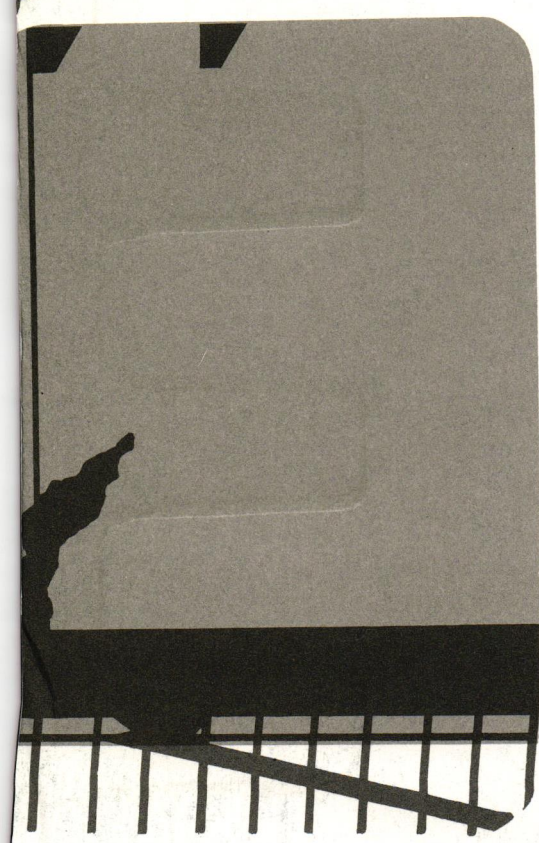
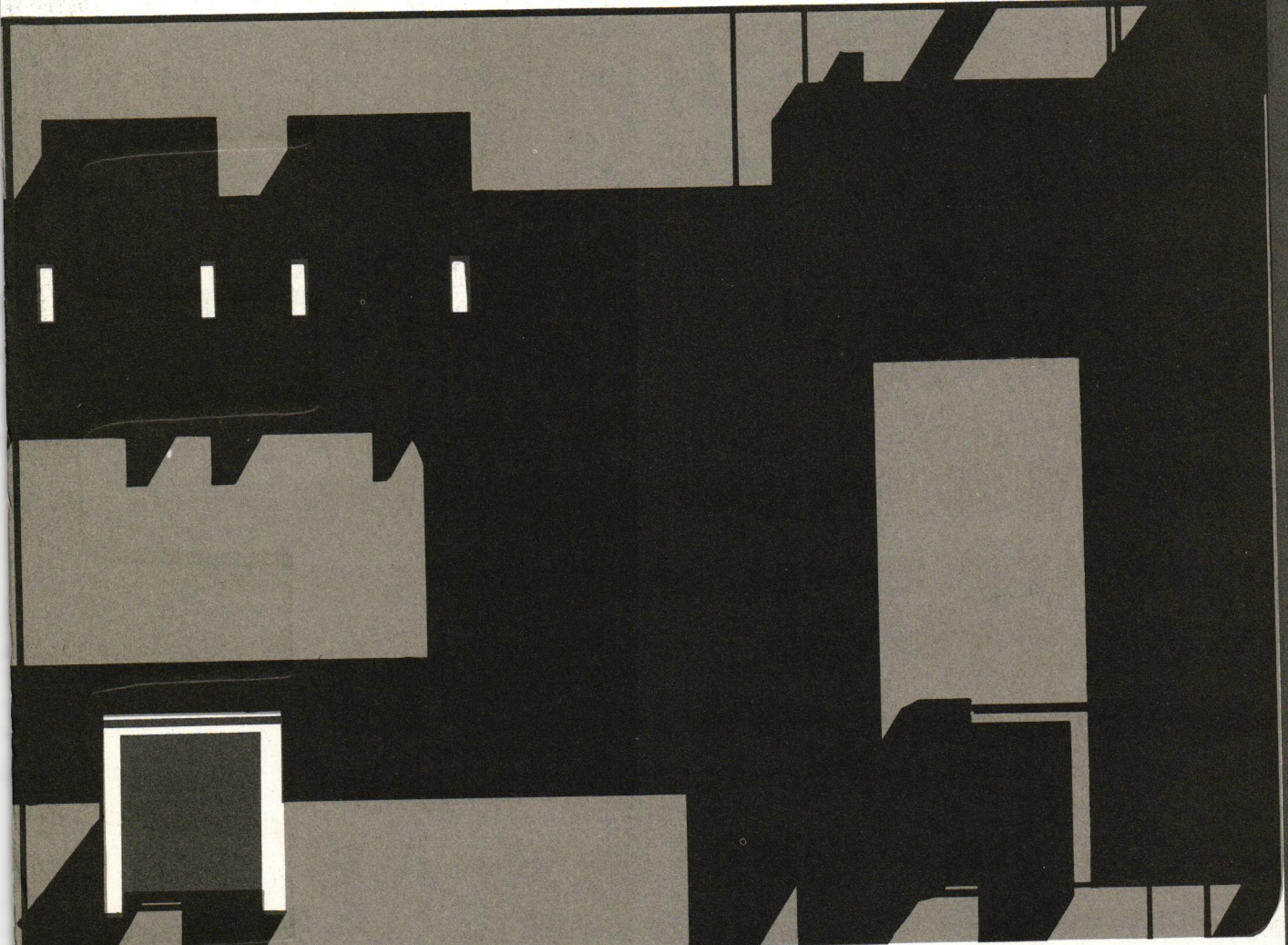


Design Quarterly 58



Design Quarterly 58

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WALKER ART CENTER

Minneapolis 3, Minnesota

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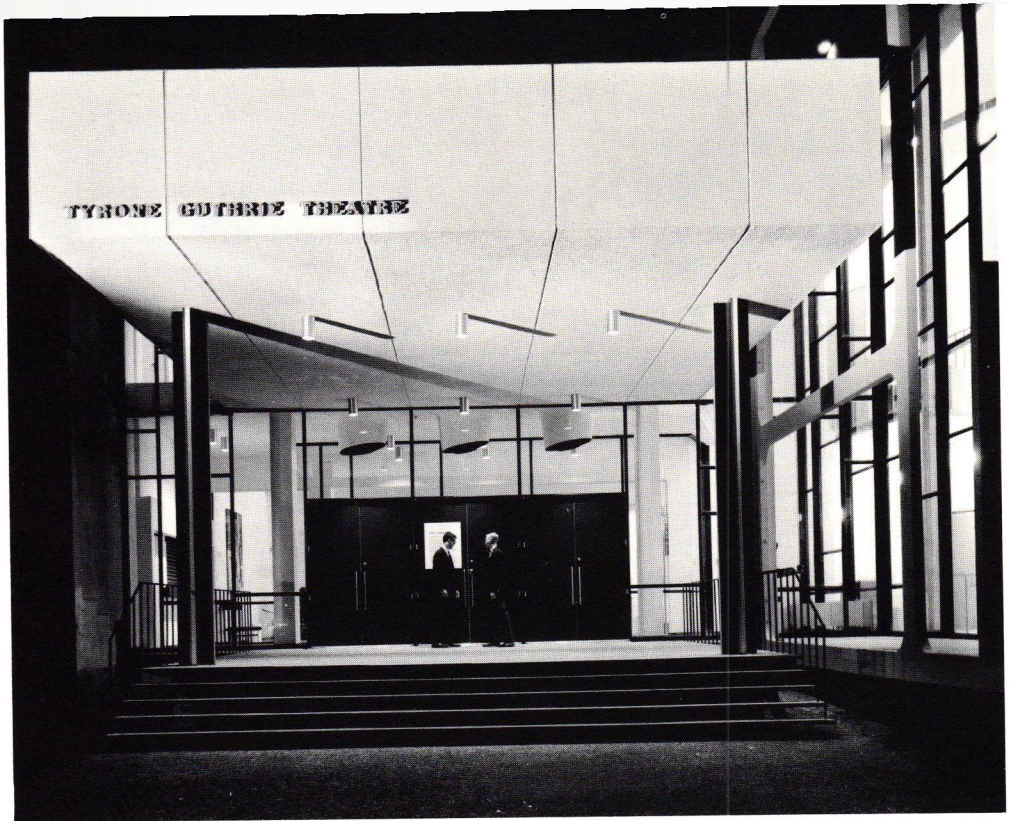
Hon. Arthur Naftalin

architecture for the stage

Tyrone Guthrie Theatre

designed by Ralph Rapson, AIA

Walker Art Center



introduction

A significant increase in the construction of civic and community theatres across the country has given the performing arts the stimulus of new environments and staging techniques. Since most new construction has taken place for educational theatre, not for Broadway, the designs are often experimental. Much interest is demonstrated in devising a variety of seating and stage arrangements with an aim to heighten the effectiveness of the production itself. The formal architectural qualities of the building, therefore, are subordinated to the direct problems of theatre activity. Thus, whereas nineteenth century theatre houses were commonly built as grandiose settings for the brilliance of the audience, twentieth century theatres are characterized by an exploratory approach which investigates the problems of staging and which encourages the collaboration of theatre director and architect, of stage technicians and experts in lighting and acoustics.

Generally the trend has been away from the conventional proscenium type of stage which separates action from audience, fulfilling the nineteenth century concept of drama as an illusionary picture within a frame. Its antithesis is the arrangement whereby the audience surrounds the stage on all sides. This arena type of stage has been revived for experimental productions in recent years. A third concept of stage design is the apron or open stage in which the audience only partially surrounds a projecting

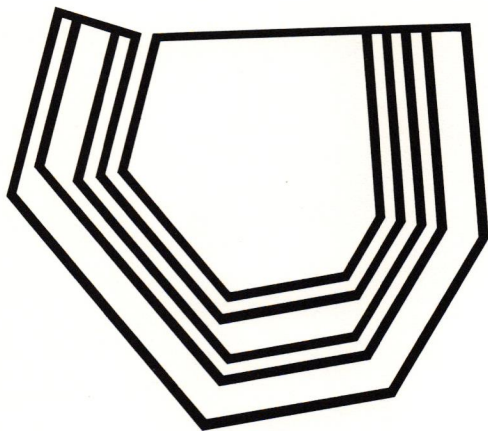
stage platform. This type was chosen for the Tyrone Guthrie Theatre. The plan of the Tyrone Guthrie Theatre was the result of close cooperation between the architect, Ralph Rapson, Sir Tyrone Guthrie and Tanya Moiseiwitsch, artistic director and principal designer of the newly established Minnesota Theatre Company, and Jean Rosenthal, technical consultant. Sir Tyrone and Miss Moiseiwitsch were largely responsible for the Stratford Shakespearean Festival Theatre in Stratford, Ontario, built in 1955. The conception of this theatre, which combines a Greek seating plan with an Elizabethan stage, is similar to the Tyrone Guthrie Theatre in Minneapolis. The exterior design of the Tyrone Guthrie Theatre is without direct precedent. It consists of a stuccoed screen which envelops the building on its three open sides, the fourth being attached to Walker Art Center. This decorative screen is largely independent of the building and attempts with bold shapes and unorthodox rhythms to convey the excitement of theatre. The site of the Tyrone Guthrie Theatre was donated by the T. B. Walker Foundation, which further contributed \$500,000. toward the cost of the building and provides a yearly sum for maintenance. The building is owned by the Tyrone Guthrie Theatre Foundation. Construction was begun in November, 1961, and the theatre opened on May 7, 1963 with a production of *Hamlet*. Other plays of the first season were *The Miser*, *The Three Sisters*, and *Death of a Salesman*.

H.F.K.

a director views the stage

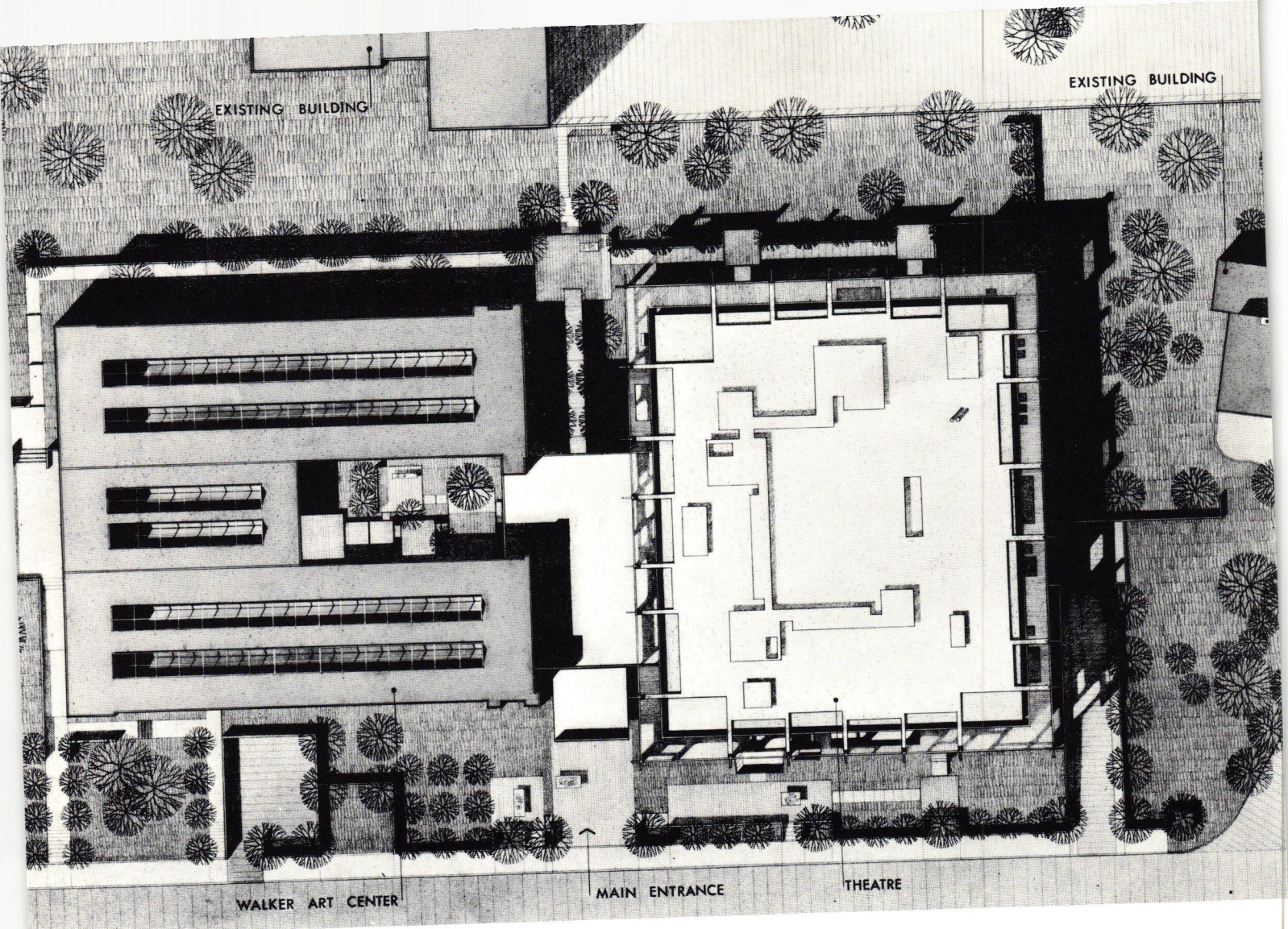
In designing an auditorium, the prime consideration should be the relation of performer to audience. Since the middle of the seventeenth century when Italian opera took Europe by storm, theatres have been designed almost exclusively in the manner best suited to operatic performances. Such designs have a raised platform in front of which is a horseshoe-shaped auditorium, usually in several tiers of seating. Between stage and auditorium a great gulf is fixed, literally a pit, in which the orchestra plays. The stage of the opera house is further removed from the audience by a partition with a large hole through which the spectators view the performance. This proscenium opening is often decorated as a picture frame to enhance the illusion that the performance is a picture in which figures magically move, dance, or sing. When the performance demands that the picture be changed, a curtain falls and appropriate pulling and hauling prepares the stage for further surprises to delight the audience. When all is ready, the stagehands are replaced by painted mummies in fine raiment, and the curtain is raised. For many years I worked in such theatres, and it never crossed my mind that a theatre could or should be otherwise. When I was in my early thirties, I was hired to direct the Old Vic Shakespeare Company. Gradually it became clear to me that trying to put Shakespeare's plays into the conventional framework for opera was wrong. The plays had been written by a master craftsman for a theatre of altogether different design. It was certainly possible to adapt them to the requirements of conventionally planned theatres. It seemed more desirable, however, to adapt some commonplace building than to adjust a masterpiece. As is often the case, the obviously sensible building plan was too expensive to execute. Yet, I realized that a more logical and easy way to stage these plays existed. It led to an examination of the whole premise of illusion which is the basis for the proscenium stage.

It has always seemed to me that people do not submit to illusion in the theatre much after the age of ten or eleven. They are perfectly aware that the middle-aged lady uncomfortably suspended on a wire is not Peter Pan but an actress pretending



to be Peter Pan. For a performance to attempt to create an illusion is as gallant but as futile as Mrs. Partington's attempt to sweep the Atlantic Ocean out of her parlor. In planning the Tyrone Guthrie Theatre, it was necessary to decide whether the stage should be the conventional platform separated from the auditorium by a proscenium arch or whether it should be an open stage such as the Elizabethan theatre and the ancient Greek and Roman theatres. A third alternative was available. We might have asked our architect to create a flexible design which could adjust to both types. We rejected this, however, on the ground that an all-purpose hall is a no-purpose hall—that insofar as a purpose is flexible, it is not wholehearted; that it was better to be firmly and uncompromisingly of one kind than to attempt a compromise between opposites which we considered to be theatrically and architecturally, theoretically and practically irreconcilable. We argued for the open stage for the following reasons: first, our intended program is of a classical nature, and we believe that the classics are better suited to an open stage than to a proscenium one. Second, the aim of our performances is not to create an illusion, but to present a ritual of sufficient interest to hold the attention of, even to delight, an adult audience. Third, an auditorium grouped *around* a stage rather than placed in front of a stage enables a larger number of people to be closer to the actors. Fourth, in an age when movies and TV are offering dramatic entertainment from breakfast to supper, from cradle to grave, it seemed important to stress the *difference* between their offering and ours. Theirs is two-dimensional and is viewed upon a rectangular screen. The proscenium is analogous to such a screen by forcing a two-dimensional choreography upon the director. But the open stage is essentially three-dimensional with no resemblance to the rectangular postcard shape which has become the symbol of canned drama. No claim is made that the open stage is better than the proscenium stage for every type of play. But, in our opinion, the open stage is more desirable for the kind of plays we propose to perform and the kind of project we propose to execute.

TYRONE GUTHRIE



Theatre site plan showing its relation to Walker Art Center.

the architect's design

The location of a permanent repertory theatre company of high artistic standards in the Midwest held exciting potential, not only for theatre, but for the region. It was a challenging opportunity for me to design the building for this new venture. We wished to design a theatre that would seat about 1,400 persons and that would accommodate open stage productions. During the inactive winter months of the repertory company, Walker Art Center would frequently use the theatre for its own cultural programs. The new structure had to be connected physically with the existing Walker building in a manner complementary to each other, but with separate entrances, circulation, and control. Thus, visually conflicting structural forms were not considered. By expressing the form and shape of the theatre through the glass wall and abstract frame, we have attempted to provide an exterior which would anticipate the stimulation of the activities within the theatre itself.

The design and construction of a theatre is composed of a complexity of ideas, techniques, and functions. The architect must draw upon his own experience and that of others while searching for new ideas, directions, and solutions. Preliminary discussions with Dr. Guthrie established his preference for open stage production and the wish always to have one wall to play against, which eliminated the possibility of theatre-in-the-round or any great degree of convertible theatre. Dr. Guthrie also wanted to seat as many people as possible close to the stage to achieve an intimate actor-audience relationship. After consultation and analysis, it became the problem of the architect to translate this research into a specific design.

I felt that the interior of the theatre should dramatically set the scene for the performance, anticipating and enhancing a stimulating event without overpowering the actual performance. The balanced but asymmetrical seating plan, the confetti-like color pattern of the seating, and the acoustical ceiling "clouds" express this idea. Since balcony patrons have too often been considered "second-class citizens," an attempt was made to eliminate this distinction by fusing the orchestra and balcony into one unbroken slope on one side. Elsewhere seating is designed in broken sections which lend variety and dynamic form to the interior.

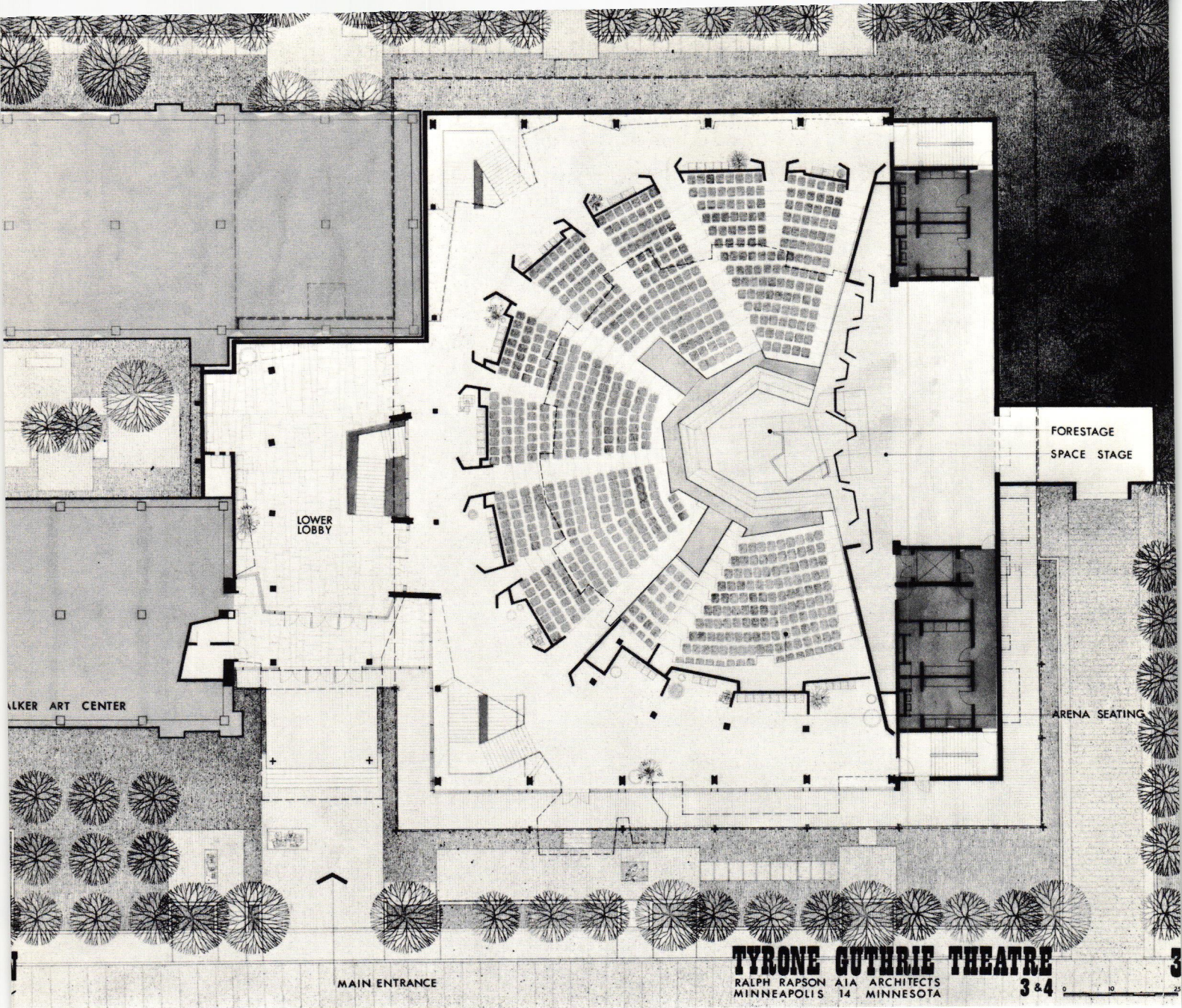
The shape and size of the house, the seating layout which provides an arc of 200-degree seating about the open stage, the slope of the floor, the inclination and shape of walls and ceiling "clouds," the location of aisles and actors' entrances, and the flexible stage wall are all the result of many studies, sketches and models. The house design also grew out of exhaustive consideration of good sight lines, sensitive acoustics, flexible lighting, fire and safety codes, structural and air conditioning factors, and a variety of other requirements. Scale models of the interiors were built to visualize and test, by light readings, the exact nature and character of all parts of the space. Since existing theatre seating units were not suitable for the design of the theatre, a new chair was designed with the help of various manufacturers. It is being used for the first time in this building.

The unstable nature of the subsoil of the site and the proximity of the existing Walker Art Center building posed special structural problems. Because of the long spans and heavy loads and the soil conditions, much of the structure is built on deep concrete piling, with no new loading permitted on or close to the Walker foundations.

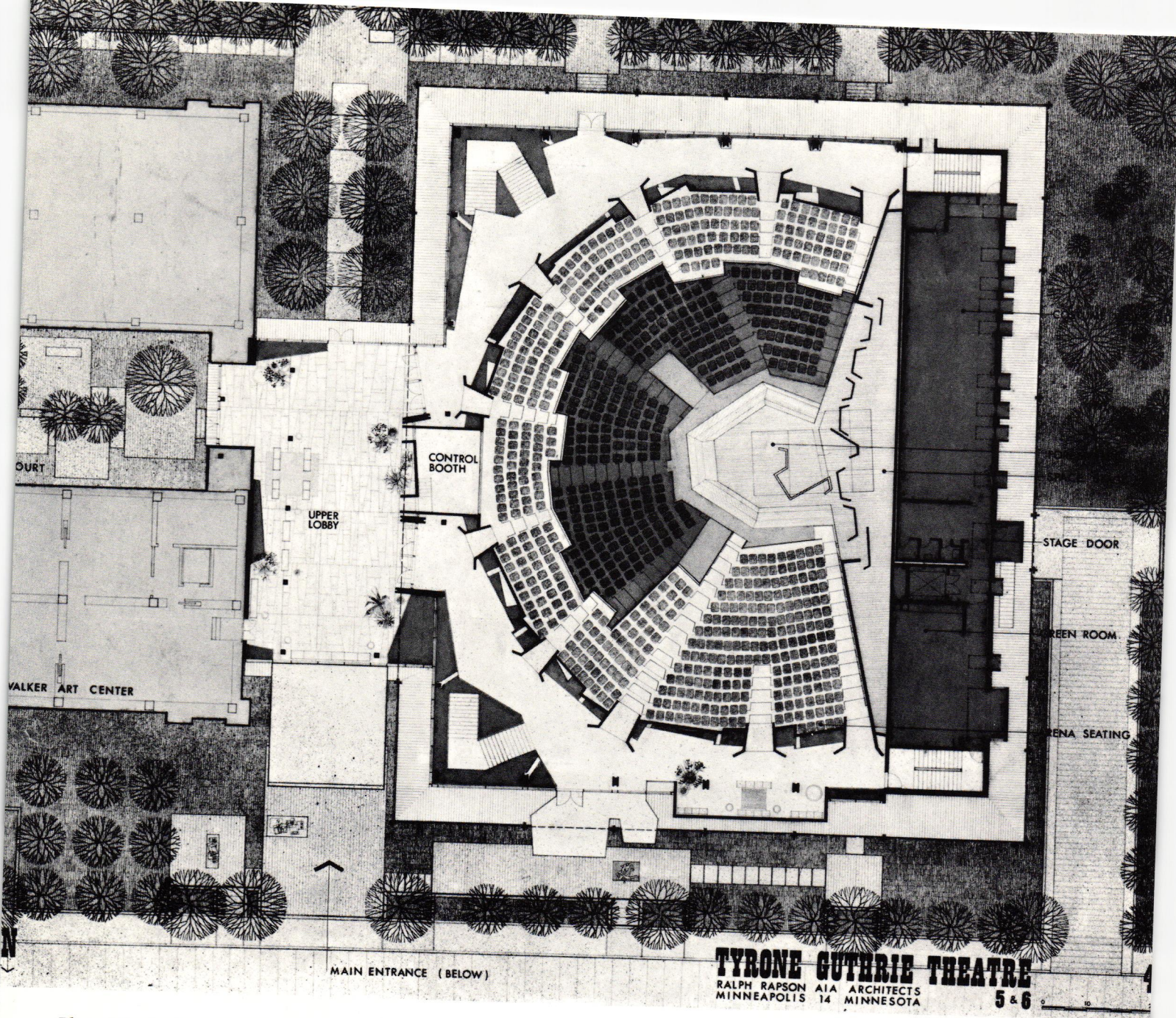
Light steel framing was chosen for lightness and economy.

Many people have given time and effort to the design and construction and many others have contributed towards the financing of the project. The achievement of a repertory theatre is a great ideal and one that will add to the cultural growth of the region.

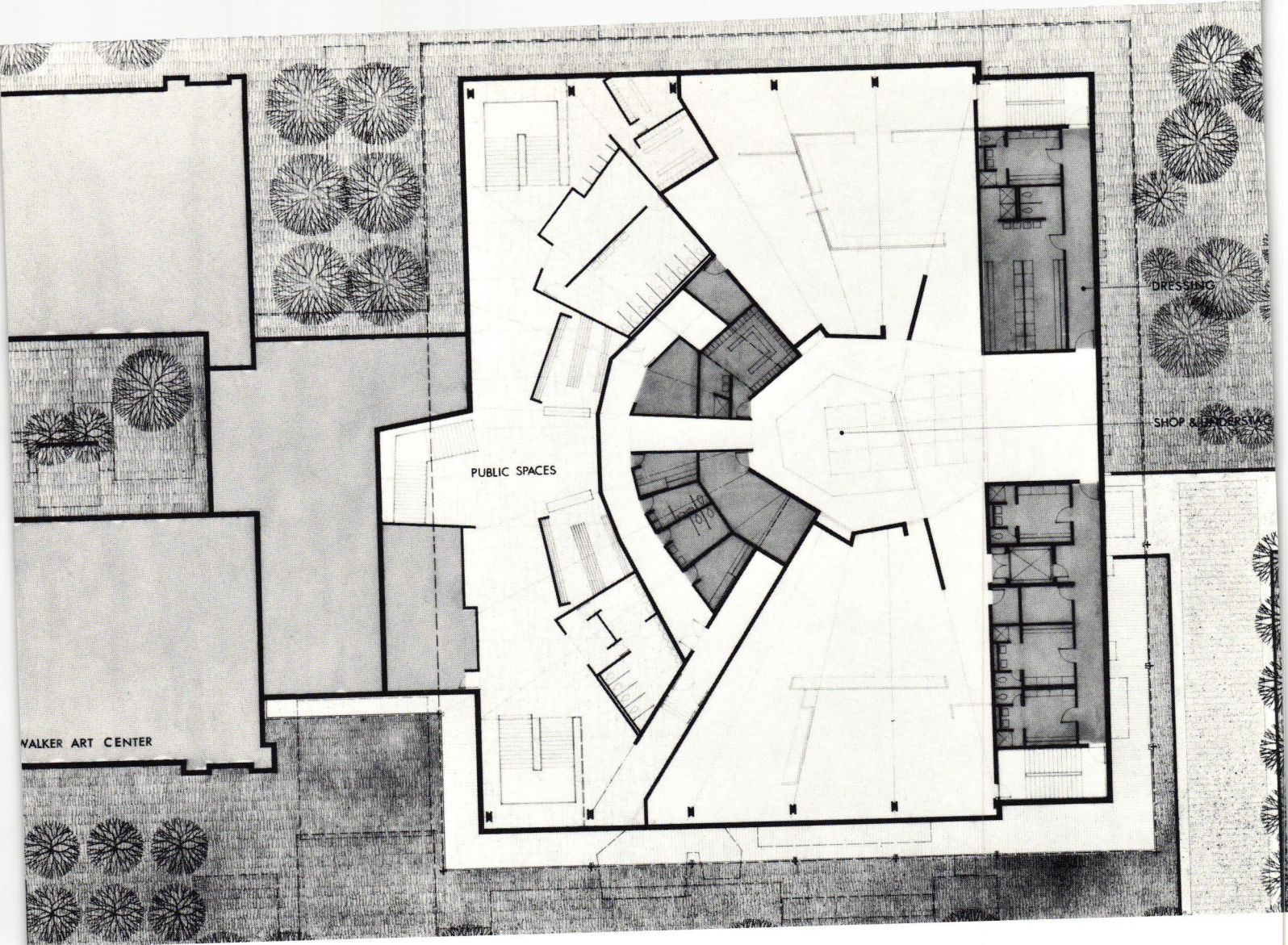
RALPH RAPSON



Plan of the theatre at orchestra level.

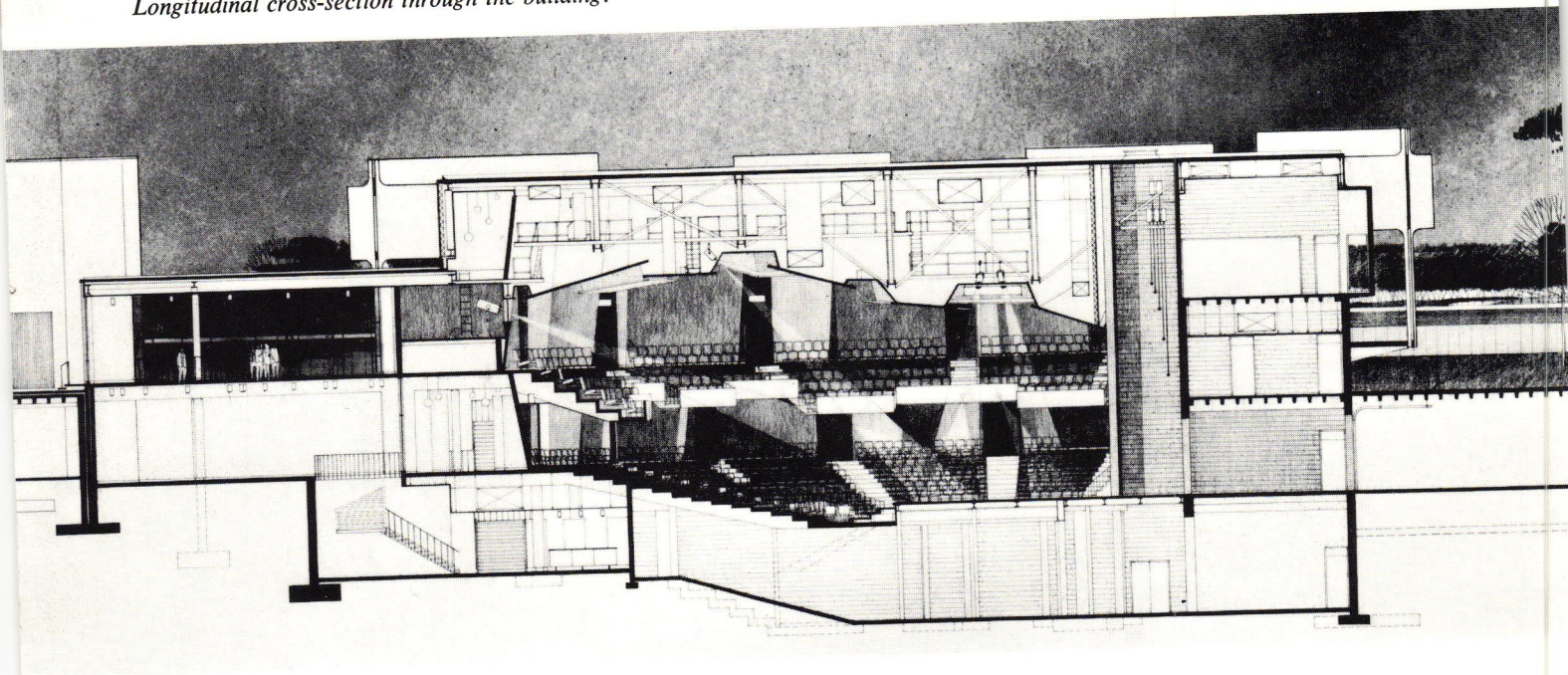


Plan of the theatre at balcony level.



Plan of the theatre at basement level.

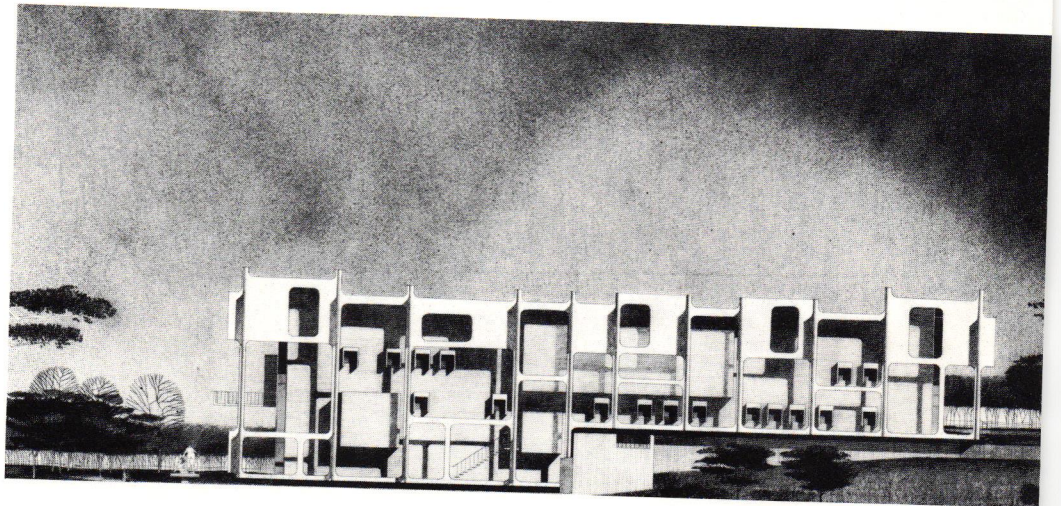
Longitudinal cross-section through the building.

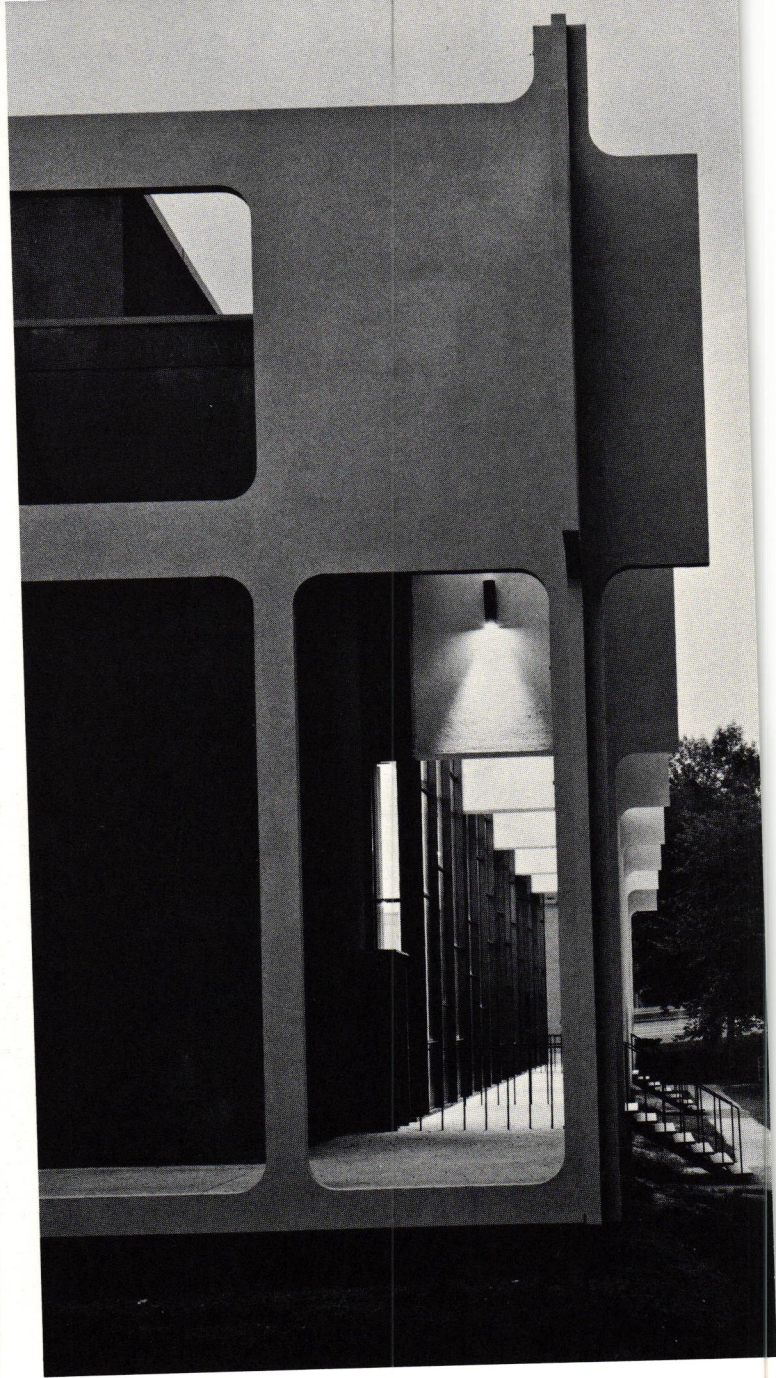




View of west facade with stage entrance and delivery door.

Architect's rendering of west elevation.





LEFT: Side view of entrance and north elevation. RIGHT: Side view of south elevation.

The screen is made of laminated wood and its surface is covered with a troweled marble aggregate in light grey.



The south facade, because of the sloping site, is only one story high, whereas the north or main facade is two full stories high.

Southeast corner detail showing intersection of exterior screen.



COURTESY: RALPH RAPSON, MINNEAPOLIS



COURTESY: DUFF JOHNSTON, MINNEAPOLIS

Stage lighting during performance of "The Three Sisters".

View of stage from orchestra level during rehearsal of "The Three Sisters".



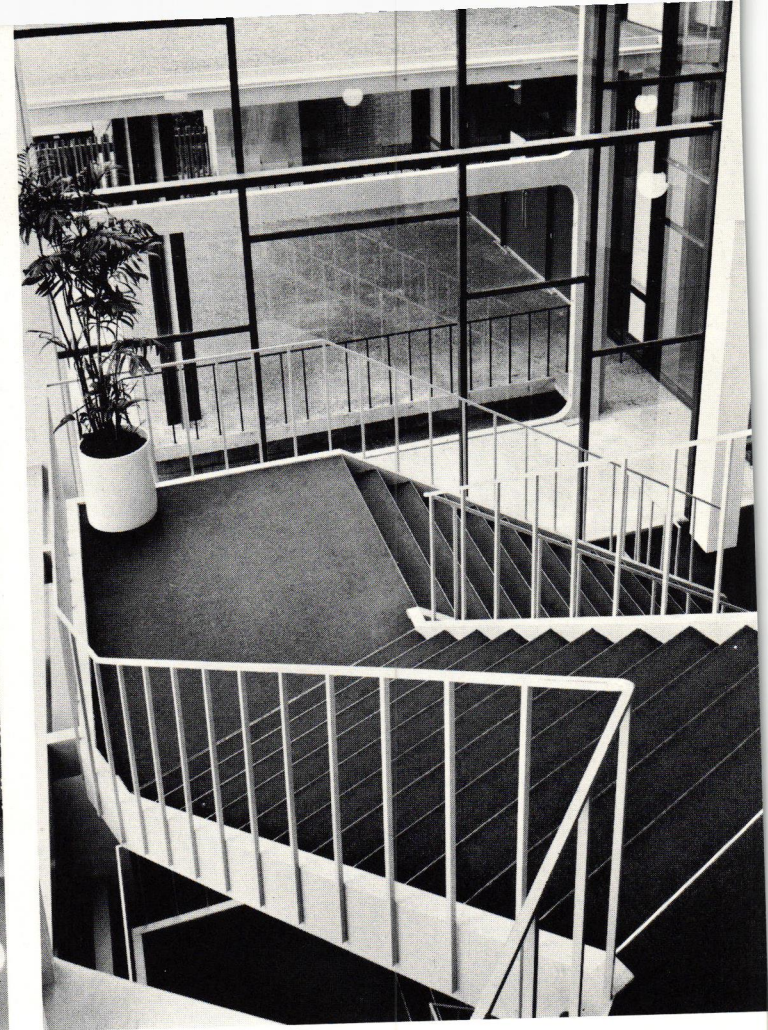


Theatre interior from balcony showing both seating levels and partial stage set for "Death of a Salesman".



The cast iron seat and arm frames and the formed plywood back follow original design for this theatre. The upholstery is in ten different colors, ranging from orange and violet to shades of green, blue and yellow.

COURTESY: BOB JACOBSON, MINNEAPOLIS



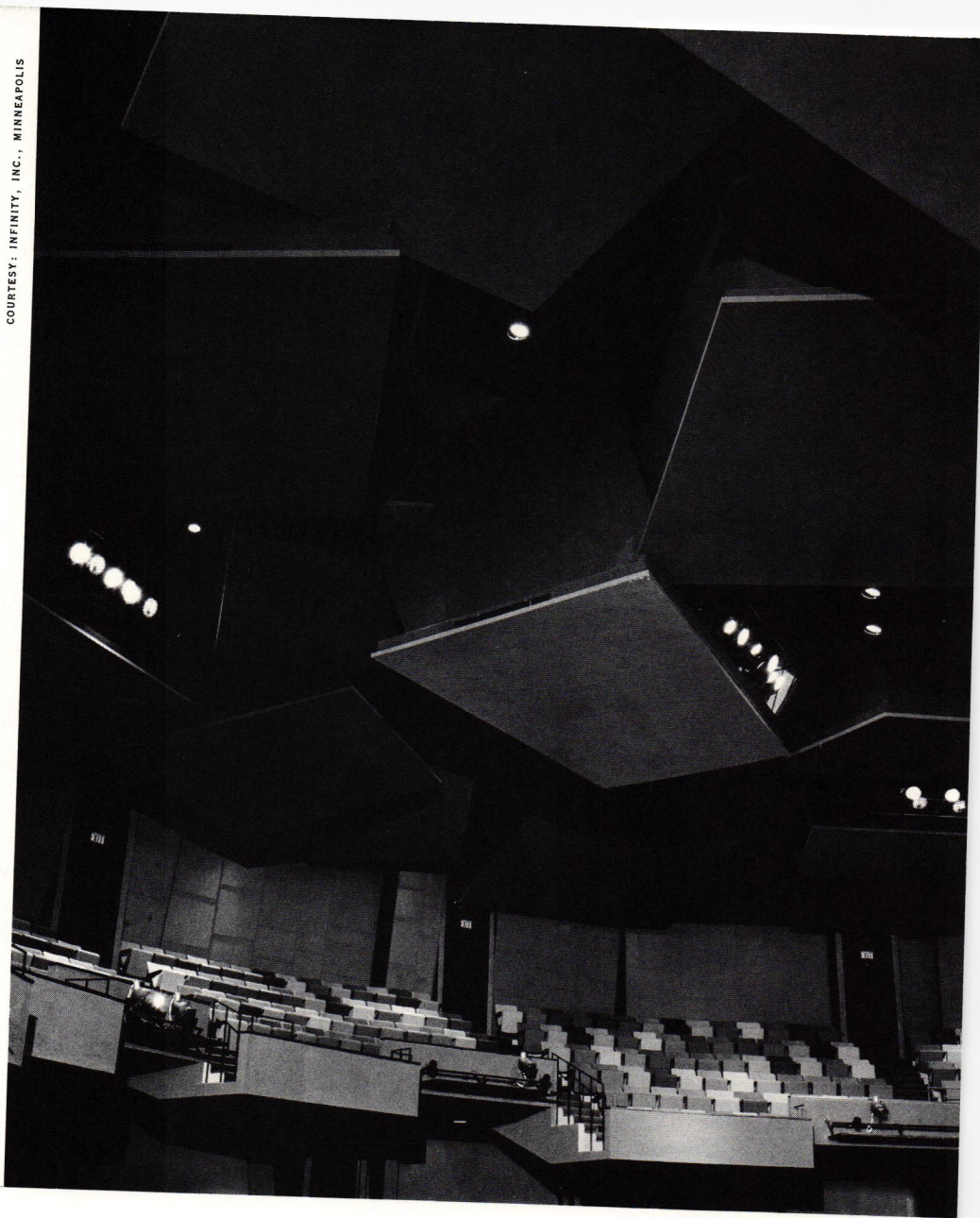
Stairs leading from entry level to balcony level. Note typical connection between balcony floor beam and column, and exposed "fin-tube" radiators on face of balcony.

One of two major stairways which are painted white and carpeted in charcoal grey.

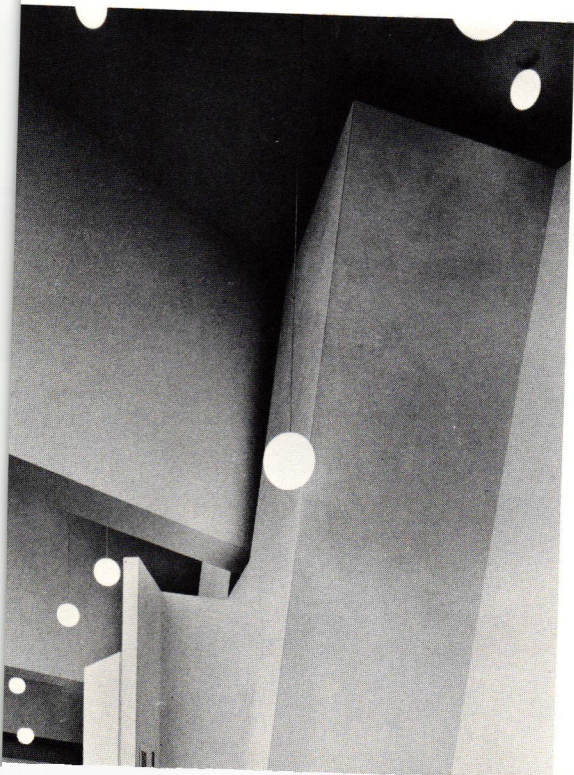
Ceiling air conditioning and heating units above front entrance.



COURTESY: INFINITY, INC., MINNEAPOLIS



Interior detail showing the integrated acoustical ceiling "clouds", the stage lighting ports and the air conditioning and heating grills.



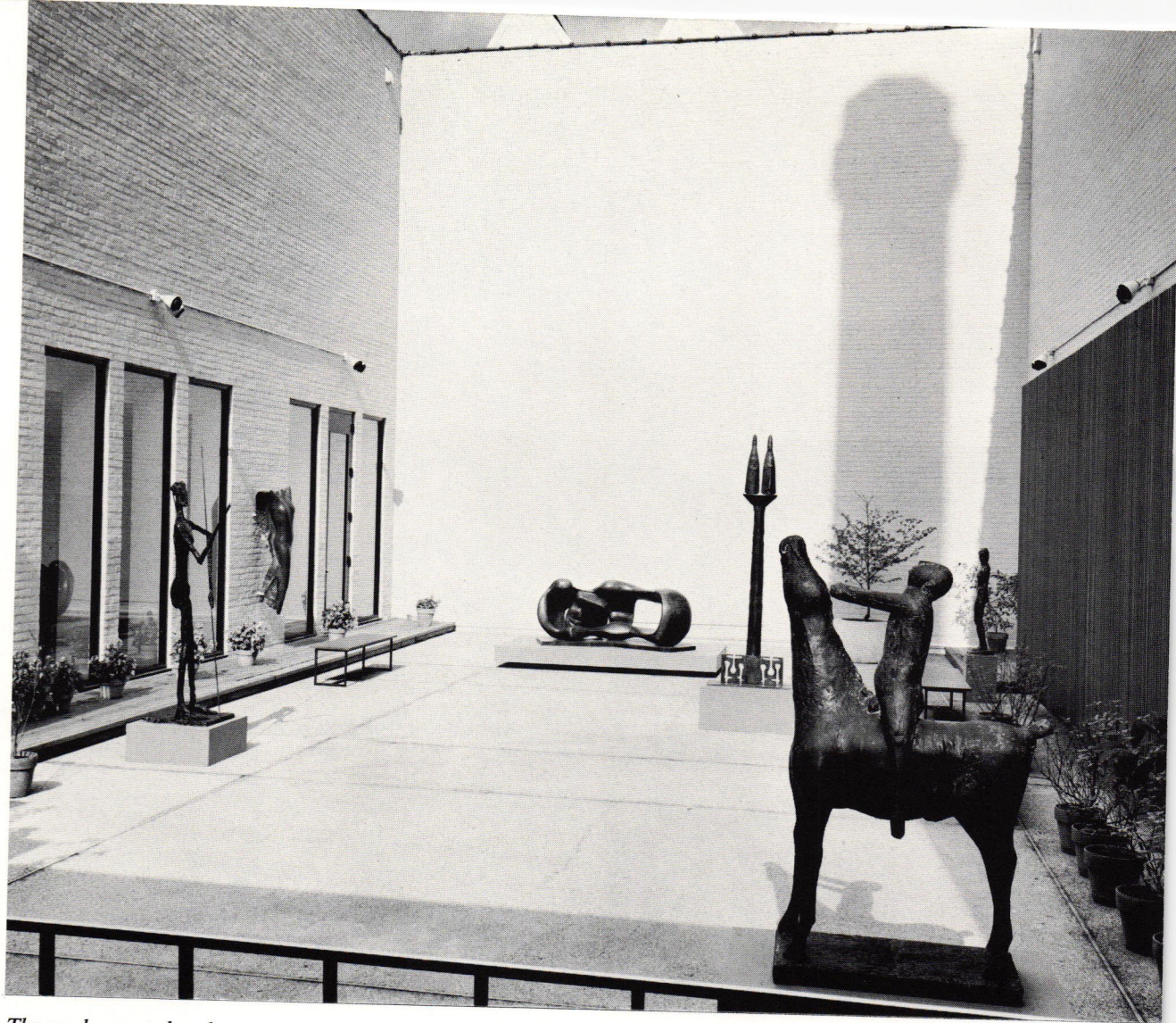
Interior detail showing intersection of roof truss with theatre wall.



Night view of the upper lobby which also serves to exhibit sculpture.

The rehearsal room is provided with a practice stage similar to the one in the auditorium.

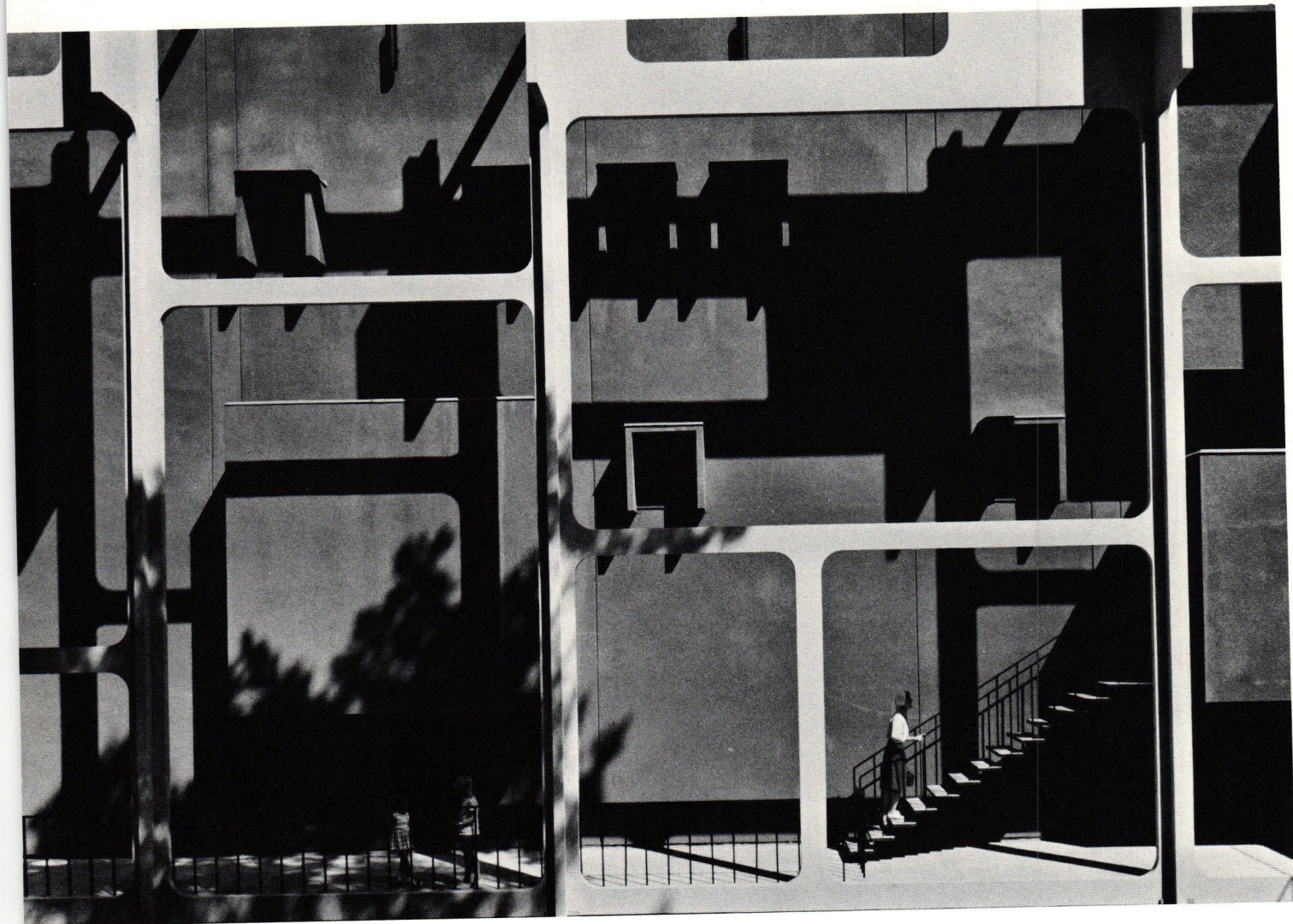




The newly created sculpture court is open to Walker Art Center visitors as well as to theatregoers.



Interior when looking from upper foyer towards stairs and through glass wall and exterior screen.



Light and shadow effects on west elevation.



Night view of north elevation.

BUILDING CREDITS

ARCHITECT: *Ralph Rapson, AIA*

JOB COORDINATOR: *Gene Stuart Peterson*

STRUCTURAL ENGINEERS: *Meyer and Borgman*

MECHANICAL AND ELECTRICAL ENGINEERS: *Oftedal, Locke,
Broadston and Associates*

ACOUSTICAL CONSULTANT: *Robert F. Lambert*

GENERAL CONTRACTOR: *Watson Construction Company
Lyell C. Halverson Company*

PROJECT ENGINEER: *Bob Park*

MECHANICAL CONTRACTOR: *Harris Bros. Plumbing Company*

ELECTRICAL CONTRACTOR: *Parsons Electric Company*

COST, DIMENSIONS AND CAPACITY

TOTAL COST OF THEATRE: \$2,250,000

*Includes remodeling work on the Walker Art Center
building, site work, landscaping, stage lighting and equipment,
theatre seating, furniture, etc.*

AREA:	72,150 Sq. Ft.	Cost per Sq. Ft. \$24.25
	1,410,000 Cu. Ft.	Cost per Cu. Ft. \$ 1.24

OVERALL DIMENSIONS: *building 140 Ft. x 170 Ft.
sculpture court connecting theatre
with Walker Art Center 45 Ft. x 72 Ft.*

SEATING: *designed by architect, manufactured by American
Seating Co., Grand Rapids, Mich.*

NUMBER OF SEATS: 1437

*No seat is more than 15 rows or 58 Ft.
from the center of the stage*

ELECTRICAL DATA:

Cueing controlled by a combination of audio and pilot light fifteen station system.

Monitor system consists of speaker stations located in all dressing rooms and areas where acting and stage personnel are present with microphone located on the face of the balcony.

Provisions for a closed circuit TV system are incorporated in the building.

A new type of electronic dimmer control was used to provide instantaneous, positive light control from full "off" to full "on" with any reduced light level obtainable in between.

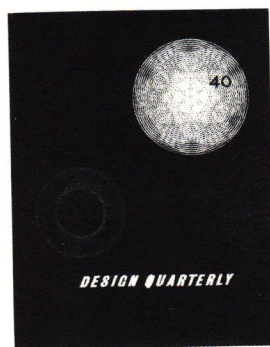
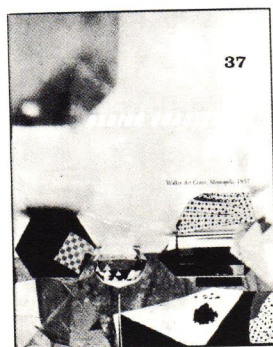
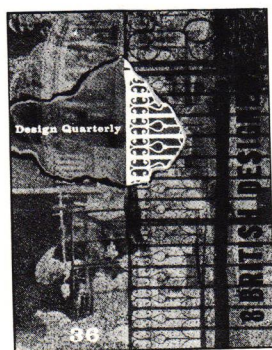
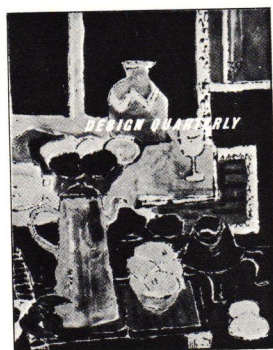
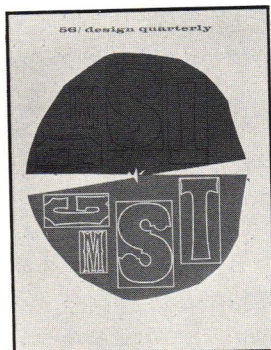
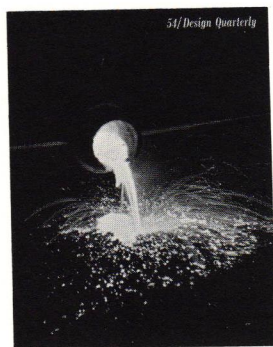
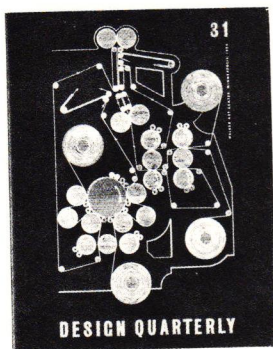
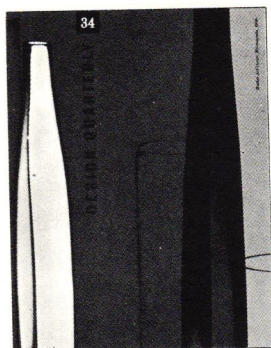
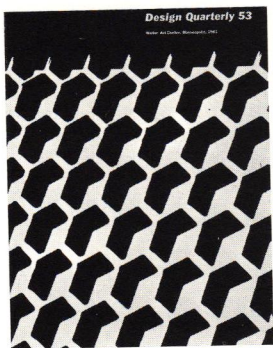
The stage lighting system permits pre-setting of up to five scenes and eliminates most circuit changes normally required.

MECHANICAL DATA:

A "no noise" heating and air-conditioning system, controllable from the stage door area was required. A dual piping system was provided to permit cooling in one or more areas while heating in others. The principal radiation is of the fin tube type with convectors in some areas and cabinet unit heaters covering entries.

STRUCTURAL DATA:

The structural frame, including roof trusses, exterior columns and upper level beams, is basically constructed of ASTM A-36 structural steel. All floors and balcony treads and risers are constructed of poured-in-place reinforced concrete. Foundation walls, interior lower level columns, interior lower level beams and footings, are also constructed of poured-in-place concrete. Poured-in-place concrete piles are used in the northeast corner of the building adjacent to Walker Art Center.



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