BUILDING CODES

Included in the program are general building codes and requirements to aid in design. For more detailed and specific information refer to the references for these regulations: Chicago Building Code, National Building Code, Uniform Building Code, and the Uniform Plumbing Code.

ZONING

The site is located in a business/commercial area. There are no setback or height restrictions. The building may be built up to the property line.

BUILDING CLASS

According to the Chicago Building Code, the Arts Center is a Class C building (assembly building), and the offices are a Class E. A 4-hour fire rating is used.

EGRESS

1. Minimum of two exits from every building or space in building.

2. The maximum travel distance to an exit door-
way is 150' for business offices, and 100' for mercantile.

3. The maximum travel distance to an exit from the end of a corridor shall be not more than fifty per cent of the normal travel distance.

4. The floor area per person for business units is 100 S.F. For museums, libraries, and similar uses, the floor area is 20 S.F. per person.

5. All stairs and corridors required as exits shall be not less than forty-four inches in width with the following exception: In all occupancies, stairs and corridors serving not more than forty persons per story shall be not less than thirty-six inches in width.

6. All doors required as exits shall not be less than thirty-six inches wide.

7. Elevators are not part of a required exitway. Escalators shall constitute a required exitway if they conform to stair width requirements.

8. All fire stairs shall open directly to the outside or a safe waiting space. The continuity of the fire stairs shall be interrupted at the ground floor.

9. All stair enclosures shall have self-closing fire doors. Also, there shall be no openings in enclosure except for doorways and windows to the exterior of the enclosure.

STAIRS

1. No flight of stairs shall have a vertical rise of more than 12 feet.

2. Landing width and length shall not be less than stair width.

3. Stair widths greater than 44 inches shall have rails on both sides. A width of 88 inches or more shall have intermediate rails.

4. Horizontal ramps shall have a gradient of not more than 1 foot in 10 feet, with no stairs or steps in the ramp. The ramps shall conform to stair unit width. Ideal grade for wheelchair ramp is 1 foot in 12 feet.

5. Treads and risers proportioned by the formula 70 T 75, with risers not over 7/4 inches.
and treads not less than 9 inches wide (exclusive of nosings).

CORRIDORS

1. Hallways shall have a clear headroom of not less than 7½ feet.

2. Hallway widths shall be based on the 22 inch unit. Number of occupants per unit of hallway width:

   - Business: 80
   - Ground floor assembly: 100
   - Mercantile: 80

3. Hallway widths shall not be reduced by door swings opening into them. If doors are to swing out, recessed door wells shall be used.

4. Revolving doors shall be the collapsible type, and shall not be less than five-and-a-half feet in diameter.

5. To provide accessibility to the handicapped in all public buildings, doors to all rooms shall be a minimum width of 30 inches.

FIXTURES

(Taken from Uniform Plumbing Code)

1. "Whenever urinals are provided, one (1) water closet less than the number specified may be provided for each urinal installed, except the number of water closets in such cases shall not be reduced to less than two-thirds (2/3) of the minimum specified."**

2. "Where food is consumed indoors, water stations may be substituted for drinking fountains. Theaters, auditoriums, dormitories, offices, or public buildings for use by more than six (6) persons shall have one (1) drinking fountain for the first one hundred (100) persons and one (1) additional fountain for each two hundred (200) persons thereafter."***
# Fixture Requirements

<table>
<thead>
<tr>
<th>Building Type</th>
<th>Water Closets Male/Female</th>
<th>Urinals</th>
<th>Lavatories</th>
<th>Tubs or Showers</th>
<th>Drinking Fountains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office or Public Buildings</td>
<td>Fixtures: 1 Persons: 1-15</td>
<td></td>
<td>Fixtures: 1 Persons: 1-15</td>
<td>None Required</td>
<td>1 per 100</td>
</tr>
<tr>
<td></td>
<td>3 Persons: 36-55</td>
<td></td>
<td>3 Persons: 36-60</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 Persons: 56-80</td>
<td></td>
<td>4 Persons: 61-90</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 Persons: 81-110</td>
<td></td>
<td>5 Persons: 91-125</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 Persons: 111-150</td>
<td></td>
<td>1 additional for each 40 people</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* See previous page
** See previous page

(Taken from Uniform Plumbing Code)
SITE ANALYSIS

The location for the Chicago Arts Center is a downtown site just east of the Loop. The site is a long, narrow block (70 feet x 378 feet) in the north-south direction. This gives a total area of 26,460 square feet. It is bordered by Michigan Avenue on the west, East Lake Street on the north, Beaubien Court on the east, and East Randolph Street on the south. The site holds a very prominent location on Michigan Avenue.

The surrounding area is Chicago’s urban downtown business district consisting mainly of retail/businesses and offices. Many of the buildings in the area are on concrete piers down to solid rock. Some of the surrounding features are listed in the following groups:

North: New downtown area on North Michigan Avenue, Illinois Center, Chicago River;

West: Loop area, Chicago Cultural Center;

South: Grant Park, Art Institute, underground parking;

East: Prudential Building, Standard Oil Building.
Lake Shore Drive, East Point Tower, Lake Michigan, I.C. suburban trains and station.

The street level surrounding the site is supported by a viaduct and is one level above the ground. The ground level can thus be used for service and delivery vehicles.

The social aspects of the downtown area are very intense and full of activity. The southwest intersection is very busy and the sidewalks are full of people talking and interacting. Chicago is full of parks, restaurants, theaters, and various activities. Gathering and meeting places (plazas) are very popular in Chicago.

The Chicago School of Architecture and Mies Van Der Rohe have created certain dogmas in the Chicago architectural world lending a certain quality to the area and surrounding buildings. The prominent location of the site will reinforce the image and importance of the building as a comment on this.

The site is presently boarded up and sidewalks surround it. There is heavy pedestrian traffic on the Michigan Avenue and Randolph Street sides of the site. The site at ground level is empty with the exception of a few cars that park there. The ground of the site is essentially flat, however, the viaduct elevation varies. The Michigan Avenue viaduct in the north-south direction dips toward the center approximately 3 feet corner to corner. The Beaubien Court viaduct is relatively flat. The viaduct along Randolph Street slopes up west to east approximately 3 feet.

There is no vegetation on the site except for weeds which cover some spots, the majority of the site being covered with gravel. Runoff takes care of the on-site drainage at the ground level. The street level has inlets at the curb. Off-site drainage is taken care of by Chicago city sewers, catch basins, manholes, and inlets. Utilities in the city should be easily obtainable. A 24-inch water main runs along the north edge of the site below the upper level street.

The views to the site are good. The site is very prominently located, and there are many good vistas looking towards the site.

South: Looking north the building will act as a terminus (eye stopping point) to Grant Park along Michigan Avenue.

East: There are no long vistas looking into the...
site and this could be considered as a secondary
elevation.

North: A good vista of northwest corner from
North Michigan Avenue. The building will act as
a terminus to the line of buildings on the east
side of North Michigan Avenue.

West: A good vista of west elevation from both
north and south of site along Michigan Avenue.
This is a primary elevation. There are also good
views from the site. Looking south, there is a
good vista of Grant Park and the distant Art
Institute. The views north and south along Michi-
igan Avenue are also good. The view east, how-
ever, is blocked by the Prudential Building.

A CTA bus stop is located on the northwest cor-
er of the block, and on the east side of the
site is a South Suburban bus stop. On the ground
level the east side of the site is adjacent to the
Illinois Central suburban train station. This is
where the I.C. and South Shore commuter trains
stop.

The site is shaded by surrounding buildings in
early morning and late afternoon. Sun reaches
the site during the rest of the day.

For additional site information, refer to the loca-
tion and site drawings which follow.
1. Tower Building  
   5 N. Michigan Ave.
2. 30 North Michigan Avenue Building
3. Pittsfield Building  
   55 E. Washington St.
4. Chicago Public Library 
   75 E. Washington St.
5. John Crerar Library Building 
   85 E. Randolph St.
6. Prudential Building  
   Randolph St. E. of Michigan Ave.
7. Standard Oil Building 
   Randolph St. E. of Michigan Ave.
8. Maremont Building  
   163 N. Michigan Ave.
9. Carbide and Carbon Building 
   230 N. Michigan Ave.
10. Old Republic Building 
    307 N. Michigan Ave.
11. 333 North Michigan Avenue Building
12. One Illinois Center  
    111 E. Wacker Dr.

(from Chicago On Foot by Ira J. Bach)
N. BEAUBIEN COURT

E. LAKE STREET

N. MICHIGAN AVENUE

CHICAGO ARTS CENTER
BUILDING TYPE STUDY
BUILDING TYPE ANALYSIS

The Building Type Analysis will study museum types and office types with brief text and diagrams.

Of the museums I have researched, six were chosen to analyze for this study. They range in size and the critical design issues are brought out. They were analyzed in terms of the following elements:

- Space
- Structure
- Circulation
- Siting
- Physical presence

The office type study is more of a look at the elements and different configurations of conventional offices. It looks at common organization and configurations of current office buildings.
RICHARD KASELOWSKY MUSEUM
Bielefeld, Germany

Architect: Philip Johnson

PHYSICAL PRESENCE - The building looks very impressive in its park-like setting. It has a protective yet inviting look to it, and makes an extremely pleasant place to be.

SPACE - The interior contains basic, fixed gallery spaces. The three above-grade floors are exhibition spaces, while the lower floors contain service areas, library, and a lecture hall. The third floor has no windows to provide added hanging space, but it is skylighted.

STRUCTURE - The structure consists of bearing walls made of granite-clad concrete. This gives pattern and modulation to the exterior and generates the gallery spaces on the interior. All the exhibit floors are similar.

CIRCULATION - The three exhibit floors are connected by a major open stairway. A recessed area at the back of the building provides a convenient access for service and deliveries.

SITTING - The building is set in a small park. Carefully placed garden walls link the building horizontally with the park. A long reflective pool is also on the site.

CHICAGO ARTS CENTER
RICHARD KASELOWSKY MUSEUM

THIRD FLOOR PLAN

SECTION

SITE & FIRST FLOOR PLAN

CHICAGO ARTS CENTER
TOCHIGI MUSEUM OF ART
Utsunomiya, Japan

Architect: Kiyoshi Kawasaki and Associates

SPACE - The spaces are configured freely, each are flowing into another one and opening to the outdoor plaza where artists and art lovers gather to enjoy the museum’s environment. The museum attempts to retrieve the artifact from environments that are too artificial to display them.

STRUCTURE - The gallery spaces in the museum use exposed structural concrete ceilings. Movable lighting is provided to give maximum flexibility in the arrangement of exhibitions.

CIRCULATION - The museum has a free-flowing circulation plan being organized around an outdoor plaza.

SITING - The museum is located in a low, small-scale environment and response to it, with the exception of the office wing, which rises up to signify the presence of the Art Museum.

PHYSICAL PRESENCE - The museum for the most part is a low-scale building with the office wing serving as a vertical element and marking the entry.
TOCHIGI MUSEUM OF ART

SITE PLAN

MAIN FLOOR PLAN

SECTION

CHICAGO ARTS CENTER
TELFORD SALADIN

Architecture: Itzhak Yashar and Dan Eitan

SPACE - The gallery and entrance hall are on the lower levels, while administration is at the top. Service is located on the lowest level. The plan features four big galleries around a huge central entrance hall. Each gallery is a half-level above the other.

STRUCTURE - The building is very simple. It consists of four huge box-shaped galleries around a central hall with cores happening between the boxes.

CIRCULATION - Circulation occurs in a spiral-type arrangement around the central space. Circulation nodes (cores) occur between the galleries.

SITING - The museum is set into a drop in grade level to make it appear smaller than it really is.

PHYSICAL PRESENCE - The elements of museum are expressed with simplicity and clarity both inside and out, and this given a sculptural appearance to the building.
TEL AVIV MUSEUM

SITE PLAN

GALLERY FLOOR PLAN

SECTION

CHICAGO ARTS CENTER
UNIVERSITY ART MUSEUM
Berkeley, California

Architect: Mario J. Ciampi & Associates

SPACE - The galleries in the art museum radiate out from the central interior court like parts of a fan. Each one of these galleries are 60 feet deep, which provides a very flexible space. The great central space is skylit from above.

STRUCTURE - The museum is built of rough-finished concrete. Each gallery is 60 feet deep and fan-shaped.

CIRCULATION - Ramps take people to the different exhibition levels of the museum. The court serves as a grand reference point to the other parts of the museum.

SITING - The rough-finished concrete exterior is offset with sculptures and grassy mounds. The building is oriented to the campus.

PHYSICAL PRESENCE - The building expresses itself as a work of art with its very sculptural, dynamic form.
EVERSON MUSEUM OF ART
Syracuse, New York

Architect: I. M. Pei & Associates

treated as sculptural elements. The building has a very strong sculptural form and serves as a piece of abstract sculpture.

SPACE - The exhibition spaces in the museum are individual with personalities of their own. The building consists of a podium, which houses subsidiary functions and minor gallery spaces. Above that are the major exhibition spaces. These consist of four box-like galleries grouped around a two-story sculpture court in the center.

STRUCTURE - Concrete is the predominating material used. The four galleries are cantilevered and hover over the podium.

CIRCULATION - The circulation from gallery to gallery is continuous via four catwalks located at the four corners of the court, and bridge the spaces between the galleries.

SITING - The building was designed on a podium to add prominence to the relatively small building when compared to other larger overpowering buildings in the vicinity.

PHYSICAL PRESENCE - All exterior surfaces are

CHICAGO ARTS CENTER
WHITNEY MUSEUM OF AMERICAN ART
New York, New York

Architects: Marcel Breuer and Hamilton Smith

SPACE - Most of the space of this museum is located at the top with void below. The upper floors contain the galleries and offices. The lower levels contain the service and subsidiary functions. This separates the museum away from the noise of the streets.

STRUCTURE - The building is heavy on top and light on the bottom. The building is cantilevered out as it goes up. A specially designed grid is used to support artificial lighting and moveable portions.

CIRCULATION - A spiral stair leads up to the mezzanine lobby level. To enter the museum, one must cross the entrance bridge over the sunken sculpture court.

SITING - The building is located on a very tight urban site.

PHYSICAL PRESENCE - The building has an identity all its own. The architect felt it should

CHICAGO ARTS CENTER
OFFICE TYPE ANALYSIS

A conventional office is typically a building shell that is subdivided and leased by tenants on the basis of a common organizing grid. Within this grid fit partitions, electrical and mechanical systems, and lighting. The tenant usually receives a certain number of partitions based on the number of grid modules he has rented. Extra partitions must be purchased. Entire floors or parts of floors may be rented.

There are three main elements which make up the conventional office building. These are:

- Cores
- Corridors
- Offices

The building core contains all vertical transportation elements, electrical and signal chases, escalators, and stairs, mechanical chases, and central plumbing.

The corridors are connections from the building core to the offices. Long, straight "shotgun" corridors should be avoided. This can be solved by jogging or curving the corridor.

Offices are private areas set up by the tenants' requirements. The environment of the private office is controlled by each tenant. Walls are set up on the grid and can be moved to allow change throughout a floor.

Conventional office buildings are based on a grid system. Typical grids are usually made up of modules of 4'-8", *5'-6". All walls are set up on the grid module. Most office structures do not permit the division of the modules.

There are many different office configurations: single loaded corridor; double loaded corridors, central cores; and perimeter cores. Some examples of these are in the following illustrations:

---

CHICAGO ARTS CENTER
SINGLE LOADED CORRIDOR

DOUBLE LOADED CORRIDOR WITH OPEN COURTS

TWO DOUBLE LOADED CORRIDORS

RALSTON PURINA HEADQUARTERS,
ST. LOUIS, MISSOURI

U.S. STEEL CORPORATE CENTER,
PITTSBURG, PENNSYLVANIA

CHICAGO ARTS CENTER
BIBLIOGRAPHY


KECK, CAROLINE, ED., A PRIMER ON MUSEUM SECURITY, NEW YORK STATE HISTORICAL SOCIETY, 1964.


SCHEMATIC DESIGN
INTRODUCTION

When beginning schematic design on any project I generally like to start out taking different areas or functions (sub-assemblies) and exploring different configurations and organizations for them. From these sketches develop larger schematic ideas until I arrive at a general scheme for the whole project. These then can be converted to schematic plans and models.

Three schemes were developed for this project. Scheme no. 2 evolved from scheme no. 1. Scheme no. 3 evolved on its own and had many formal implications.
GALLERY CONCEPTS:
SCHEME NO. 1

This scheme was an attempt to emphasize the linear quality of the site. The image it had was that of a high-tech-metal panel serpent or snake which would subtly wind its way through the site and curve up into the office tower. In actual plans of the scheme this undulating was tempered a bit.

The sculpture garden was placed between Arts Center and office tower for privacy. The tower was topped with a cloud form.
SCHEME NO. 3

This scheme was based on the death of modern architecture. With its Chicago location it was ideal. The copulating of the building was also evolved.

At the base of the tower was the theater. In the middle was the office lobby, and the Arts Center lobby on the south. The spine was originally planned as a stair or escalator system.

At jury time this was the least resolved but made a very strong and sculptural statement.
OK people, capitalizing. An insect or people, and two animals" "cannot anning south toward the pack.

Other metaphors include: a mirror.

Facade and historical elements.

In addition to historic allusions are allusions to the art institute through a lion's face.

A major element.

The column mantains it's prominence as the column maintains it's architectural element. Here has been a major architectural element. Throughout history the column movement, the past not crushed by the modern capitals. This represents the last foundations of two massive historical columns with crowning the tower. The tower is held from final toppling by the building.

Post-modernism which involves and tops the post. Modernism which is currently held by the new architecture which is currently held by the evolving and emerging being buried by the present modern movement.

Current on the state of architecture. The old attempts to create a new architectural statement style but serves as a sculptural statement of the prime.
DESIGN DEVELOPMENT

Although scheme no. 3 was the least resolved I felt it had the most potential to be a powerful project. The first thing needed to be done was to work up some drawings in plan and section.

The stair shaft became a mechanical shaft. The sculpture garden was placed at the south end of the building. The idea of the pedestrian passage-way from scheme no. 2 was incorporated.

Throughout the development philosophies were resolved and a final form began emerging.

Some critical issues were: the working out of the 75 ft. deep truss structure for the tower, the coffin lid roof form, resolving my attitude towards the historic facades, and resolving the level changes on the site.
Let's you slide to safety
Sleeve

Escape

By Brenda L. Becker

Cut the risks of high-up emergencies
A swift, easy ride in this long fabric tube
It is possible for 30 people to escape from the system if they follow the correct procedures. The system requires that all people involved be trained and familiar with the procedures. The system is designed to prevent escape attempts and ensure that none are successful. When a person attempts to escape, the system activates and locks down the escape route, preventing further attempts. The system is designed to ensure the safety of all people involved.

The system includes a series of check points, each with a unique code that must be entered to proceed. If the code is incorrect, the system locks down the escape route and notifies the authorities. The system also includes a series of alarms that sound when a person attempts to escape, alerting the authorities and preventing further attempts.

People can escape every 100 feet by opening the emergency exit door located at the rear of the room. The door is equipped with a series of alarms that sound when it is opened, alerting the authorities and preventing further attempts. The system is designed to ensure the safety of all people involved and prevent escape attempts.
DETAILS

PLANER FINISH

4" THICKNESS REQUIRED

40 SQ. FT.

BASE MODULE

LIMESTONE PANELS:
TOTAL = 15".

2" DRYWALL
1/2" GYPSUM DRYWALL
5/8" METAL STUD w/ INSULATION
1/2" AIR SPACE
4" LIMESTONE

WALL THICKNESS: 15"

Drawing:
- SURROUNDING Acoustical Ceiling
- 1/2" Rigid Insulation
- Metal Anchor
- 1" Hardwood Base
- 1/2" Gypsum Drwyall
- 3/4" Metal Stud
- 6" Concrete Block
- 1/2" Air Space
- 4" Thick Limestone Panel (Indoar)