<th>Square Footages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gallery / Exhibition</strong></td>
<td></td>
</tr>
<tr>
<td>Permanent Collection</td>
<td>6,000</td>
</tr>
<tr>
<td>Non-permanent Exhibition</td>
<td>12,000</td>
</tr>
<tr>
<td>Sales / Rental Gallery</td>
<td>2,000</td>
</tr>
<tr>
<td>Children's Wing</td>
<td>4,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>24,000</td>
</tr>
<tr>
<td><strong>Work / Storage</strong></td>
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<tr>
<td>Dock with Forklift</td>
<td>200</td>
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<tr>
<td>Outer Vault / Crate Stor.</td>
<td>400</td>
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<tr>
<td>Center Vault - Registrar Off</td>
<td>75</td>
</tr>
<tr>
<td>Center Vault - Inspection</td>
<td>200</td>
</tr>
<tr>
<td>Center Vault - Storage</td>
<td>6,000</td>
</tr>
<tr>
<td>Inner Vault</td>
<td>900</td>
</tr>
<tr>
<td>Design Studio / Shop</td>
<td>600</td>
</tr>
<tr>
<td>Design Storage</td>
<td>100</td>
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<tr>
<td>Design - Preparator Office</td>
<td>150</td>
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<tr>
<td>Curator's Shop</td>
<td>200</td>
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<td>Curator's Office</td>
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<td><strong>Total</strong></td>
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<td><strong>Lecture / Instruction</strong></td>
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<td>3 @ 1,000</td>
<td>3,600</td>
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<tr>
<td>Studio Workshops</td>
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<tr>
<td><strong>Total</strong></td>
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### Office Areas

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<thead>
<tr>
<th>Area</th>
<th>Square Feet</th>
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<td>Director's Office</td>
<td>250</td>
</tr>
<tr>
<td>Primary Personnel 6 @ 100</td>
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<tr>
<td>Support Personnel 6 @ 75</td>
<td>450</td>
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<tr>
<td>Waiting / Entry Area</td>
<td>100</td>
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<tr>
<td>Board Room for 15 - 20</td>
<td>300</td>
</tr>
<tr>
<td>Conference Rooms 2 @ 150</td>
<td>300</td>
</tr>
<tr>
<td>Registrar's Record Room</td>
<td>100</td>
</tr>
<tr>
<td>Staff Library</td>
<td>150</td>
</tr>
<tr>
<td>Printroom / Duplication</td>
<td>150</td>
</tr>
<tr>
<td>Staff Restroom 2 @ 100</td>
<td>200</td>
</tr>
<tr>
<td>Staff Showers / Lockers 2 @ 75</td>
<td>150</td>
</tr>
<tr>
<td>Employee Lounge</td>
<td>100</td>
</tr>
<tr>
<td>Security Room</td>
<td>100</td>
</tr>
<tr>
<td>Volunteer Center / Office</td>
<td>200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,150</strong></td>
</tr>
</tbody>
</table>

### Other

<table>
<thead>
<tr>
<th>Area</th>
<th>Square Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gift Shop / Bookstore</td>
<td>600</td>
</tr>
<tr>
<td>Kitchen</td>
<td>800</td>
</tr>
<tr>
<td>Cafeteria / Lounge</td>
<td>1,500</td>
</tr>
<tr>
<td>Orientation / Tour Info.</td>
<td>200</td>
</tr>
<tr>
<td>Checkroom</td>
<td>250</td>
</tr>
<tr>
<td>Public Restroom 2 @ 400</td>
<td>800</td>
</tr>
<tr>
<td>Members Lounge / Gallery</td>
<td>750</td>
</tr>
<tr>
<td>Members Restaurant</td>
<td>750</td>
</tr>
<tr>
<td>Members Support Kitchen</td>
<td>150</td>
</tr>
<tr>
<td>&quot; Conference Rooms</td>
<td></td>
</tr>
<tr>
<td>2 @ 150</td>
<td>300</td>
</tr>
<tr>
<td>Members Restrooms 2 @ 150</td>
<td>300</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6,400</strong></td>
</tr>
</tbody>
</table>

See Figure 18 on following page.

See Figure 19 on following pages.
Space Totals

Total of all space totals:

<table>
<thead>
<tr>
<th>Category</th>
<th>S.F.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gallery / Exhibition</td>
<td>24,000</td>
<td>51%</td>
</tr>
<tr>
<td>Work / Storage</td>
<td>8,925</td>
<td>19%</td>
</tr>
<tr>
<td>Lecture / Instruction</td>
<td>4,400</td>
<td>7%</td>
</tr>
<tr>
<td>Office Areas</td>
<td>3,150</td>
<td>9%</td>
</tr>
<tr>
<td>Other</td>
<td>6,400</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Net Total</strong></td>
<td><strong>46,875</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Circulation and unassignable area -
(See cost section following)

\[46,875 \text{ S.F.} \div 0.79 = 59,335 \text{ S.F.}\]

Gross Total 59,335 S.F.
Fig. 18: Space Corelation
Scale: 1"=100'}
Fig. 19: Space Corelation 1"=50'
Cost Breakdown

The following approximate total budget requirement is obtained from the previously found net totals & the use of the cost estimating guides from William Penet's book, Problem Seeking - An Architectural Programming Primer.

A. Building Costs:
   46,875 S.F. ÷ .79 = 59,335 S.F. Gross
   Museum Efficiency Ratio 65/35%
   35% - 5.5% Mechanical - 7.0% Walls
   - 1.5% Public Restrooms = 21%

   59,335 S.F. x $45.00 = $2,670,075.00

B. Fixed Equipment:
   $2,670,075.00 x 8% = $213,606.00

C. Site Development:
   $2,670,075.00 x 6% = $160,204.00

D. Total Construction:
   Total A, B & C: $3,043,885.00

E. Site Acquisition / Demolition:
   No Cost
   $0.00

F. Movable Equipment:
   $2,670,075.00 x 6% = $160,204.00

G. Professional Fees:
   $3,043,885.00 x 10% = $304,388.00

H. Contingencies:
   $3,043,885.00 x 10% = $304,388.00

J. Administrative Costs:
   $3,043,885.00 x 1% = $30,439.00

K. Total Budget Required:
   D & E thru J
   $3,843,304.00
The Fort Wayne Fine Arts Foundation has only recently retired the mortgage on the Performing Arts Center and have stated that a new art museum is now top priority. While there may be no binding situation between the Fine Arts Foundation and the Museum of Art, support can be expected from the foundation. The Fort Wayne / Allen County Historical Society however is currently renovating the Old City Hall and some Foundation support can be expected to be channeled to the Historical Society and away from the Museum of Art's fund drive.
Building Type Study

Building Type Study       70
Building Type Summary     80
Natural Lighting Studies  81
Building Type Study

The building type study identifies a representative group of current art museums. I have chosen museums with both normal and unusual circulation patterns, organization, image, etc. I have tried to use only those buildings with approximately the same square footage as the proposed Fort Wayne Museum of Art.

To the left of the text, a simplified zoned floor plan divides the building into the following zones:

Public- Lobbies, giftshops, bookstores, members areas, restrooms, orientation area, coat rooms, and cafeteria.

Auditorium

Galleries- 2 & 3 dimensional display and sales gallery.

Offices- Administrative and employee offices.

Work- Studio workshops, conservation rooms, dock facilities, and shipping and uncrating.

Storage- Art storage areas.

Visitor circulation within the gallery is graphically expressed below each page’s text.

The following conventions were used:

!!!!!!! Main circulation paths

⇒ Free gallery circulation

★ Vertical circulation

⇒ Public entry

→ Loading dock
1. University Art Museum, Berkeley, California

2. Everson Museum of Art, Syracuse, New York

3. Denver Art Museum, Denver, Colorado

4. Gallery of the 20th Century, Berlin, Germany

5. Pasadena Art Museum, Pasadena, California


7. Tochigi Museum of Art, Utsunomiya, Japan

8. Scaife Gallery, Carnegie Institute, Pittsburgh, Pennsylvania
University Art Museum
University of California at Berkeley
Architect: Mario J. Ciampi & Assoc.
95,000 $

Circulation:

Individual galleries radiating from central 2 story space. Individual galleries connected by ramp system. Public entry into main level 2 story court.

Space:

Basement level contains work and employee areas. Main and upper areas have galleries on 9 levels radiating from central public public area with office and work areas at side. Sculpture terraces located at gallery ends. Structure spans between gallery walls.

Siting:

Located across from Berkeley campus. Exterior is exposed concrete with no windows on upper levels, but windows opening onto sculpture terraces.

To Galleries

Gallery Circulation
Everson Museum of Art  
Syracuse, New York  
Architect: I.M. Pei  
60,000 $ including plazas

Circulation:
Individual galleries surrounding central sculpture court.  
Public entry into central sculpture court from plaza.  
Central open stair circulation.

Space:
Basement level has employee areas surrounding public spaces.  
Both ground and second levels public.

Siting:
Located on pedestrian square in urban environment.  
Exterior is bush hammered concrete with no windows.
Denver Art Museum
Denver, Colorado

Architect: James Sudler Assoc. & Gio Ponti
120,000 $p$

Circulation:

Vertical zoned dual galleries around elevators.
Public entry into public space leading into 2 story gallery.
Other 5 levels of gallery reached by central core elevator.

Space:

Operations, office, and parking on 2 below ground levels.
First floor contains public areas with a changing exhibit gallery.
Levels 2 - 6 contain 2 galleries on each level joined by the central elevator.

Siting:

Located in a small scale urban environment.
Numerous feature windows of various shapes and sizes are located "onto" the exterior facade.
Exterior surface covered in gray ceramic tile.

Gallery

Elevator Core

Gallery Circulation
Gallery of 20th Century
Berlin, Germany

Architect: Ludwig Mies van de Rohe
100,000 $†

Circulation:
Large unstructured galleries.
Public entry into midst of gallery space.
Two stairs serve as circulation tools.

Space:
Lower level contains employee areas which wrap gallery on two sides.
Upper level is total gallery.
Structure is welded steel plates on 12' o.c. bearing on four columns.

Siting:
Located on barren plaza near freeway.
Upper level is total glass walls.
Typical "Miesian" box. Glass with black structure.

No Structured Circulation

Gallery Circulation
Pasadena Art Museum
Pasadena, California

Architect: Ladd & Kelsey
85,000 $22$

Circulation:

Galleries in flowing molecule form.
Visitor wanders freely along structured path.
Public entry into midst of "molecule" galleries.
Very old fashioned circulation.

Space:

Lower level contains work and storage areas.
Ground floor contains galleries, with other public spaces and an auditorium.

Siting:

Located in a residential neighborhood.
The exterior is of a residential scale and materials.

Circulation
Hugs Walls

Gallery Circulation
Whitney Museum of American Art
New York, New York

Architect: Marcel Breuer
85,000 $

Circulation:
Vertical zoned galleries with elevator.
No structured gallery circulation.
Public entry over bridge from busy street into public areas.
Elevator on building side as circulation tool.

Space:
Basement 2 contains art storage.
Basement 1 and ground floor contain work and storage areas in rear with public areas in front.
Floors 2, 3, & 4 contain all galleries with the top floor containing offices.
A reverse stepped form lets light into the sunken sculpture area.
Structure is 2' precast concrete grid.

Siting:
Located in large scale urban environment on very restricted site.
Exterior is stark granite facade with only occasional "eyelid" windows of varying location and size.
Tochigi Museum of Art
Utsunomiya, Japan

Architect: Kiyoshi Kawasaki & Assoc.
40,000

Circulation:
Unstructured and flowing galleries of different sizes.
Public entry into auditorium lobby and public space.
No vertical circulation needed for public. Direct hall to galleries is present.
Elevator used only to reach employee areas.

Space:
Lower level contains work area with auditorium.
Main level has all galleries with some work/storage areas.
The 2, 3, 4 & 5 floors contain offices.
Structure is reinforced concrete grid.

Siting:
Located in residential area.
Those walls facing from sculpture plaza are reinforced concrete while those in the tower & those towards the sculpture are mirrored curtain walls.
Scaife Gallery, Carnegie Institute
Pittsburgh, Pennsylvania

Architect: Edward Larrabee Barnes
120,000 $*

Circulation:

Very restricted gallery circulation. Means of circulation are 2 elevators with long flight of stairs parallel to sculpture court.
Public entry into large hall.

Space:

First level contains a large amount of public circulation with employee work & office areas.
Second floor is total gallery with very restricted circulation.
Sculpture court acts as focus to massive stair.
Gallery walls are wall bearing.

Siting:

Located adjacent to Carnegie Institute in Pittsburgh.
Exterior facade is flush stone panels with only small windows in the front galleries.
Building Type Summary

The building type study has helped me to obtain some valuable information. The primary zoning of the museums with a breakdown of gallery circulation has also been beneficial.

The public areas are obviously best suited to be placed by the public entrance with the work and storage areas normally placed out of public eye and access. Offices are precariously placed between the public areas and work areas with no clear cut precedent set.

The most exciting and interesting gallery spaces or series of spaces are those which do not rely on a strict and restricted gallery movement in which all galleries must be passed through to complete the visit. The best galleries, I believe, are those of differing sizes and characteristics. They should not be the large and hollow Miesian boxes of some art centers. The circulation spaces should be mainly used for just that purpose – circulation. The visitor to the Fort Wayne Museum of Art needs the visual and mental break between the gallery experience and these paths should express this temporary pause. Of course these circulation breaks must not dictate a long pause, either physically or mentally, for those who wish to continue on their unhindered tour of the facilities. These circulation paths may even bypass those galleries that the visitor may not wish to see or those galleries which are being changed or reworked.

The natural light studies that follow simply express the large variety of lighting techniques and methods that are possible.
Natural Lighting Studies

Kimbell Art Museum
Fort Worth, Texas
Architect: Louis I. Kahn

Museum of Modern Art
Rio de Janeiro, Brazil
Architect: Affonso Eduardo Reidy

Art Museum
Aalborg, Denmark
Architect: Alvar Aalto
Gallery of Modern Art
Turin, Italy
Architect: Carlo Bassi & G. Boschetti

Miro Foundation
Barcelona, Spain
Architect: J.L. Sert
Footnotes


4 Ibid., p. 185.


6 Unknown, See reference material listing.

7 Lee, op. cit., p. 163.

8 Brawne, op. cit., p. 181.

9 Ibid.

10 Ibid., p. 179.

11 Lee, op. cit., p. 150.

12 Brawne, op. cit., p. 175.

13 Ibid.


15 Lee, op. cit., p. 85.


20 Buildings for the Arts, op. cit., pp. 77-82.

21 Brawne, op. cit., pp. 119-120.


25 Ibid., pp. 94-99.

26 Louis I. Kahn, Light is the Theme (Fort Worth, Texas, 1975) p. 31.


28 Ibid., p. 75.

29 Ibid., p. 12.

Reference Materials


The following sources were used in addition to the previous list in the time period from 11-20-78 to 5-1-78.


Kahn, Louis. Light is the Theme; Louis I. Kahn and the Kimbell Art Museum. Fort Worth, Texas; Kimbell Art Foundation, 1975.


Addenda

Interviews and Meetings

In addition to the following meetings, I have met numerous times with Professors Jack Wyman, Sonny Palmer, and Bruce Meyer, all of the College of Architecture and Planning, Ball State University, Muncie, Indiana.

Listed after the individual is the meeting date and the accomplishments of the meeting.


8. James Bell, New Director of FWMOA. November 21, 1978. Reactions and feedback to program and schematic plans.
RELATED TRAVEL

The following environments provided excellent input into my thesis project. Date when visited is listed after the location.


ADDENDA TO TALLY OF SPACES

After additional information was obtained and goals were altered, the following changes were executed in the square footages of the programmable areas.

Work/Storage Areas

Set-up area 0 — 500
Photo Studio 0 — 200
Mechanical 0 — 500

Other Areas

Cafeteria/Lounge 1500 — 2000
Members Restaurant 750 — 0
Members Lounge 750 — 1150
Kitchen 800 — 1300

REVISED TALLY OF SPACES

The following represents the final programmable areas.

Tally of Spaces Square Footages

Gallery / Exhibition

Permanent Collection 6,000
Non-permanent exhibition 2,000
Sales / Rental Gallery 2,000
Children's Wing 4,000
Total 24,000

Work / Storage

Dock with Forklift 200
Outer Vault / Crate Stor. 400
Center Vault—Registrar Off. 75
Center Vault—Inspection 200
Center Vault—Storage 6,000
Inner Vault 900
Design Studio / Shop 600
Design Storage 100
Design—Preparator Office 150
Curator's Shop 200
Curator's Office 2 50 100
Set-up Area 500
Photo Studio 200
Mechanical Booster 500
Total 10,025
### Lecture / Instruction

**Lecture Hall / Classrooms**
- 3 x 1,000 = 3,000
- Studio Workshops 2 x 400 = 800

**Total** 4,000

### Office Areas

- Director's Office 250
- Primary Personnel 6 x 100 = 600
- Support Personnel 6 x 75 = 450
- Waiting / Entry Area 100
- Board Room for 15 - 20 300
- Conference Rooms 2 x 150 = 300
- Registrar's Record Room 100
- Staff Library 150
- Printroom / Duplication 150
- Staff Restroom 2 x 100 = 200
- Staff Showers / Lockers 2 x 75 = 150
- Employee Lounge 100
- Security Room 100
- Volunteer Center / Office 200

**Total** 3,150

### Other

- Gift Shop / Bookstore 600
- Kitchen 1,300
- Cafeteria / Lounge 2,000
- Orientation / Tour Info. 200
- Checkroom 250
- Public Restroom 2 x 400 = 800
- Member Lounge / Galley 1,150
- Members Conference Room 300
- Members Support Kitchen 150
- Members Restrooms 300

**Total** 7,050

### Net Total

- Gallery / Exhibition 24,000
- Work / Storage 10,025
- Lecture / Instruction 4,400
- Office Areas 3,150
- Other 7,050

**Total** 48,625

### Circulation and unassignable area

(See Page 67)

48,625 S.F. ÷ .79 = 61,551 S.F.

**Gross Total** 61,551 S.F.
FIRE STAIR DATA

Questions arose as to how many enclosed fire stairs were needed in the Fort Wayne Museum of Art. The Museum would qualify as a Type A structure and therefore would need none of its three required vertical exits fireproofed. The following passage was taken from section 3306 - 3308 from the Building Code:

Exit Enclosures
Sec. 3308. (a) General. Every interior stairway, ramp or escalator shall be enclosed as specified in this Section.

Exceptions: 1. In other than Group 1 Occupancies, an enclosure will not be required for a stairway, ramp or escalator serving only one adjacent floor and not connected with corridors or stairways serving other floors. For enclosure of escalators serving Group B Occupancies, see Chapter 17.

UNIFORM PLUMBING CODE REQUIREMENTS

The following table represents the minimum fixture requirements in the museum.

<table>
<thead>
<tr>
<th></th>
<th>Lower Level</th>
<th>Upper Level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water closets</td>
<td>4</td>
<td>2</td>
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<tr>
<td>Urinals</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Lavatories</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water closets</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Lavatories</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td><strong>Drinking Fountains</strong></td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
LOUIS KAHN'S SITE PLAN - FINAL VERSION

The Performing Arts Center is the only element of Kahn's plan that was built. Freimann Park occupies the west end of the two block parcel with the proposed art museum on the east side. This information was taken from the book, Louis I. Kahn; Complete Works 1935 - 1974.
DETAILS

The exterior would be limestone panels anchored to the steel framework. A typical detail is shown below. This is taken from the Indiana Limestone Handbook, page 59.

stone and steel frame

Shown at the left is an example of combining two or more pieces of stone panels with a steel frame for accelerated installations. The joints are sealed with elastomeric joint sealants and joint backer. All stone is shimmed and anchored to the steel framework. This type of installation eliminates the need for masonry back-up. By utilizing the strength of the steel it allows reduced thicknesses and sizes of stone panels, thereby reducing weight and cost.
The main triangular court's space frame would be top edge supported as shown below. The source is Unistrut Brochure, page 17.