LOS ANGELES CENTER FOR THE PERFORMING ARTS

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LOS ANGELES CENTER FOR THE PERFORMING ARTS

DOUGLAS BAILEY
Montana State University
Bozeman, Montana
June, 1991

"Theatre will not influence the price of a man's loaf of bread. It will not start wars or stop wars. But it examines how wars begin, or why people fight at all, and it affects us vitally."
-Sean Kenny

THE LOS ANGELES CENTER FOR THE PERFORMING ARTS

Douglas Bailey
June 1991

A professional paper submitted in partial fulfillment of the requirements for the degree of Bachelor of Architecture, Montana State University

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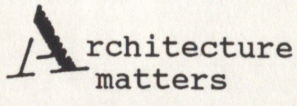
-This book is dedicated to Carol, without whom my architectural education would never have reached fruition.



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INTRODUCTION

A series of theatres for drama, music, and dance are all based on the concept of architecture adapting to celebration. Celebration is for all, not just the elite few. In 1920 Peter Behrens referred to theatre as the "maximum cultural symbol." Can we agree that cultural experiences help raise mankind's conscience and spirit to a higher plane of civility? If so, how does this effect the design considerations for a center that many people may only attend once in their life? Can an architect directly improve the affordability and accessibility of a performing arts center so that a broader range of patrons may attend?

Space must also designed in such a way that it embraces those who live *in the shadow of the curtain* as well as all who constitute the audience, for quality space must be created for both sides of the house. A 2500 seat Opera and Drama Theatre, an 1800 seat Concert Hall, a 750 seat Lyric Theatre, and a 200 seat Children's Hall will give the performers of Los Angeles a chance to soar, an opportunity to create their necessary art on their own terms.

The strong acoustical, mechanical, and circulation requirements must be addressed, and can become an asset to quality design. Creativity allows limitations to be turned into opportunities.

Sited in Los Angeles, this performing arts complex must recognize the unique climate and mind-set of Southern Californians. Located at the interchange of the Pasadena and Santa Monica freeways, the center will address the automobile as the primary mode of transportation, and welcome it onto the site.

It is time the theatre lives up to its possibilities.

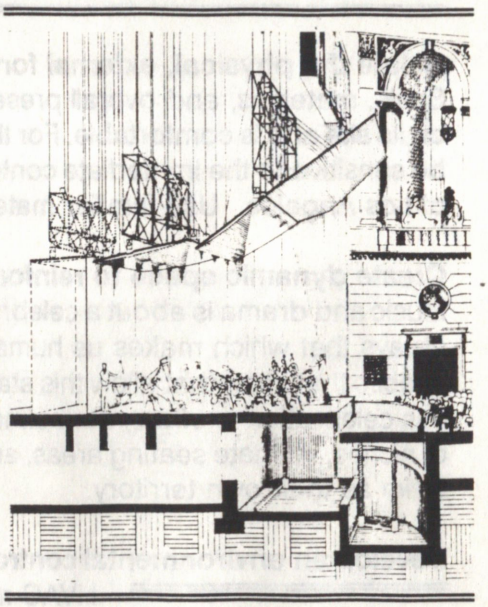
GOALS & CONCEPTS

"Be not the first by whom the new are tried, Nor yet the last to lay the old aside. A mighty maze, but not without a plan."

-Alexander Pope

Present a Center for the Performing Arts that will be available to all.
One factor affecting availability of music and drama, the frequency of which patrons attend, is ticket cost. Quality of the performing troupe, selections being performed, weather, and a host of other factors also influence attendance, but these are all out of the architect's control. Ticket cost, on the other hand, is an issue on which an architect can have some impact. Number of seats, independent or shared lobbies, efficiency of technical working environment, are all significant budgetary factors to be considered during the schematic design phase. Determine an appropriate budget for this building type in comparison to historical precedent, and then keep the estimated costs within a realistic frame through thoughtful design decisions.

Provide a facility which will accommodate the functional needs of the theatre.
There are many demanding technical requirements in a theatre program, ie fly space for scenery, grids for lighting, lifts for orchestra, and traps for the stage. This will be integrated into the design solution.

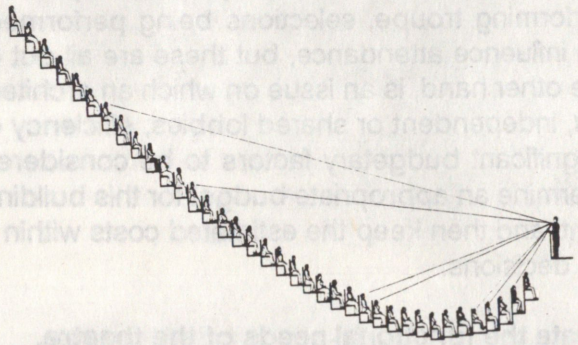


Fulfill the needs of the performers, those who live *in the shadow of the curtain.*
Too often architects focus all their attention on the public side of the house. The back of house typically requires more square footage than the public areas, and is certainly more important to the technical success and psychological comfort of the performers. This theatre complex will be designed for the performers, it will create quality space, not just adequate space, for actors and technical staff.

Build in flexibility for staging options as well as house configurations.
To optimize the concert hall for a Mozart symphony and a Baroque concerto requires adjustable parameters - ie acoustical shell, seating distance from the stage, etc. The same is true in the theatre if you are performing Shakespeare or Miller, each has its own unique requirement. Allow the Performing Arts Center to be fine tuned by building in adjustability.

Interweave the new public spaces with the existing urban fabric of downtown Los Angeles.
Plazas only work with people. The plazas surrounding this theatre complex must invite all residents of the city to utilize the space, to enliven the environment and become part of the performing arts community.

Design the house to take advantage of current knowledge of acoustics and lighting.



The primary objective of a theatre auditorium is to allow the performers to been seen and heard. Much research has been done in this field since Sabine pioneered the science of acoustics, and this project will work with that body of knowledge.

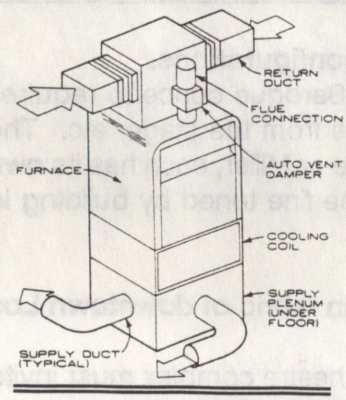
Relate the physical, external form to its context.

Scale, materials, and overall presence contribute to the sense that a building belongs on its site and is comfortable. For this program to feel psychologically accessible, it must be sensitive to the immediate context of the neighborhood, as well as the larger context of Los Angeles. Use familiar materials, and give it a human scale.

Create dynamic space to reinforce celebration.

Music and drama is about a celebration of life, sometimes joyful, sometimes somber, but always that which makes us human. The architecture of the theatre must incorporate spaces that allow that allow this staging to take place. It must not be forgotten that often this celebration is of an informal nature, taking place in the lobby or loge. This speaks of niches, intimate seating areas, and a host of small spaces that groups can temporarily claim as their own territory.

Develop an environmental controls system which is both economical and effective.



HVAC maintenance and operating cost is a significant long term cost for any facility with large square footage. A portion of the development in an efficient system must deal with exterior glass area and orientation as well as overall insulation. While the limitations of time on the development of this project are well realized, while comprehensive detailing can not take place on a project of this size in the limited time allowed, these issues should still be kept in mind while designing the larger elements.

Rationalize the structure to insure it is constructible

Utilizing a structural grid as the starting point enables the design to adapt to conventional and economical construction practice when that is acceptable. It also allows the design to break into a unique configuration when that is appropriate. The structural system of this facility will be a conscientious extension of the overall design.

Design a performing arts complex founded on the principles of Universal Design

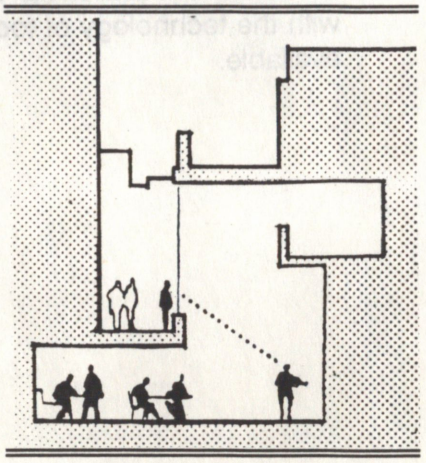


Universal Design speaks to more than accessibility for the physically handicapped. It speaks to equality. This center will not require those in a wheel chair to use the back entrance because that is the only ramp available. All patrons will be allowed to experience the approach, entry, and space in the same manner.

Consider effective internal circulation as a primary factor in the success of the facility.

Those attending the center must understand there they need to go to find their seats and other amenities, or attendance will lead to confusion and frustration. Rapid egress from a large auditorium is critical to public health, safety, and welfare. A circulation system can be designed which is interesting and efficient.

Facilitate the social function of theatre as a place to "see and be seen".

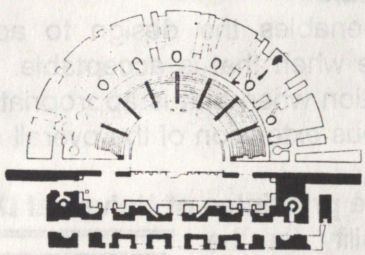


An evening of theatre or music is still an opportunity to spend time in a quality environment, and to socialize with peers. Without adopting an elitist attitude, grand lobby space should be designed to complement this activity.

Limit the magnitude of *the loop*

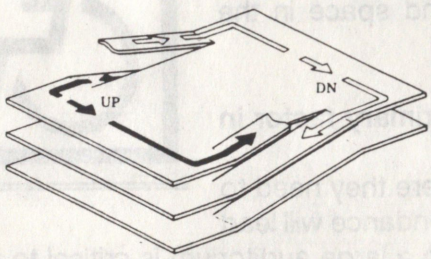
George Izenour has determined that there is a straight line energy path of finite length between the vicarious experience transmitted from active participant to passive spectator. The implication from this finding is that the size of the hall must be scaled appropriately to the intended function. Do not make the footprint, or the number of seats, larger than precedent says is effective.

Take into account the powerful and successful precedents of history.



Form, sightlines, and acoustical control have all been explained with some success in the past. While still being innovative, accept the conventions that work and bring their principles into this project.

Accept the automobile as the primary mode of transportation to the Center.



Virtually all who attend this center in Los Angeles will do so in their own car. The approach to the parking structure, and the transition from parking to front lobby, must be designed as the "normal" means of experiencing the Center.

Combine up-to-date technological innovations

Advances are being made rapidly on systems such as air casters for seating towers, tunable acoustical shells, and sound isolation. The theatre of tomorrow will be designed with the technology of today, but it should be the most advanced technology we have available.

TOPIC OF EXPLORATION

WHO NEEDS THEATRE?

"Art is said to provide a sense of meaning or significance or intensity to human life that cannot be gained in any other way."

-Ellen Dissanayake

The title of this essay, *Who Needs Theatre?,* was derived from a 1987 book of the same title written by Robert Brustein. To make the claim that human beings need art and theatre is a proclamation of faith, not a scientific hypothesis. There is, however, a substantial body of research that supports the idea that theatre helps us to become civil, social beings. The term Art often combines several separate activities that may not truly deserve to be combined. However, since the *art* of theatre will be referred to throughout this essay, the activity of the theatre should certainly be added to this ill-defined Art with the capital A. It is believed that the first found artwork consisted of stone tools that were fashioned so that an embedded fossil, already naturally occurring in the flint, acquired central importance. This tool was designed 250,000 years ago, thus speaking to the long-term importance of our involvement with the aesthetic.[1]

Leisure has been defined as the freedom or opportunity to do something.[2] Physical recreation for the body is generally agreed to be necessary, but rarely does one address play of the mind, play of the spirit, play of the creative imagination. This is the world of the arts, the aesthetic pleasure and satisfaction of attending the theatre or hearing the symphony. For many this is the largest unexplored territory of human behavior, and this essay will show the necessity of spending more time within this realm if one intends to become fulfilled as a human being. Theatre is vital, society needs it to function at its optimal level. Architects can and should be playing an active role to preserve and expand theatre in modern society. Who needs theatre? Everyone needs theatre, to show what is possible, to challenge people to question and achieve, and to add our own energy to the collective personality of society. "Drama has long been recognized by poets and philosophers as the essence of civilization. This is why it is worth taking seriously. Actors and architects should keep this in mind."[3]

It has already been shown how art has been a part of our lives for 250,000 years, but it should be noted that only recently has it been assumed that a work of art had its own autonomous values, apart from being useful. Classical and medieval civilizations did not make works to serve strictly as art objects. They were intrinsically important for other reasons; and thus, the best were done beautifully. Art should be integrated into daily life. Ellen Dissanayake, a significant researcher on the overall importance of art to our well being, notes, "Art in its most conventional modern sense has become increasingly a private predilection, separated from primary lived experience."[4] In early societies, virtually everyone was a participant in the creation and appreciation of art. The Greek model of the democratic theatre illustrates how all citizens of the city attended the dramatic performance. The early Renaissance theatre took place on the open piazza, and all people in the area would participate or attend these productions. In primitive societies, art was inseparable from daily life. One critical change in modern society is

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[1]Ellen Dissanayake, What is Art For?, (Seattle Washington, University of Washington Press, 1988), p. 22.

[2]Stephen Joseph, Actor and Architect,ed, (Manchester London, University Press, 1964), p.80.

[3]Joseph, p. 29.

[4]Dissanayake, p. 183.

that performance, design, and art is removed from daily life, reserved for *the special*. In his landmark book on theatre and society, Marvin Carlson said, "Within the ample boundaries of the Grecian amphitheater, the whole populace was wont to witness the performance, in our superior theatres, loll only the affluent classes."[5]

Even within the Greek and Italian exceptions mentioned, theatre has traditionally presented itself as a special experience set apart from everyday life. By using masks, costumes, and physical actions arranged in a set way, and by performing in special places, theatrical experiences are set aside as *non-ordinary*. In the early twentieth century Germany, Peter Behrens tried to create a relationship between art and daily life, and was somewhat successful at making art and theatre accessible to the people of the time.[6] Much avant-garde work today is concerned with making art part of daily life, and it is the architect's responsibility to design spaces that facilitate this exchange. One way this can be done is to integrate additional functions within the theatre complex that will have a purpose and attendance of their own. Banquet facilities, library, and restaurants that are available to everyone can add to the occurrence of people simply stopping by to become a part of the excitement within a facility. This drawing of people to the physical area will assist in breaking down the image of theatre as special, only to be attended when one is dressed up. Making art a part of daily life is one reason why society needs the theatre.

Has theatre always been important in this role that is being defined for it? Because all human societies, past and present, participate and respond to art and performance, it can be inferred that it must contribute something essential to human life.[7] It is as if there is an archetypal group memory of what the arts have done for people in the past, or can do for people in the future, that attaches itself to the connotations of capital A art.[8] At the least it can be agreed that art is basic. It is central, not peripheral to the way people think, work, and live. Researchers studying how society evolves have shown that artists, intentionally or not, often accelerate social change. Natalija Sabotinic, in a recent essay on how people respond to the urban theatre space of Italy, found; "Theatre, being in close contact with the society which it represents, has always been an active vehicle for profound social transformation."[9] Often of a spiritual nature, art was engaged to facilitate socially important behavior, especially ceremonies, in which group values were expressed or transmitted. Ritual ceremonies of the Eskimos and the Hopi were concerned with the aesthetic as much as the practical ends.[10] Their societies

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[5]Marvin Carlson, Places of Performance: The Semiotics of Theatre Architecture, (Cornell University Press, 1989), p. 39.

[6]Julius Posener, Theatre Construction in Berlin from Gilly to Poelzig, (New York, New York, Rizzoli International, 1988), p. 35.

[7]Dissanayake, p. 167.

[8]Ibid., p. 168.

[9]Natalija Sabotinic, "Theatre of the City", Journal of Architectural Education, Vol. 43, No. 1, (Fall 1989), p. 36.

[10]Dissanayake, p. 169.

complemented and completed the integrity of life that we are missing in today's society. The monumental theatre, opera houses, and symphonic halls of the nineteenth century all served the symbolic functions associated with them. They were highly visible signs of civic dedication to the arts as defined by the high bourgeois culture of the time.[11]

In his study on the role of architects in the theatre, Stephen Joseph determined, "Ever-increasing emphasis on materiality and technological developments have caused us to lose site of broad human values."[12] Sociologists feel many people have lost their sense of communal purpose, and are losing their sense of the values of life itself. Art has the possibility of preserving these values. This possibility is particularly true for theatre because it is a bringing together of the other arts, it is generally understandable, and easily recognizable to everyone.[13] The human form that is necessary in theatre allows people to participate creatively, to relate to the action and themes presented on stage. Herman Hertzberger, architect of the Vredenburg Music Center, felt the over-riding imperative in the design of spaces for that music center was to introduce a socio-cultural relevance that would appear less intellectually elite.[14] The theatre must be accessible to all. It must function as an outgrowth of the city, and extend a feeling of welcome to all who visit or pass by the theatre complex.

Theatre is said to be both pleasurable and advantageous because it is therapeutic.[15] However, the issues of vital concern to the theatre today deal with life as people live it, and of the often terrifying problems people have to face in their daily lives. These concerns make accessibility to the theatre even more important today than ever before. Another justification for theatre is the reality that it is immediate. Theatre is "hostage to the whims and caprices of nature."[16] Just as life itself, sometimes the door does not open, or someone misses a cue and does not walk in exactly when they should. Theatre is engaging, and helps people "look at art from the life side, and then look at life from the art side."[17] This blurring of art/life distinctions, as Schechner described it, helps people maintain a fresh perspective on their daily activities.

A comprehensive look at the relation between theatre and modern American society lead Julius Posener to say, "The separation between daily fare and artistic elevation is due in part to the fact that our world has been fragmented to a degree unimaginable in earlier

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[11]Meredith A. Clark, "South Coast Air Quality Management District 1989 Annual Report", (LA, South Coast Air Quality Management Board, 1989), p. 88.

[12]Ibid., p. 67.

[13]Ibid.

[14]Richard Padovan, "Hertzberger's Vredenburg Music Center", Architectural Review, Vol. 167, No. 996, (Feb. 1980), pp.79-87.

[15]Dissanayake, p. 65.

[16]Brustein, p. 3.

[17]Richard Schechner, Between Theater and Anthropology, (Philadelphia, University of Pennsylvania Press, 1985), p. 150.

human history."[18] "Ordinary man is less able to participate in the creation of anything. Our lives are governed by technicians and statisticians. Machines have taken the place of craftsmanship, statistics have taken the place of thought. We no longer play music in our homes, we play it on records. We no longer read aloud, we watch television."[19] More and more there is a decline in society's level of social participation. Western society has few group values that are widely shared and transmitted by means of performance and the fine arts, and mankind is growing more isolated from society into a world of specialties.[20] People in the United States today fail to communicate with each other, and join infrequently in a fully developed community life. These are concerns of the theatre community today because it truly believes art can "restore the significance, value, and integrity of the emotional power of things."[21]

To develop an answer to the poised question of who needs theatre, one should ask why is theatre important?. There is no shortage of writing in response to this query. Brustein said, "Theatre is one of a dwindling group of activities that bring Americans into communication with each other; it is, therefore, an enterprise that preserves some vestige of belief in the possibilities of society."[22] Sociologists have long shown that the entire pattern of individual's lives is organized around social activities, and the introductory section of this essay attempted to illustrate how the arts have integral importance to individuals and in human societies. Tyrone Guthrie, one of the great figures of modern theatre, felt that each person ceases to be him/herself, and becomes a tiny bit of a single collective personality, that of the audience. "Theatre may be one of the last remaining shreds of evidence that we are a people, not just an isolated mass of frightened fanatics, barricaded in our homes, seeking safety from a sinister and threatening world."[23] Performers have long been understood to possess the ability to transport individual spectators, to engage them to the point where they are not passive witnesses, virtually transforming them into additional members of the cast. Dissanayake believes, "Through this aesthetic experience, a perceiver may acquire a special and valuable kind of experience that he could receive in no other way."[24] For many, the appreciation of art, music, and drama has become "a special mode of cognition, described by some persons as the most significant moments of their lives."[25] It is obvious that art contributes something essential to the human being, and it is a challenge to the architect to design spaces that will facilitate the performers and provide for the patrons so this experience may take place.

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[18]Posener, p. 34.

[19]Joseph, p. 167.

[20]Dissanayake, p. 167.

[21]Ibid., p. 67.

[22]Brustein, p. 4.

[23]Ibid.

[24]Ibid, p. 275.

[25]Dissanayake, p. 42.

If one claims that theatre satisfies a psychological and social need, it is discomforting to admit that many people live their lives without ever entering the auditorium of a theatre. Is then the theatre truly necessary? Many would say yes because it is an inspiring art form and it has existed since 500 B.C. With all the demands and options of the approaching twenty-first century, those answers are not enough. "Theatre has the right to survive only if it can continue to provide an essential human need."[26] Attendance at a dramatic performance does provide for the essential need of learning and practicing how to relate to others. This experience teaches us how to act in groups, and be sensitive enough to care about how our actions and behavior affect the person in the seat in front of us. These issues are as basic as the importance of considering the needs of the whole above the needs of the few. In a recent theatre magazine Laura Shamal stated, "Theatre is a social arena: we experience this art--which is performed live--as part of a group. It's one of the few places left in America where 500 people can laugh or cry or sigh or breathe--together, side by side, an acknowledgement of our humanity."[27] What is the future of humanity if we lose this basic sense of community? Do we need theatre? Unequivocally, yes.

There was a transition as society moved from the accessible outside to the controlled, dedicated space of the nineteenth century. Historian Nicolaus Pevsner said, "Many older theatres were designed in utter contempt of the man with a small income. One feels that the architect thought he was doing us a favor to let us in at all."[28] By the mid nineteen century, a patron who did not pay for *good seats* was often relegated to a second class area of the theatre where they could not adequately see or hear the performance. It is with the rise of this type of reasoning that society further isolated itself into the privileged and the not, those who could enjoy the experience of shared social exchange, and those who found art one step further removed from daily life.

One can see how the arts were available only to the educated few, the privileged middle and upper class. It is hoped that today it can be seen that this removal of drama and music from the mainstream is not necessary. "It is not a matter of *educating* people so they can join the privileged ranks. The theatre can speak to all people: we only have to take it out of its fetters, let it expand and explore."[29] By sensitively designing spaces where the playwrights and actors of today have this room to explore, the architect can make a significant contribution to providing dynamic performing arts for all people. It is the architect's responsibility to confer with those who live in the shadow of the curtain to be certain that appropriate space is being designed.

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[26]Joseph, p. 66.

[27]Laura Shamal, "Watching the House", American Theater, (Sept. 1990), p. 7.

[28]Nicolaus Pevsner, A History of Building Types, (The A.W. Mellon Lectures in the Fine Arts, The National Gallery of Art, Washington D.C., Princeton University Press, 1970), p.107.

[29]Joseph, p. 28.

There are many vexations of play-going, not the least of which would be the high price of tickets and the strong pull of books, movies, and television. Some writers believe that these are all merely reasons to justify the increasing insularity of American life.[30] Robert Brustein asks in his book, "Why leave home at all? Why exchange one's pleasant and habitual surroundings for an unfamiliar environment where the seats are uncomfortable, and the streets unsafe?"[31] It is true that many American theatres find themselves in areas described as combat zones, many times no better than they were sited in Elizabethan England. Boston and New York are good examples of theatre districts that are located in blighted areas. The physical issues of uncomfortable seats and unsafe streets are ones the architect must become more involved with for the theatre to regain its position as a pleasurable and advantageous activity. It is no longer acceptable to design an egotistical monument that has no respect or understanding of the context in which it sits. The Performing Arts Center of today must integrate into the neighborhood, invite all residents of the city to walk through its doors and participate. These are issues of scale, sympathetic materials, openness and accessibility of the facade that the architect must control if the theatre is to be again embraced by all. Today it is more important than ever that drama and music become an *ordinary* experience, an integral part of contemporary life.

It is generally agreed that reception to the theatre suffers because of its physical conditions, but it is *overwhelmed* by cost.[32] One of the primary concerns of the theatre today is the rising price of attending live performance. The same human forms referenced earlier that make theatre easy to relate to, also make it a labor intensive and expensive activity. There have been some breakthroughs in technology-lighting boards, computer integrated sound equipment, etc. For the most part, however, it still takes the same number of people to do the same number of tasks that it did in Shakespeare's day, or in Sophocles' for that matter. There is no question that a forty-five dollar ticket has a strong influence on the decision by many people to stay away from the Symphony Hall. The price of a ticket for any given performance is the result of many factors: performers' wages, corporate underwriting, the cost of electricity, and a host of other factors that are far beyond the architect's influence. At the same time, that ticket price is also affected by the initial construction cost, the life cycle cost of the materials included, the efficiency of the electrical and daylighting system, the appropriate sizing and design of the HVAC, and a host of other issues that *are* directly within the control of the architect. Architects need to realize that informed and intelligent design decisions can have an impact on making the stage available to a larger percentage of the population.

For theatre to survive and fulfill the role that is being assigned, it must have a stable audience. There are many reasons people give to not attend- "it doesn't belong to us, it is not for us, it's a middle class and middle age sort of thing, I don't know how to

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[30]Robert Brustein, Who Needs Theatre?, (New York, The Atlantic Monthly Press, 1987), p. 1.

[31]Ibid.

[32]Ibid, p. 3.

behave in the theatre, the lady in the box office tries to take advantage of us, etc."[33] These may all be valid reasons for limited attendance that the theatre world must overcome. One of the ways these excuses can be avoided is by attracting youth to the theatre. Social interaction begins at an early age, and by developing an interest in theatre on the part of young people, one can both contribute to the beginning of social interaction *and* create a stable audience. By setting up experiences for young people that will bring them into the theatre and concert hall as a positive environment, society is assuring the audience of tomorrow. "Genetic transmission happens once in a life time. Cultural transmission, the passing of information from one individual to another by behavioral means, can happen again and again. In this manner we can help young people extend their consciousness and participate in the socially developed skills that are critical today."[34] It is for this reason that children's theatre should be considered legitimate drama, and incorporated into any design programming for a performing arts center. Children's theatre has unique requirements of scale and flexibility that can not be dealt with as a scaled down *normal* theatre.

A question at the root of this essay is how can theatre be made accessible? One basic tenet is to provide good theatre. Joseph believes, "Good theatre depends on three things: the quality of its repertoire, the quality of its performance, and the quality of its housing."[35] This is a direct linkage to an architect's responsibility to make drama and music available. By studying the successful precedents of theatre design, by staying in touch with current movements in the dramatic world, architects can design spaces that will serve the needs of actor and audience alike. The entire theatre, its seating, foyers, public spaces, and open plazas all assist the audience to make meaning of the experience. At a time when there is a pressing necessity to open the doors of the theatre to all, it is in part the architect's duty to make the audience comfortable--physically and psychologically. "Art can help the individual adapt to an often uncomfortable and indifferent world."[36]

It should be stressed that the theatre should not be seen as a culture machine, where you put in *the great unwashed* and out come decent people. If the theatre is fulfilling its social-celebrative function, then it is making available a wide experience in the arts, in the right context, at the right level. This referenced level is not an educational issue. Richard Schechner found, "It does not take special training to like Broadway theatre, or to dislike it. What it asks of its audience is not special knowledge, but responsivity."[37] One should look at the theatre experience in the context of a larger framework, "as a socio-cultural event whose meanings and interpretations are not to be sought exclusively in the text being performed but in the experience of the audience assembled to share

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[33]Joseph, p. 68.

[34]Dissanayake, p. 23.

[35]Joseph, p. 68.

[36]Dissanayake, p. 66.

[37]Richard Schechner, Between Theater and Anthropology, (Philadelphia, University of Pennsylvania Press, 1985), p. 144.

in the creation of the total event."[38] This look at the experience of the audience should be comprehensive, taking into account the factors of the visit, and how a person has learned because of it.

Richard Wagner, one of the great musical personalities of all time, had lofty ideas in mind for the concert hall he designed; "Here we feel invested by a more elevated dimension, one that stems from our spiritual sensitivity and from the need to satisfy our transcendence. Everything opens our souls to a second life, to its immortal life. We grow, we become more wholesome, more transparent: we forget the inadequacy of our existence and the pettiness of the soul."[39] At a slightly less religious fever, Frank Gehry referenced his goals while designing the Walt Disney Concert Hall. He spoke of creating a fundamental relationship to the urban environment that would invite the citizens into the foyer as the living room of the city. Gehry expressed his commitment to a responsiveness to the musicians artistic and professional needs that would allow them to function within the space[40]. One way these goals can be achieved is by allowing the theatre to exist in the public environment and make the theatre site an enclosed extension of the city. Another is to create a hall that is physically responsive to live theatre or the production of music. This refers to keeping the number of seats down to the smallest economically feasible number so the performer, the individual person, can be felt. In a non-architectural response, these goals can be attained by staffing the box office with a person who behaves politely to the patrons, and tries to encourage them to go the theatre instead of treating them as if they were doing the theatre a favor. The patron, again the individual person, is the reason theatre works. "It is not the mass that will see Cassandra's existence and gestures, but the single, thousands of singles,"[41]

The focus of this essay is on experiencing art rather than making art. It is the premise of this paper that architects can assist in giving all who attend the theatre the impression, in fact the actual experience, of being involved people. Through the creation of spaces designed to embrace the patron, the foundation is set to enrich the individual life. "Through the work of art, a new community is born."[42]

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[38]Carlson, p. 2.

[39]Posener, p. 28.

[40]Barbara Goldstein, "Gehry Awarded Disney Hall", Progressive Architecture, (Vol. 70, Feb 1989), p. 21.

[41]Posener, p. 16.

[42]Ibid., p. 40.

> "We must make the theatre alive, an exciting place. It doesn't begin with the architect. It doesn't begin with the frame. It begins as space, a free space: nothing. Let it grow from the inside, do not start from the outside. Create something exciting, and then do not hold it away from the audience. We must build theatres where the audience can move freely in the intervals, where they can feel a sense of their importance as human beings, where they can for a short time forget the drab procedure of standing in line for the bus."[43]

Mr. Joseph was correct in asserting that theatre, as everything, begins as a free space: nothing. However, if the creation of *exciting* space does not begin with the architect, theatre will never reach its full potential. Hertzberger began by bringing Vredenburg down to the proportions of a private house, by providing large areas of internal glass so people could see back and forth, and by designing sitting spaces everywhere so people could claim their own territory. Gehry began by creating a living room for the city, by creating a plaza that had a park-like atmosphere to attract people day and night. These are the tools of the architect. These are the tools that can make the theatre alive and exciting and accessible to all.

Underlying the vision of accessibility is the realistic understanding that theatre and musical concerts of the nature presented are not mass entertainment. The audience will always be a minority of people in any city. The case made in this essay is that this minority should have a broad representation. Theatre belongs to no particular sector of the community. As Mr. Joseph found, "It is possible to be a carpenter or an insurance agent and love the creative imagination, just as it is possible to be a University professor and despise it."[44] Works of art may induce exceptional emotional effects, but if the theatre is going to serve as a springboard for spiritual development and growth, then that same theatre should be designed less as a temple, more as a shop.

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[43]Joseph, p. 62.

[44]Brustein, p. 313.

CONTEXT

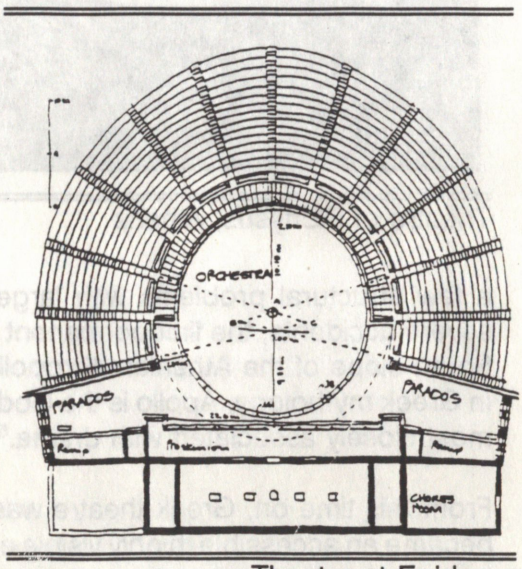
A SELECTIVE HISTORY OF THEATRE

"Theatre as a total event, of which performance is only one part."
-Marvin Carlson

Theatre is one of the most persistent architectural objects in the history of Western culture. As a building type, the theatre has evolved and adjusted in relation to the many forces which act upon it. The art and science of theatre design has existed for more than 2,400 years, and clearly divides itself into two epochs. The ancient epoch lasted approximately 800 years, the modern period has been developing for nearly 500 years, and there was a 1,100 year period of virtual inactivity in theatre design between the two. The Byzantine and Middle Ages saw a limited continuation of the theatre and drama, but no construction or development in theatre space. The primary reasons for this void are attributed to war and religion. People were either too busy trying to survive destruction and battle, or the church forbade them from involvement because of the *perceived evils* of the theatre.

While the physical structure of theatre has evolved in the last two centuries, the basic definition and purpose of theatre has not. One of the primary researchers of theatre ans society, Marvin Carlson defined theatre as; "A permanently or temporarily created ludic space, a ground for the encounter of spectator and performer."[1] The most basic interpretation incorporates a structure for the encounter of two spaces, that of the public and that of the actors. It is the evolvement of that structure, as it relates to theatre design today, that will be explored in this essay.

The Greeks invented theatre in the sixth century BC, and continued to develop and refine the concept and structure for several hundred years. In 27 BC Vitruvius wrote the Ten Books of Architecture, and included a section on the theatre. This chapter, *De architecturea*, was the primary influence on all theatre design from the Renaissance through the late 19th century.[2] English and German designers in the 1800's rediscovered the value of sightlines and acoustics originally developed by the Greeks and Romans, and took us back to the classic fan shaped auditorium. When you realize the seating radius of Epidarus, built in ancient Greece 400 BC, and Wagners Festspielhaus in Bayreuth Germany 1870, are both exactly 36', one can begin to understand the importance of studying historical development and precedent for this particular building type. These theatres are two of the most successful structures in providing for the needs of the theatre.



Theatre at Epidarus

[1] Marvin Carlson, Places of Performance: The Semiotics of Theatre Architecture, (Cornell University Press, 1989), p. 6.

[2] George C. Izenour, Theater Design, (New York, McGraw-Hill, 1977), p. 30.

Theatre development was certainly not limited to Greece, Italy, and England. There is a strong body of research into Performing Anthropology or Theatre Anthropology in a wide range of countries. There is a performing arts aspect of the Arizona Yaqui deer dancers, as well as Korean shamans. 14th century India perfected the masked dances that began in that country in the 8th and 9th century. The masked dance and drama of Africa is well documented elsewhere.[3] The important point is that theatre, however it was currently defined, always played an important role in human development. To understand how it all developed, one must naturally start in Ancient Greece.



Theatre of Dionysus, Athens

Theatre is derived from the Greek word *Theatron*-a place for seeing.[4] It is significant to recognize that it started as a place to see, rather than a place to hear. The first recorded theatre construction was in Athens around 550-500 BC. It was a 3 sided wooden seat scaffolding where the citizens would come to watch the newly written dramas of Aeschylus and Sophocles. Apparently there were a few structural problems with large crowds and unstable bleachers. After several severe accidents, the first permanent stone theatre in the world was constructed on the South slope of the Athenian Acropolis in the 4th century BC, the theatre of Dionysus. In Greek mythology, Apollo is the God of Music, but Dionysus has always been the deity most closely associated with drama.[5]

From this time on, Greek theatre was an essential unit in the urban model. It quickly became an accessible, highly visible element in any Greek city. Initially the Greek theatre had to develop where the topography allowed, often near the acropolis. As time progressed, they learned how to berm their seating areas, and this allowed them more flexibility in the siting of the theatre. By the time of Hippodamus and then the Romans, the town had been planned into sacred, public, and private zones. With the now well

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[3]Richard Schechner, Between Theater and Anthropology, (Philadelphia, University of Pennsylvania Press, 1985), p. 66.

[4]Carlson, p. 4.

[5]Josep Campbell, Historical Atlas of World Mythology, (San Francisco, A Van der Mack Edition, 1988), p. 27.

established flexibility of theatre siting, all theatres were placed in the public zone, thus evolved the first theatre district in the Campus Martius.[6]

The classic Greek theatre was based on a full circle orchestra at the base of amphitheater seating. The Greek word *orchestra* was completely independent of our modern connection with music. The orchestra was a flat plane which served as the acting area, with the mountains in the distance serving as backdrop. In the early fifth century a *skene* house was erected on the side of the orchestra across from the audience to provide an offstage space for actors to change costumes and masks, and to furnish rapid and easy entrances to the acting area. In the later Greek Hellenistic age the acting moved toward the *skene*, with some painted backgrounds. The Romans modified this concept to a raised stage, and eventually added formal adjustments to accommodate painted backdrops for scenery.[7]

Many researchers believe that late Greek theatre incorporated lobby space, and certainly from the Romans on this has been an important area for the theatre. This lobby area has developed into the concept that patron and actor are equals in the theatre, they each play roles. The lobby is for the spectators to make adjustments as the actors do backstage, and shed themselves of extra-theatrical concerns.[8] This type of preparation may well have been necessary with ancient drama and stone seating. It was not uncommon for a session at the theatre in Athens to run from morning to night. Two complete tragic trilogies would be presented, interspersed with satyr plays for comedy relief. Today the theatre journals are filled with complaints of an audience who can not sit still for a 2 1/2 hour production. It will be left to you to decide which is progress.

George Izenour determined that Greeks and Romans both found out that speech and hearing are essentially directional, straight line phenomena.[9] All their theatres were designed to this understanding of the laws of physics, helping to explain why the theatre at Pergamon has a back row which is 265 feet from the orchestra, yet the audience was able to understand the performers. The role of mask in drama should not be overlooked at this point, as the enlarged and exaggerated visual features on the masks worn in ancient Greek theatre helped convey the meaning over great distance.[10] However, the primary concept that if the audience could clearly see the actors, they could hear the actors, was better understood in 400 BC than at certain times since.

Stage to black for 1,100 years.

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[6]Carlson, pp. 65-67.

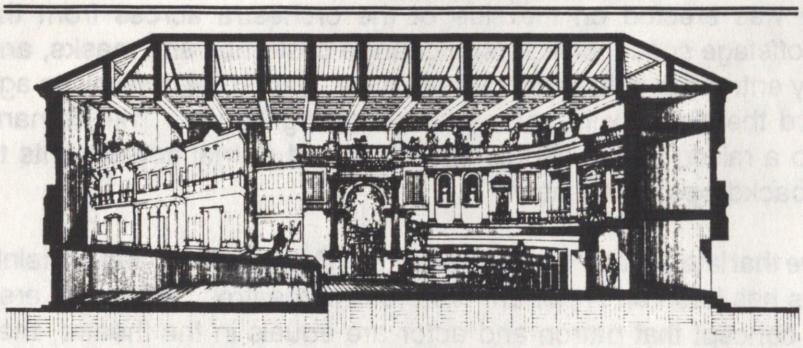
[7]Marvin J. Malecha, Form and Performance, (Pomona, CA, Cal Poly State University, 1989) p. 16.

[8]Carlson, p. 133.

[9]Izenour, p.31.

[10]Ibid, p 39.

Very little drama existed in the early Renaissance in Italy, 1400-1480. What theater did take place was staged outside in the piazza. It was not until nearly 1500 that performance was moved inside the palace. The writings of Vitruvius were rediscovered, and the shape and influence of the theatre would never be the same again. The fact that the newly formed court theatres were owned by royalty, the principle of public access was soon given up for an art which was restricted to the learned society.



Section, Court Theatre at Sabbioneta

These newly designed court theatres of the Renaissance were generally small, ornate, and secluded halls. Sabbioneta has the oldest surviving indoor court theatre, constructed in the early 1500's.[11] In the following 100 years the court theatre removed drama from nature completely, not only in physical setting, but also in scenery. In Florence, one of the most active theatre areas during the Renaissance, artists had a vision of what their city should look like, and they began to paint this abstract vision onto the scenic design for all their productions.

By the late 1500's and early 1600's these residential theatres had grown in popularity and size, some holding an audience of 3,000 people. However, even with this large audience possible, the productions were only available at the invitation of the owner of the theatre, the royalty.[12] Theatre had effectively been separated from the common man.

The first movement to bring theatre and its drama back to everyone took place in the early 1600's, in Italy. Public theatres were introduced to the center of many urban areas. These theatres were also owned by the aristocracy, but they were built to make money, therefore they were available to anyone who could pay to see the production. One result of this commercialization was a need to interest people in attending, and thus paying their admission fee. From this desire grew a new physical form for the theatre, one which could provide a new excitement of the spectacular entertainment of moving pictures. The frame for these moving pictures quickly evolved into the proscenium, or picture frame stage. The first proscenium theatre was the *Teatro Farnese* in Parma, designed in 1618 by the architect Aleotti.[13] This development broke the building into

[11]Carlson, p.40.

[12]Ibid, p. 45.

[13]Stephen Joseph, Actor and Architect,ed, Manchester London, University Press, 1964), p 5.

two rooms, one containing the audience, the other containing the stage and stage machinery. Actors immediately noticed they could be heard less easily now that they were behind a frame, but the rebellion against the psychological separation between artist and audience that is caused by the proscenium would not be verbalized for a few hundred years.

Lest one think all theatre development took place in Italy, it can be shown that at this same time Germany, France, and England were making significant contributions as well. At the turn of the 18th century, Max Reinhardt from Germany affected a major transformation by re-introducing realism to the stage.[14] Rather than the cardboard cutouts that were then being used for scenery, Reinhardt brought real trees to form his backdrop. This movement was widely acclaimed, and has had a major continuing influence on scenic design.

London is generally credited with establishing the first theatre district in modern times-Blackfriars in 1576, although it should be noted that this fact was not generally recognized as a positive element. The English Renaissance public theatres were socially marginal, not considered a legitimate part of the urban structure.[15] This marginality was expressed consistently in their physical locations. Voltaire, in 1740 stated "We attend the theatres and are shocked to have to reach them in so inconvenient and disgusting a manner, to be accommodated in them in so uncomfortable a fashion, to see these buildings so poorly constructed, so badly laid out, and to leave them with even more suffering and embarrassment that was felt upon our arrival."[16] It was not until the late 1700's that England realized a new vision of the possible relationship between city and theatre.

This new vision of the importance of the theatre, the substantial impact theatre can have on peoples lives, was also recognized at this same time in France. Francois Blondel, in his book Cours d'architecture of 1771, said: "Nothing contributes so much to the magnificence of cities as public theatres, and these edifices should indicate by their grandeur and exterior disposition the importance of the cities in which they are situated."[17] The theatre had fully emerged from its questionable reputation by the end of the 18th century, and some of the greatest architects of the period began to design *places to see*. Soane, Schinkel, Smirke, Wren all took their turn with acoustics and sightlines.

One of the interesting developments at this time was an unexpected nationalism in what was considered proper theatre design. At approximately the same time, 1790, two pseudo-scientific books were published. Pierre Patte from France determined that the

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[14]Julius Posener, Theatre Construction in berlin from Gilly to Poelzig, (New York, New York, Rizzoli International, 1988), p. 36.

[15]Carlson, p. 70.

[16]Ibid., p. 74.

[17]Ibid., p. 78.

ellipse was the most effective form for an auditorium. George Saunders from England pronounced that the circular form was the only geometry that truly worked.[18] These two documents, both now realized to be fatally flawed in many areas, became the determining factor in theatre design in France and England for the next 100 years.

Schinkel's work in Germany in the early 1800's was truly the beginning of modern theatre reform of the nineteenth century. He designed a prospective amphitheater with lateral walls that converged toward the stage at an angle. This feature produced a focal point that was projected outside the scene, and changed the way the stage looked from the audience. Schinkel also lowered the orchestra pit for the first time. This simple move allowed the singers to be more strongly felt over the instruments. Richard Wagner is well known as a composer, but he also had a major impact on theatre design. His design of the *Buhnenfestspielhaus* (Theatre of Scenic Festivals) advanced the dropped orchestra because of his dislike of the "repugnant disturbance caused by the irksome view of the technical apparatus of sound production."[19] As attuned to music as Wagner was, he realized that the center of focus for his opera was the stage, not the orchestra as it had been in the ancient amphitheater.

Wagners theatre design was based in the concept of a truly populist theatre. The rise of the socialist movement in Germany did create Europe's first monumental theatre for the proletariat, The *Volkshbuhne* (Peoples Stage). This drive for a democratic theatre, the absence of private boxes and virtual equality of all seats had been left behind in Athens.

After the middle ages, immediately upon the emergence of the theatre as a building type, the first Royal Box appeared in Dresden, 1664. The idea of dividing open galleries into boxes for the aristocracy is attributed to Benedetto Ferrari, who believed in the importance of clarifying the social semeiotics of the auditorium.[20] It is well know in modern times that the famous Metropolitan Opera was built in New York not primarily to satisfy desire for this art, but because all the aristocratic boxes at the old Academy of Music were filled, and the new rich were not allowed the status of their own box. In 1794 the French had a brief courtship with democracy, the committee in charge of French theatre decreed the now traditional system of box seating must go in favor of open seating. Theatres all over the country were remodeled, and the privileged found themselves sitting with the commoners. This lasted for four short years before they replaced all the members of the committee, and had all the theatres remodeled again back to their separated boxes.

Theatre public spaces became a kind of indoor parade ground. The idea we now understand of the theatre being a place to see and be seen, for gathering of fashionable society and its display, has its roots in this separation. There are those researchers

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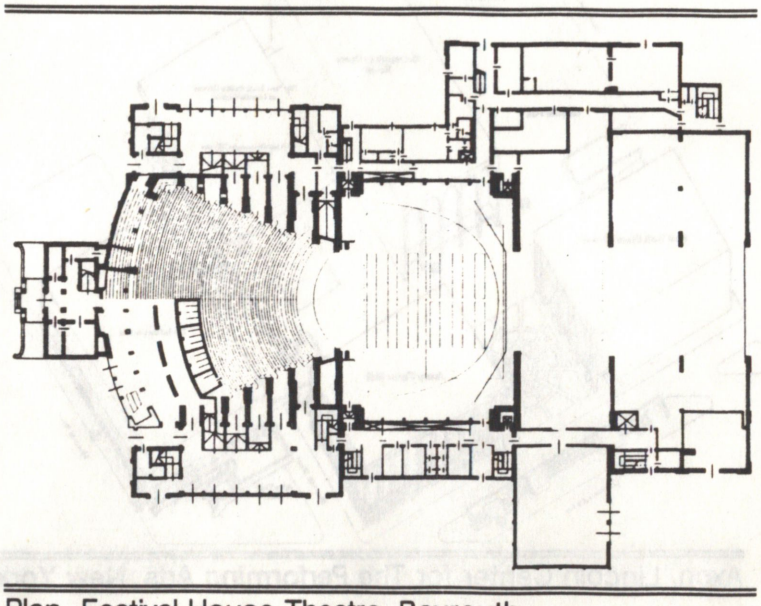
[18]Izenour, p. 57.

[19]Posener, p. 14.

[20]Carlson, p. 142.

today who will make the case that in the twentieth century the function of the theatre as a place of social display has faded, and that seems to be true to an extent. However, from the author' personal observation in theatres and concert halls around the United States it can be said that, for better or for worse, social display is still a fundamental activity in our culture. This fact is also reinforced by discussions with House Managers who say many performing arts centers are profitable only because of the high price attached to their box seats, and that those are always the sections reserved the furthest in advance.

After a lengthy evolution of this elitism in the theatre, Wagner was ready for something different. He truly wanted to enable the less rich segment of the population to see everything good and beautiful that had been created (Wagners Operas).[21] The Festival House in Bayreuth was his masterpiece. Incorporating the dropped orchestra again, and this time integrating it with a house laid out in the classical Greek fan, Wagner brought theatre design away from the ineffective horseshoe shaped house that had been creating acoustical and sightline problems for 200 years. Starting from the goal of opening bourgeois culture to the less fortunate, which he succeeded in doing at Bayreuth, he reaffirmed the basic geometry of the ancient Greeks as the most successful for theatre house design.[22]



Plan, Festival House Theatre, Bayreuth

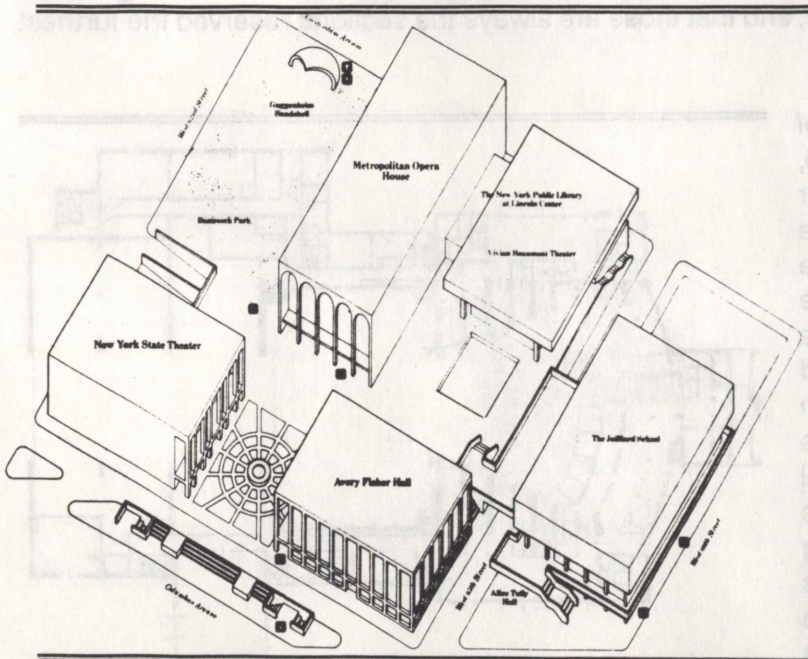
To this point all the technical and scientific development in the field of acoustics had been achieved by luck or strong instinct. It was not until 1895 that Wallace Sabine from Harvard founded modern acoustical engineering.[23] From 1895 to 1915 Sabine matured this new science, and became the world's first acoustical advisor, working on Symphony Hall in Chicago. His research and findings still form the nucleus of what we understand today regarding how sound works in an auditorium.

[21]Posener, p.23.

[22]Izenour, p. 74.

[23]Ibid., p. 87.

Sabine was so successful in his consulting, he was asked to work on one of the most important and influential theatre buildings in the 19th century, the Chicago Auditorium-Theatre by Adler and Sullivan. This hall provided excellent acoustics by introducing flying balconies for air and sound circulation, by incorporated an overhead acoustical baffle for the first time, and integrating a sophisticated stage mechanism for flexibility.



Axon, Lincoln Center for The Performing Arts, New York

Integrated into an office/retail block was the Chicago Auditorium-Theatre, one of the first to do this on so large a scale. A common development of the theatre as public monument in the twentieth century has been into the arts complex, where structures for theatre, dance, opera, and sometimes other arts as well are clustered together to form a kind of super-monument, and entire artistic enclave within the city. The South Bank of London and the Lincoln Center in New York are two examples of this type of development. This isolation is often felt to foster the elitist feeling that surrounds the arts today.[24]

The theatres of the 18th through the early 20th century have given us a stock of auditoria that are often considered too large for many modern plays.[25] The actor/audience interaction mentioned earlier has become a strong factor in modern theatre. The image of proper decoration has also changed, and now is based more on how the theatre ought to be experienced for a given setting, rather than a generally agreed upon standard. In the eighteenth century the auditorium was the most highly decorated area of the theatre. Now artists wish to remove the consciousness of the audience of itself as an audience. As such, normally today the auditoriums are visually de-emphasized, minimally decorated and totally darkened during performance.

[24]Carlson, p. 92.

[25]Joseph, p. 24.

The movement toward accessibility in drama, staging, and in design of audience spaces appears to be a positive direction for the health of the theatre in the future. Audience spaces have almost always reflected with great accuracy the class preoccupations of their society. Today even President Mitterrand has proposed plans for the creation of a monumental people's opera for the working class of Paris. With the strong direction to the open stage, we are also seeing a direction toward inclusion rather than elitism. This direction can only bode well for the theatre of tomorrow.

As we have seen, the first modern theatres drew most of their inspiration from the study of ancient ruins and from the architectural manuals of Virutrivus. As a building type, the theatre has been able to accommodate itself to a variety of urban functions as the city and peoples perception has changed. From its impressive founding in the democratic classical theatre of ancient Greece, through the horseshoe shaped, fragmented and vertically stratified Baroque houses, and culminating in the wedge-fan plans of the past 100 years, theatre has been able to change its form as well as its siting to provide whatever the patron and artist thought important.

> "Theatres have been designed to accommodate entire communities or single spectators, to surround their audiences with Spartan simplicity or with the greatest luxury the society could afford, to stress the essential equality of all audience members or to reflect in astonishing detail the most subtle differences in social status. Theatres have been located in the commercial centers of cities, in the most elegant residential areas, in working-class neighborhoods, and in the most disreputable and socially marginal situation. They have been designed as temples of art, seeking to remove their audience from the concerns or even any visual echoes of everyday life, and they have been created out of the very texture of the life, out of the raw material of streets, marketplaces, and factories, foregrounding for spectators the nontheatrical cultural association of these locations."[26]

Never before in history has a public had available for its consideration paintings, music, or drama from so wide a range of cultures and historical periods. The same eclecticism characterizes the physical spaces in which theatre today may be presented.

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[26]Carlson, p. 205.

AN OVERVIEW OF LOS ANGELES

Is there a meaningful way in which the Beverly Center can say to Cedars Sinai: "Give me your sick and your dying and I will heal them with a one-time designer's close-out sale, this weekend only"?

-John Chase

The physical makeup of Los Angeles has been referred to as instant architecture in an instant townscape.[1] Los Angeles is one place in the world where freeway structures and hamburger stands are as important to the human ecology as 'high architecture'. To many people they would be considered more important. One factor that needs to be understood at the outset of any study of southern California is that the language of design, architecture, and urbanism in LA is the language of movement. Reyner Banham said in Los Angeles mobility outweighs monumentality.

This unique metropolis today provides every form and style of design work you can conceive, but unquestionably the most recognizable, the most often utilized, is the ever present Spanish Colonial Revival. Elaborate homes to small shacks, car wash to large government buildings all sport their own version of red tile roof, white stucco, and black wrought iron. Of course one does not want to overlook the significant number of streamline moderne and art deco buildings that Los Angeles has to offer. The decades of the 30's and 40's saw a large number of beautifully crafted deco buildings erected in the downtown and Wilshire Boulevard areas, that still command attention when you pass.



1930's Art Deco Office, Downtown

To look back at the history of Los Angeles, land and water were the two primary factors that shaped this area, just as anywhere mankind settled. The *Gulf of Los Angeles* that existed during Jurassic times was the last time this area saw water in any great quality. The geological lifting process created rivers that carved the plains where LA now sits, and water has never been plentiful since. One consolation to the dryness is the temperate weather this area enjoys. Los Angeles has the useful advantage that the difference between indoors and out has never been clearly defined. This factor has had a strong influence on the way Southern Californians live, work and play.

After land and water, transportation was to be the next primary influence in the shaping of the Los Angeles area.[2] There are several predominate transportation routes that have been in existence since the land dried out enough to walk across. Mammoths first

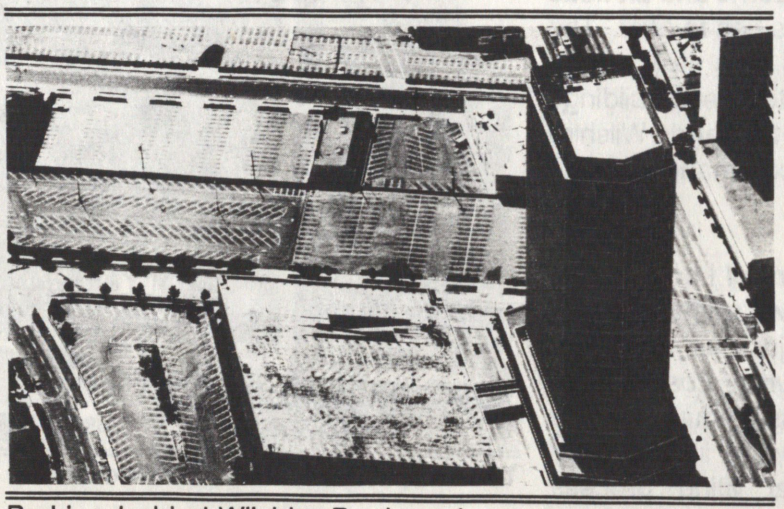
[1]Reyner Banham, Los Angeles: The Architecture of Four Ecologies, (Suffolk, The Penguin Press, 1971), p. 21.

[2]Ibid., p. 31.

walked the trail leading by the La Brea tar pits. The Camino Real was the Spaniard's military road when their oxen pulled the carts up from the south. The Southern Pacific Railroad laid track on this corridor in 1869. Today a 1991 Toyota Celica from Toyota Central, Figueroa and Venice Street- in business since 1945, drives down Wilshire Boulevard past the same tar pits that have been there for centuries. The woolly mammoth is still there too, but today he is made out of fiberglass. It can be seen from the historical documents that the railroad followed the same trail as the Camino Real, the freeways now fill the abandoned tracks of the railroad.

This transportation system has been extremely efficient in bringing people to this area. In 1850 there were 2,500 people who called Los Angeles home. Today there are 14 million Angelenos who fill the seventy square mile mobile metropolis.

Although transportation has always been important, mass transportation has not. In 1923 the Pacific Electric Railway provided transportation on 1,164 miles of track in the LA area. This mode of transport fell out of favor with the first automobile to drive the streets there in 1915, and today there is one trolley, the Long Beach Metro which covers less than 20 miles within the entire LA area.



Parking behind Wilshire Boulevard

The automobile quickly became such an important influence on the environment, that in 1928 The Miracle Mile was created on Wilshire Boulevard. This was a shopping area removed from the downtown, and designed to accommodate the now all pervasive auto. The important department stores, including Bullock's, moved to the Miracle Mile, and set up to do business for people who arrived in their own car. Large parking areas were designed behind the stores for the first time, Portes-Cocheres were proportioned for the automobiles, and the dawn of automobilism was here to stay.[3]

As more and more vehicles populated the street, Southern Californians realized they needed bigger and better streets. The Figueroa Street Grade Separation was the first of the current freeway system sections to be realized in 1938. This 'separation' is now integrated into the Pasadena Freeway and passes immediately to the west of the site for

[3]Ibid., p. 87.

this program. While the freeways are conspicuously the largest human artefact on the plains, they have been appropriately referred to as a work of art in themselves.[4] However, these have not been enough to satisfy an Angelenos need for mobility. There has been much discussion about a super-freeway for the area, one that you could only access from the existing freeway system. For a variety of reasons this super-freeway idea has never fully germinated, but that is not to say the concept will soon go away.



Intersection of Santa Monica and San Diego Freeways

Everyday commuting in the area now tends to move less in an expected *into the city in the morning-out of the city at night* mode. It is in fact a far more random pattern. All lanes are full, going all directions, at all times. The concept of fast, slow, and passing lanes does not seem to exist here, they are all equal and you may pick and choose your favorite driving lane as you see fit. There is an environment, a sense of community, which exists on the freeway system that makes it appear to be a single comprehensible place. As you acquire the special skills involved, the LA freeway becomes a personal experience. Reyner calls it "a heightened awareness that some locals find mystical." This is readily apparent in the way the freeway system is noted by seasoned drivers. They would never refer to Interstate 405, instead an Angeleno would call it by the more personal San Diego freeway. All interstates have names, based on the direction you are traveling. I-110 can be the Harbor freeway, or the Pasadena freeway, but never the coldly impersonal I-110.

"The world's image of Los Angeles is of an endless plain endlessly gridded with endless streets, peppered endlessly with ticky-tacky houses clustered in indistinguishable neighborhoods, slashed across by endless freeways that have destroyed any community spirit that may once have existed."[5] This is a fair picture of the city proper, and this

[4]Ibid., p. 88.

[5]Ibid., p. 161.

author agrees with Mr. Banham on that image. But there are the beach communities, the foothill communities, and the pockets of interesting neighborhoods that give Los Angeles an inviting personality that is easy to admire. This sprawling urban haze, intersecting at absolutely precise right angles must be one of the worlds greatest urban vistas.



Drive In Church, Richard Neutra

The social milieu and climate affect architects and architecture in Los Angeles like few other places. Schindler, Neutra, and Wright all did outstanding work in this area, in part because of the freedom and support they found in Southern California. Wright did some of his strongest work in LA, powerful spaces beautifully filled with light and detail, that have not been matched even in Oak Park. Neutra designed the well known Drive in Church in 1962 which sums up both the architectural freedom found here, as well as the sometimes bizarre automotive mania that everyone in LA seems to succumb. Cars can sell clothes and cigarettes as well as act as your private church pew.

The downtown civic center emanates from an area named Bunker Hill. This plateau houses the Los Angeles Music Center, many government offices, and a host of upscale hotels, residences, and office buildings. Occasionally referred to as the 'cultural acropolis'[6] it is one of the few remaining healthy areas of the downtown. The City Department of Planning recently announced a new plan to manage the downtown growth that is now in the early developmental stage. There are so many people who work downtown that the area is beginning to take on a life of its own. Based on the proposed city plan, new office development in Greater Downtown will be matched with art shops, restaurants, and specialty shops to spur tourism, recreation and night life in the downtown area. The city is also starting 'market inducements' to stimulate mixed-

[6]Ibid., p. 201.

level housing in the area.[7] This development will no doubt assist in creating a healthy, lively environment in the Greater Downtown.



Tommy's Clothes Billboard

The Greater Downtown which the city mentions has no precise boundaries, but loosely surrounds the central business district by Central City on the west side, the LA river on the east, Union Station on the north, and the University of Southern California/Exposition Park on the south end. Ken Topping reported in the official City Development Plan; "While USC/Exposition area has been seen as a satellite area, its proximity and easy access to the Central Business District, together with the presence of major academic, cultural and sports centers all point to its inclusion in Greater Downtown in the future."[8] The University of Southern California/Exposition area is the nearest neighbor to the south of the site of this program, while the Central Business District is immediately to the north.

No utopia is perfect, and Los Angeles is certainly not an exception. Among her several flaws, the infamous smog is definitely one of the most serious. The psychological impact of Black Wednesday, 8-September-1943, is still a factor in the quality of life.[9] That day in 1943 was the first time dense smog covered the entire city. Air quality is often a source of concern and discussion, and bright days are joyous and noticed. Far more than the psychological impact, there is concern with the physical manifestations of the ever present pollution. The Air Quality Management Board has been formed to monitor airborne pollutants. A toll free number was started so everyone could be aware of the current conditions of carbon monoxide, lead, and any of the dozen other particulates they test. One finding the Air Quality Board recently released is that 52% of all the pollution in the area is caused by the well loved car, bus, truck, and motorcycle.[10]

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[7]Marc Porter Zasada, Los Angeles Downtown News, City Report Advocates Greater Downtown Plan, Vol. 18, Num. 42, (October 15, 1990), p. A16.

[8]Ken Topping, A Greater Downtown for the 21st Century, Department of City Planning, (1990), p. 3.

[9]Banham, p. 215.

[10]Meredith A. Clark, South Coast Air Quality Management District 1989 Annual Report, South Coast Air Quality Management Board, (1989), p. 4.

When you call the toll free number, you learn which districts have air that is unsafe to breath that day. Their recent annual report was pleased to announce that there is some improvement in the air quality, stage one smog episodes last year were down from 77 to 54. Southern Californians will take any improvement they can get.



Customized Truck on Pico Boulevard

Despite the health hazard, most people there still seem to love their cars. The automobile is shiny clean, the tires are whining on the pavement, and the radio is on. The metaphor has been drawn that the automobile is a work of art, and the freeway is a suitable gallery. Brock Yates of Car and Driver Magazine said: the freeways of Los Angeles are an "existential limbo where man sets out each day in search of western-style individualism."[11] It is true the freeway is where Angelenos live a large part of their life, and many people certainly make a statement with their individual car, but most drivers consider the freeway an unexciting requirement of daily life rather than *existential limbo*.

In spite of all the things it does well, Los Angeles does break the rules of urban design. There are certain densities of population, certain physical forms of infrastructure that are considered essential to produce a successful city. Many of these prerequisites simply do not exist in LA.[12] Yet this city certainly possesses a cosmopolitan style, creative energy, and support of the cultural arts that are the hallmarks of a great city. There are few who would not consider Los Angeles successful in many ways. Often blame is laid on the automobile for the shortcoming that was just discussed. This is founded in the common misconception that everything in LA is caused by the automobile as a way of life. This is simply not true. The sprawl which exists in LA, and is admittedly fed by the auto, is based more on an outgrowth of the dream for an urban homestead according to Reyner Banham. This urban homestead has its linage back to the country house

[11]Banham, p. 216.

[12]Banham, p. 236.

culture of our forefathers.[13]

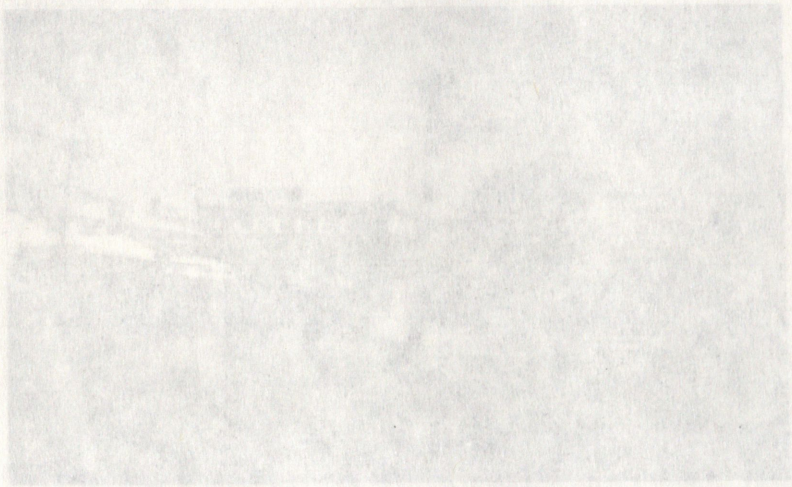


Car Wash, La Brea Avenue

An interesting architectural outgrowth of LA autopia has lead to special treatment of the classic Los Angeles car wash. For reasons beyond this author's understanding, virtually all car washes in the area have a high exposed structure, or ornamentation. Sometimes steel beams, occasionally a tall set of Spanish Colonial Revival red tile caps, even oversized wrought iron lanterns, but they all have a rhythm of high ornament that lets you instantly know your car will be safe and clean if you just pull in for the 10 minute deluxe treatment.

Los Angeles still has a sense of possibilities for things which lie ahead. This sense of possibilities in the past helped created the Gamble house, Disneyland, Watts Towers, the Music Center, the freeway system, Eames house, Schindler house, Universal Studios movie lot, and the Hollywood Bowl. Whatever you feel about Los Angeles, you must respect it for fostering a supportive environment for projects like those. It is this sense of the future that continues to bring bright minds to the City of Angels. It is this sense of possibilities that will allow Los Angeles to create the significant monuments of tomorrow that have yet to be conceived.

[13]Ibid., p. 238.



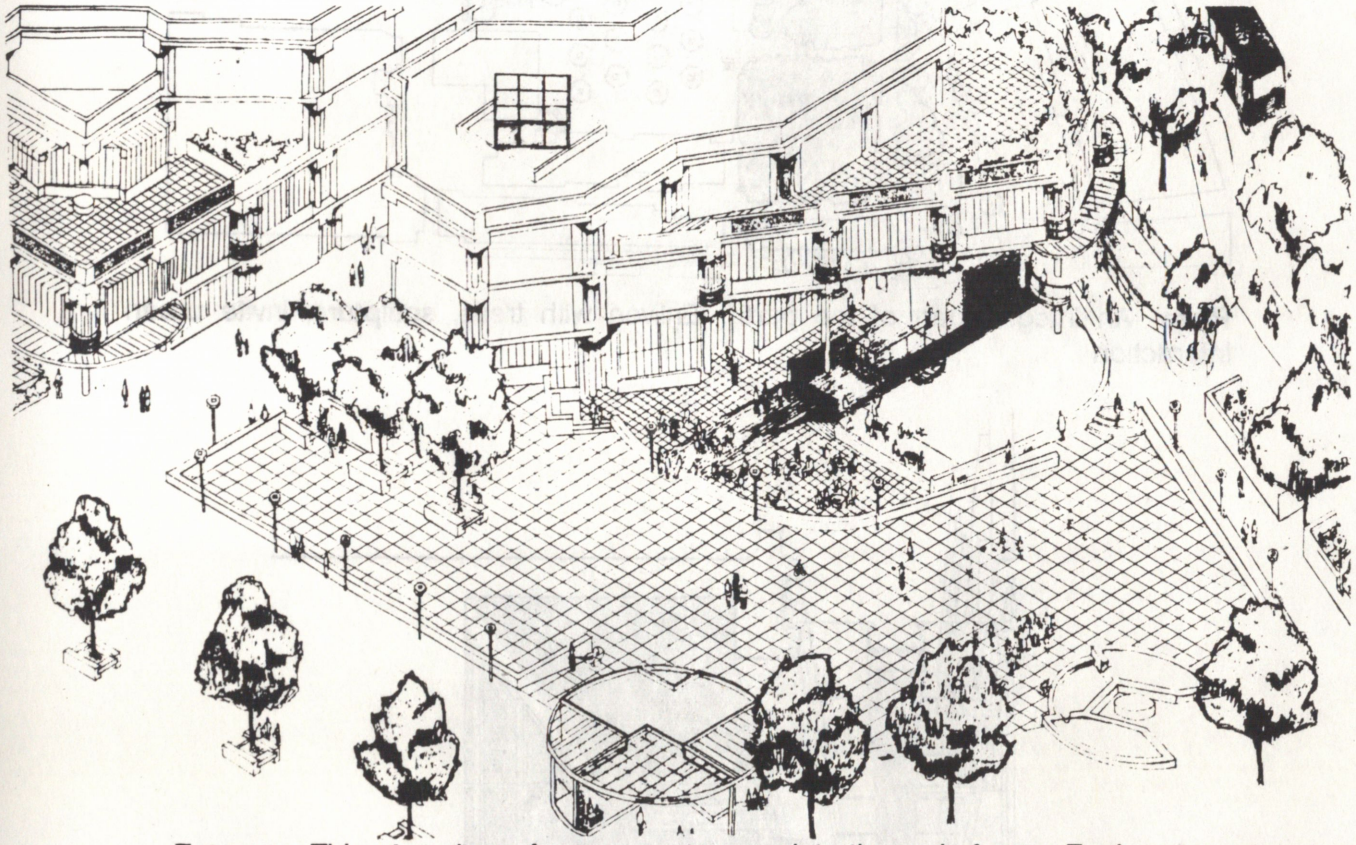
BUILDING TYPE

THEATRE AND PLAZA PRECEDENT

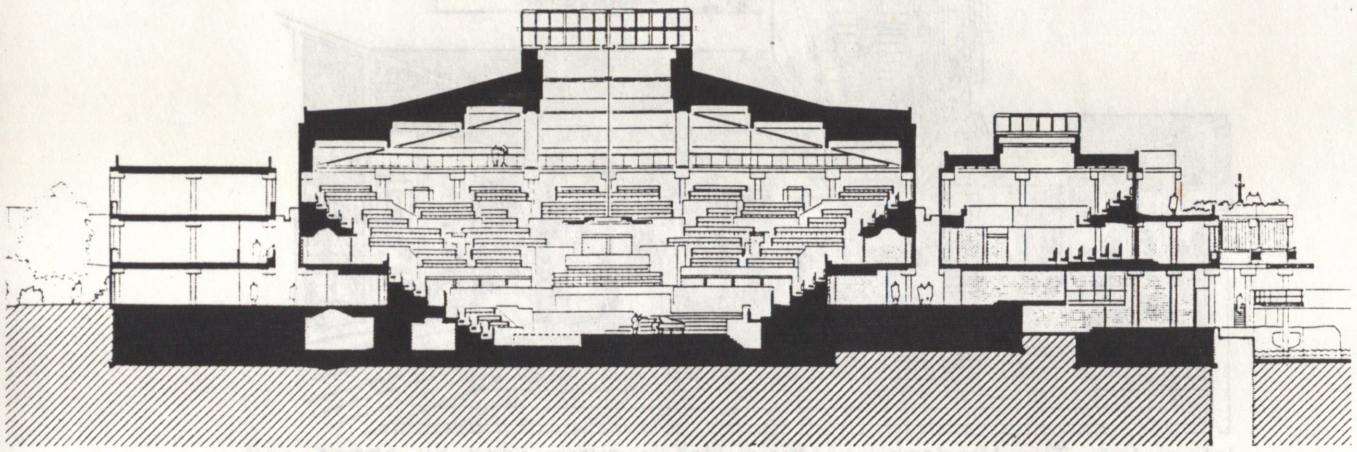
"When faced with historic auditoria, be it the Teatro Olimpico or Farnese, La Scala, Drottningholm, or the Burgtheatre, we historians hardly ever asked ourselves: Did they work?
-George Izenour

The first phase of this precedent study will examine 3 Performing Arts Centers at some level of detail, comparing form, program, and sensitive design issues. The Vredenburg Music Center in Utrecht, Holland, designed in 1978 by Herman Hertzberger, was chosen because it has been referred to as one of the most democratic and accessible theatres to be designed in the past 25 years. The Thunder Bay Community Auditorium in Thunder Bay, Ontario, completed in 1985 by Graham Bacon Welter is included because it is an extremely successful, small budget facility, and acoustically is considered to be one of the finest in North America. Finally, the proposed Walt Disney Concert Hall to be built in Los Angeles by Frank Gehry will be looked at because of the obvious site and program relationships, but also because the jury awarded Gehry the commission partially because his solution attempted to accept the city, and break down the rift between workaday city-scape and privileged precincts.

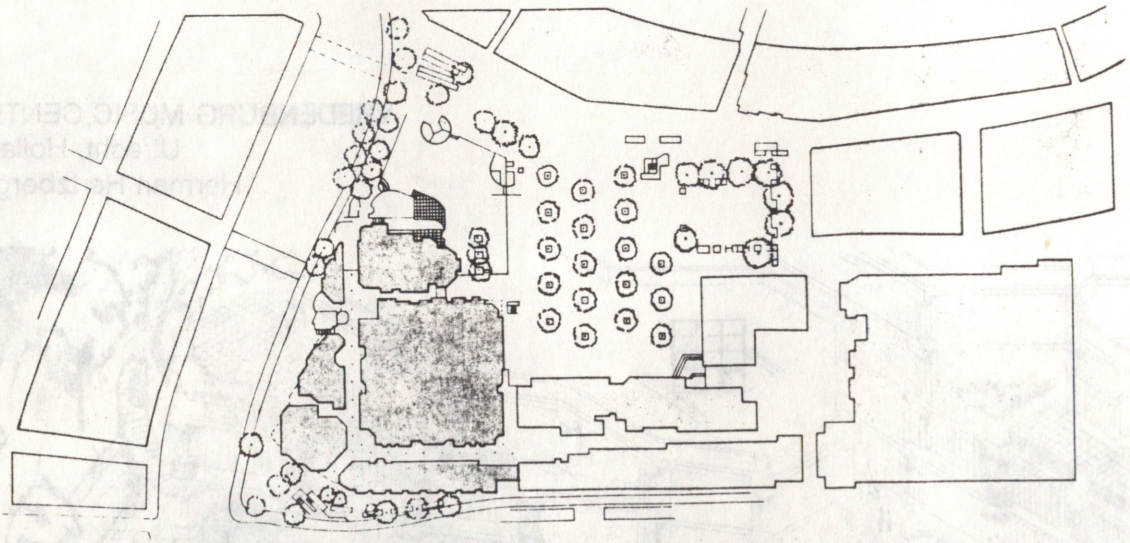
VREDENBURG MUSIC CENTER
Utrecht, Holland
Herman Hertzberger



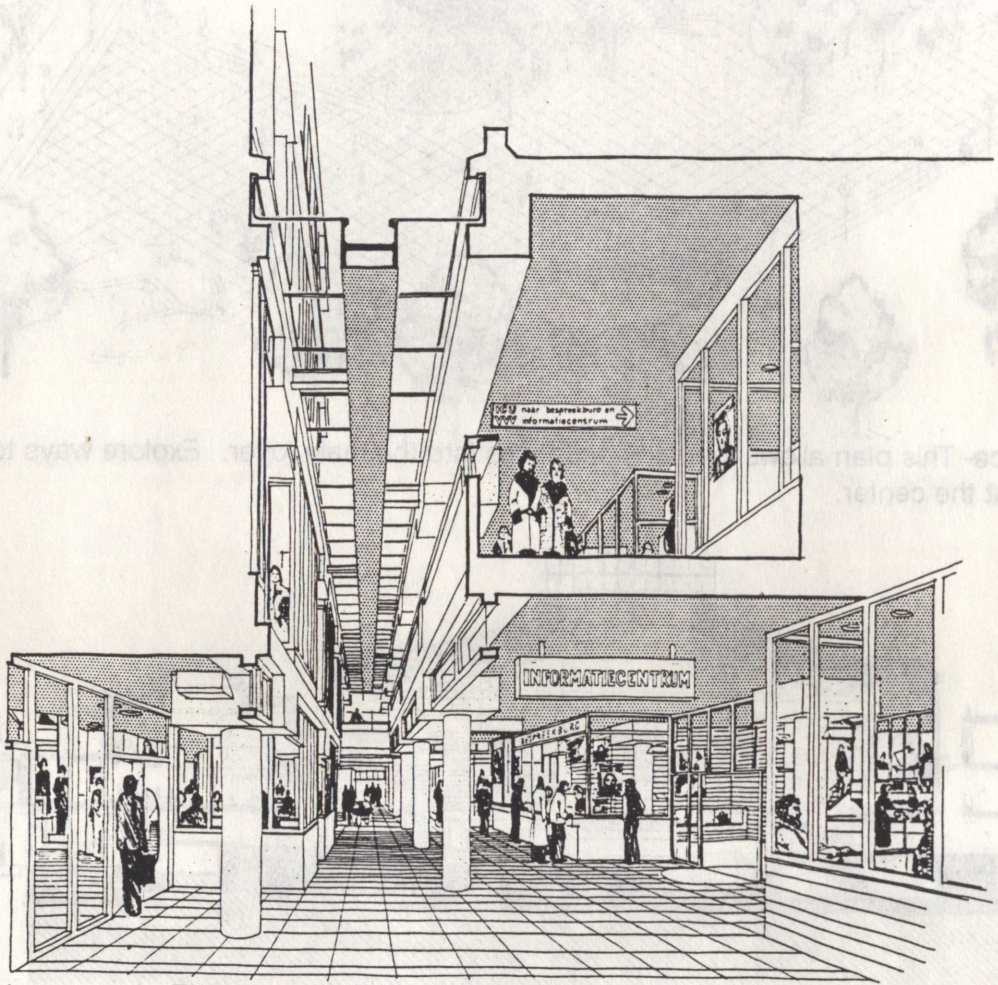
Entrance- This plan allows for many entrances into the main foyer. Explore ways to arrive at the center.



Scale- This hall fits, makes the complex feel comfortable to the arriving patron, as well as the person who is simply passing. Keep it human.

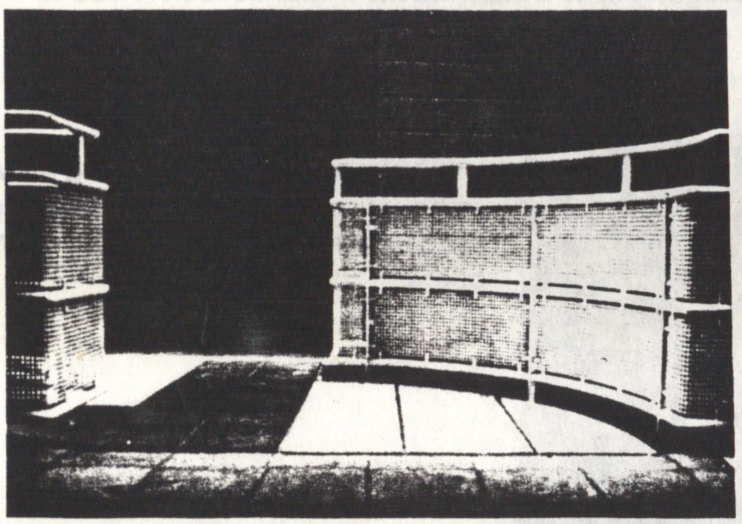


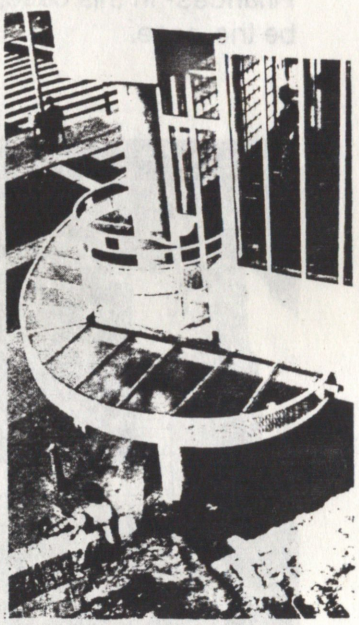
Plaza- An integral part of the parti. Enliven with trees, sculpture, invite urban interaction



Integrated- The Vredenburg Music Hall is surrounded by shops and restaurants. Provide many reasons to visit the site.

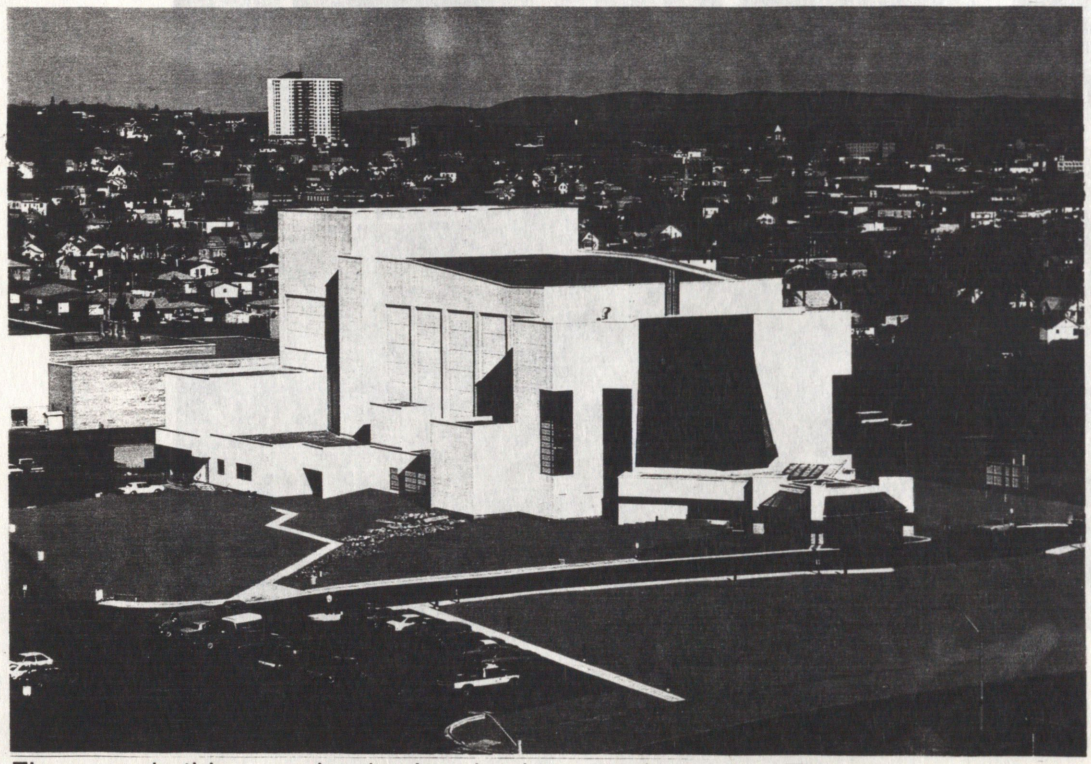




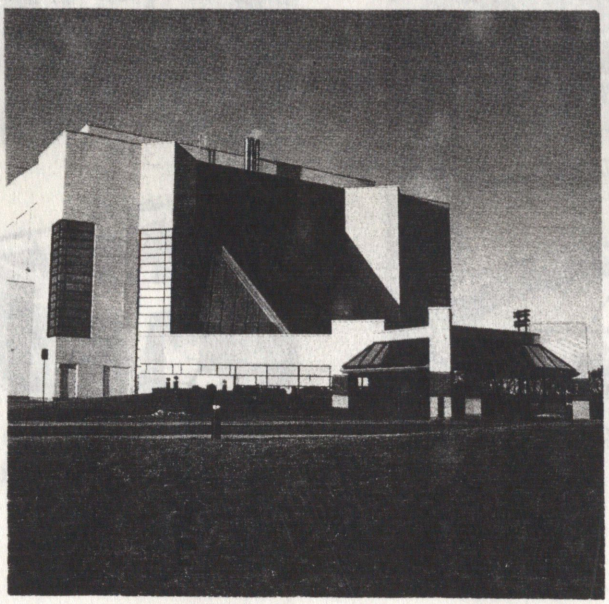


Details- They add a richness to all the spaces in the hall. Create texture, interest.

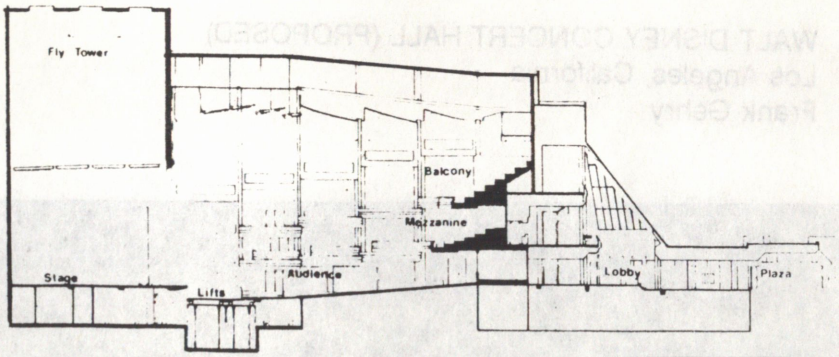
THUNDER BAY COMMUNITY AUDITORIUM
Thunder Bay, Ontario
Graham Bacon Welter



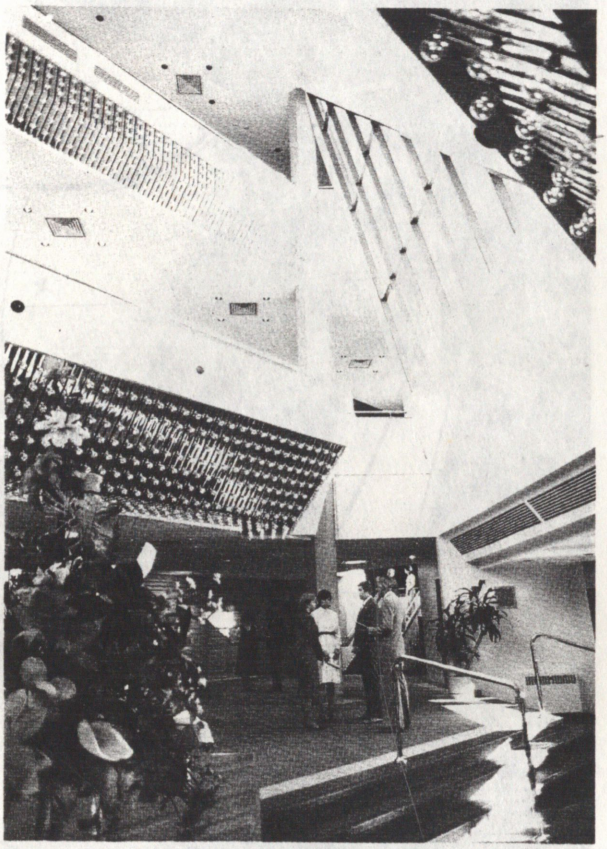
Finances- In this case, low budget lead to a stark exterior. That does not need to be the case.



Flexibility- This works for staging as well as house size. Examine the wide range of configurations for music, drama, opera.

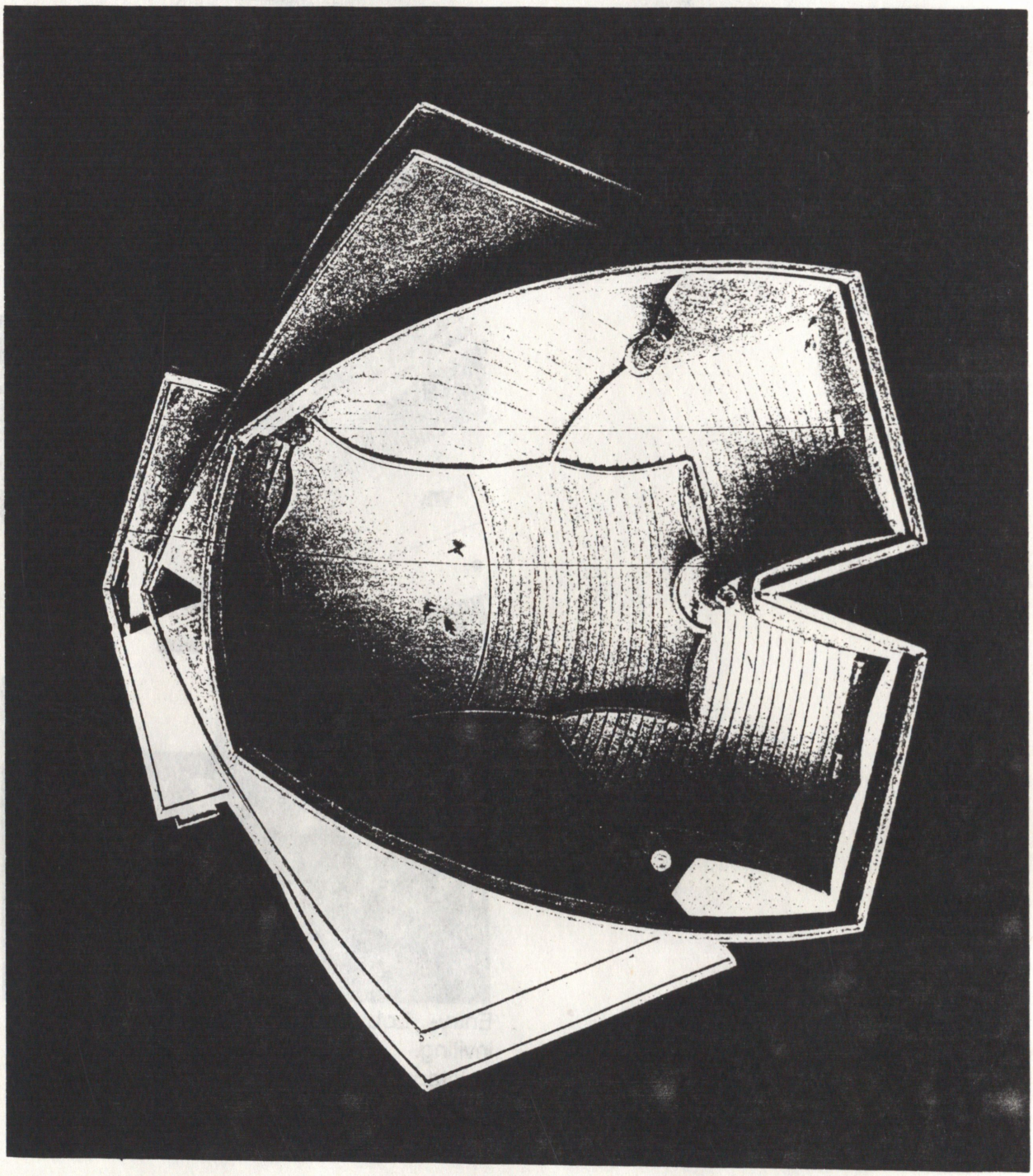


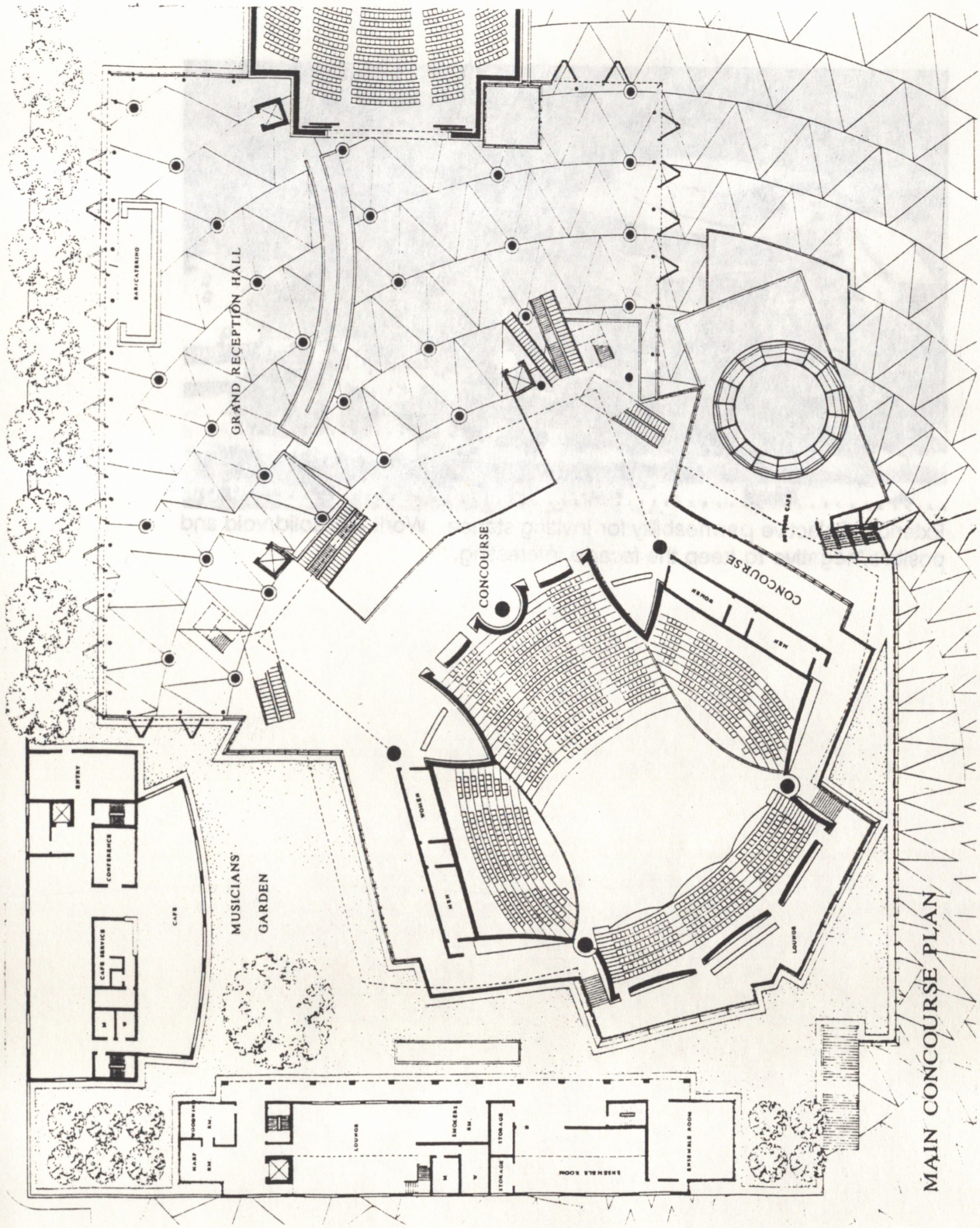
Acoustics- This hall has excellent sound in auditorium. Utilize acoustical arrangements that have contributed to success.



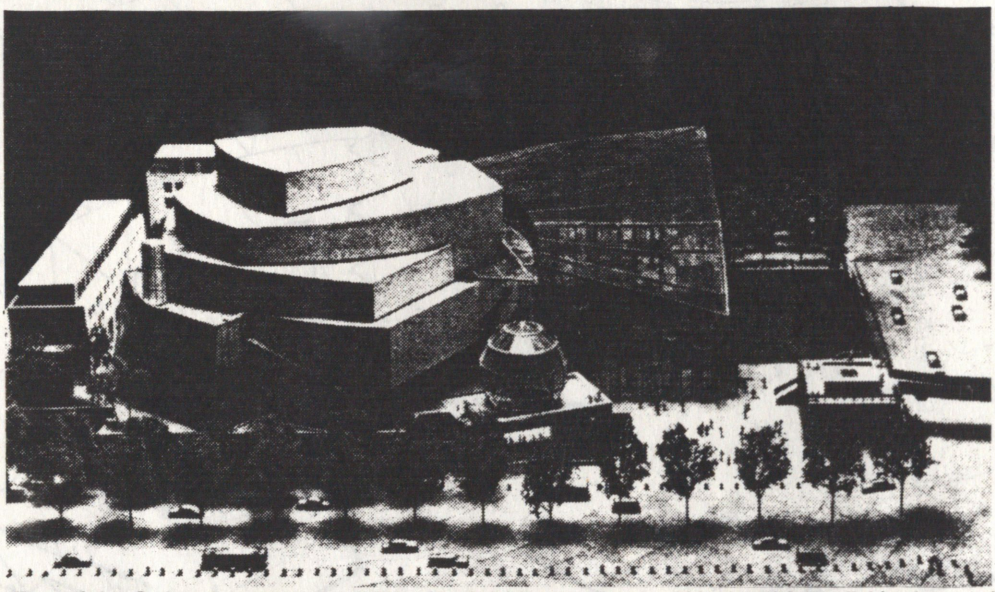
Entry- Lobby space is bright, spacious, inviting. Integrate those qualities with outstanding circulation.

WALT DISNEY CONCERT HALL (PROPOSED)
Los Angeles, California
Frank Gehry





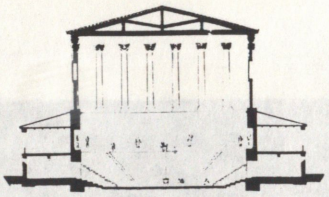
Site Plan- It accommodates virtually any opportunities for human experience, from political rallies to large concerts. How can the architect physically provide for this enrichment of the space?

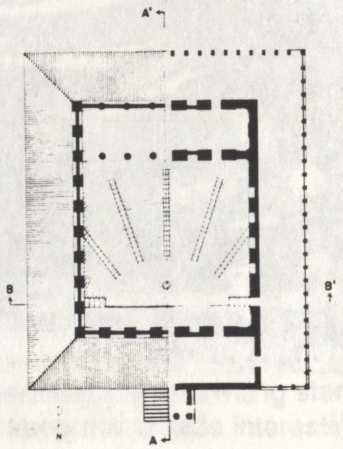


Exterior- Selective permeability for inviting stance. Work with solid/void and positive/negative to keep the facade interesting.

This second phase of precedent study presents a number of theatre plans and sections, all at 1" = 100". This brief overview demonstrates the great variety of room configurations which have been constructed to accommodate actor and audience.

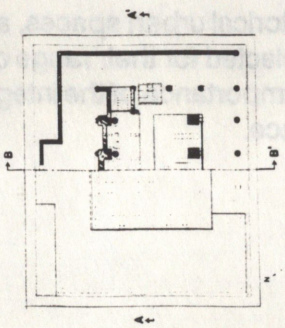
Also included for reference are several historical urban spaces, also at 1" = 100" to allow comparison. These public spaces were selected for their range of spatial and circulatory configurations. These diagrams imply the importance of the integration of quality exterior space in a project of major civic importance.





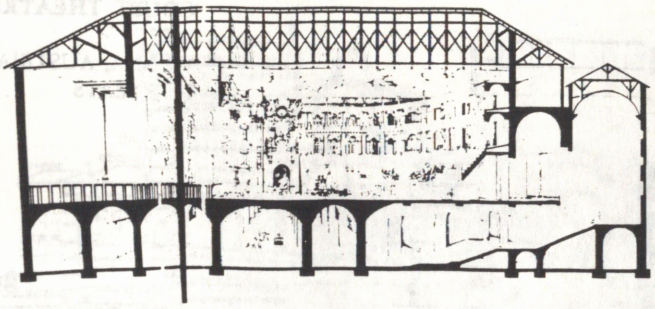
ODEUM OF AGRIPPA
12 B.C.
ATHENS, GREECE
1000-1200 SEATS

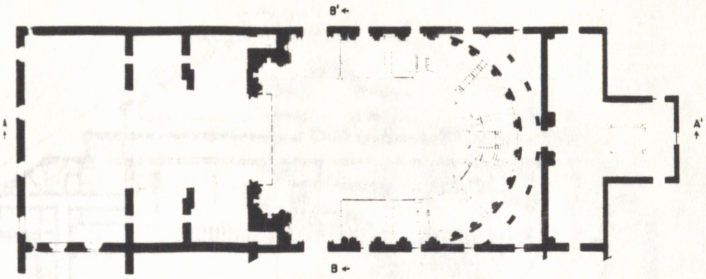




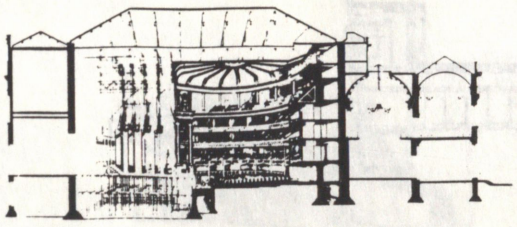
ODEUM OF NERO
50 A.D.
COSA, ITALY
230-250 SEATS

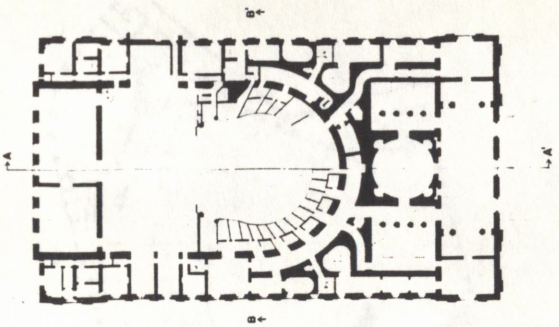
0 50 100 ft



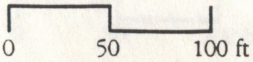


TEATRO FARNESE
1628
PARMA, ITALY
2200,2600 SEATS

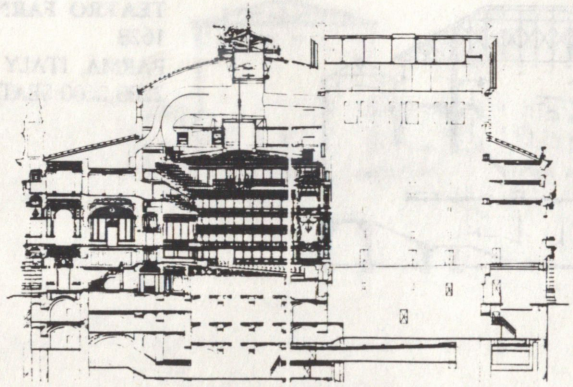


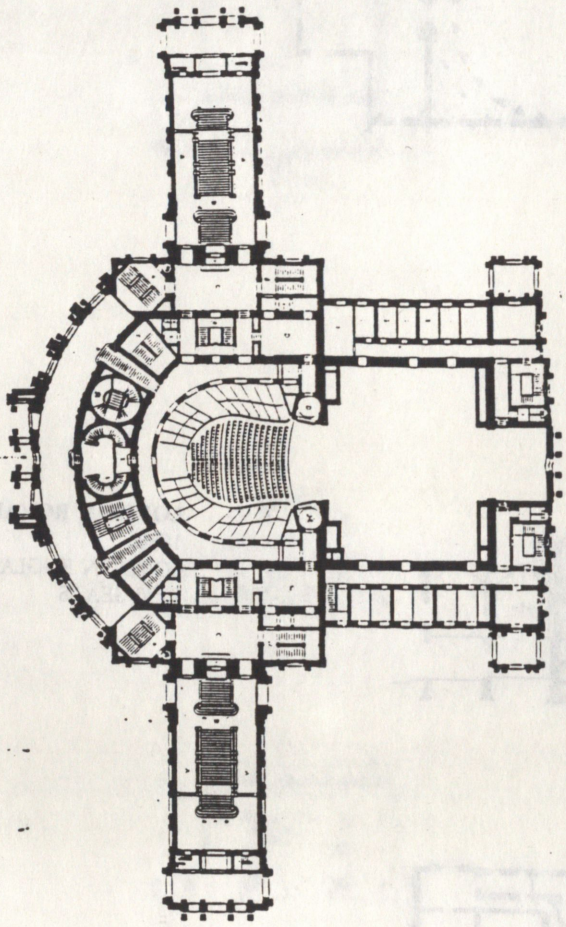


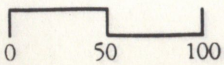
LONDON ROYAL OPERA HOUSE
1858
LONDON ENGLAND
2180 SEATS

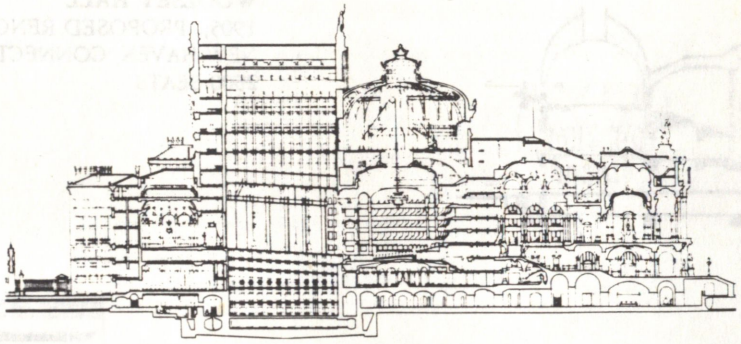


COURT THEATRE
1895
VIENNA, AUSTRIA
1475 SEATS

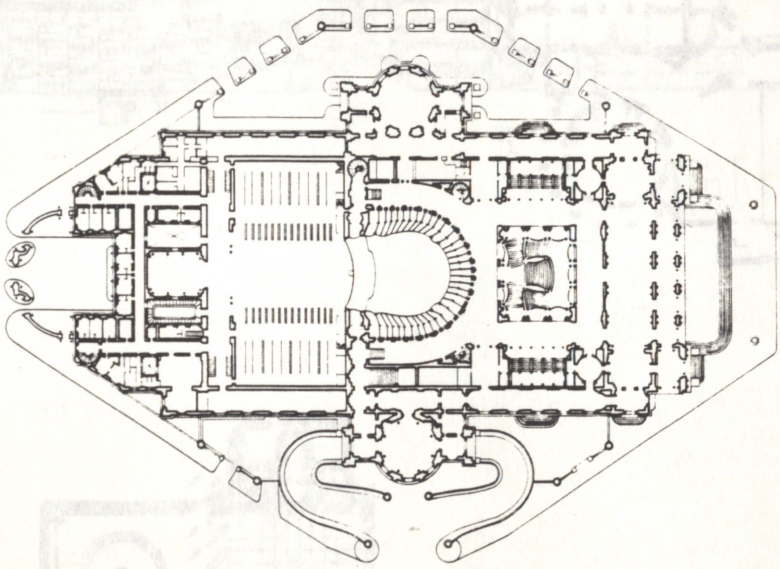


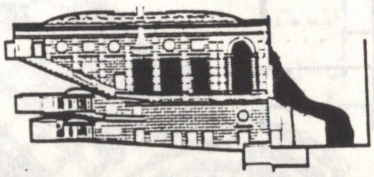




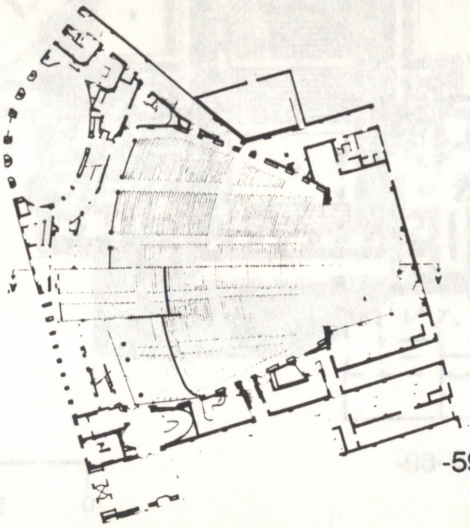


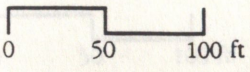
OPERA DE PARIS
1875
PARIS, FRANCE
2156 SEATS

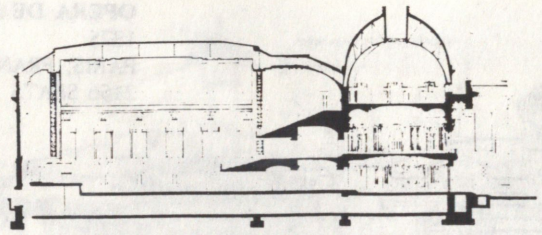


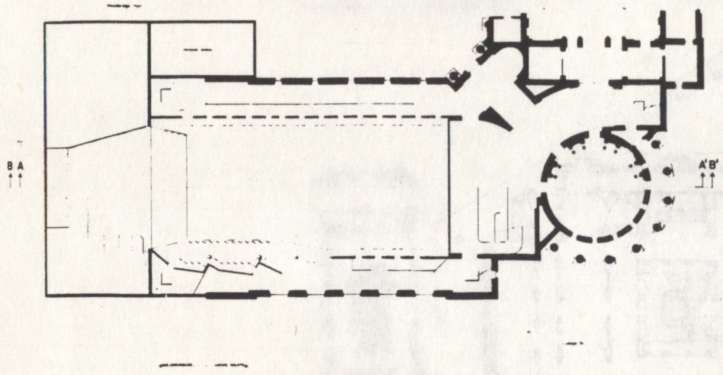


EASTMAN THEATER
1922
ROCHESTER, NEW YORK
3058 SEATS

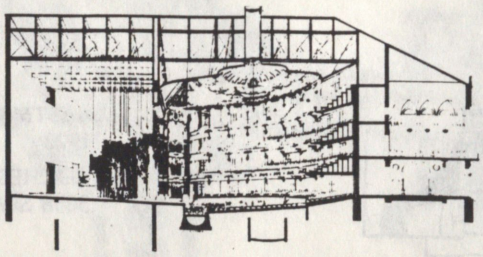


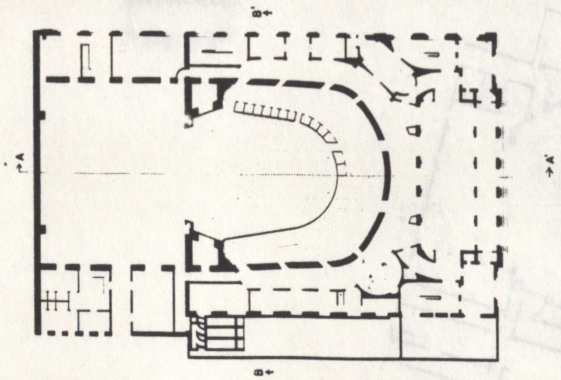






WOOLSEY HALL
1905; PROPOSED RENOVATION 1973
NEW HAVEN, CONNECTICUT
2500 SEATS

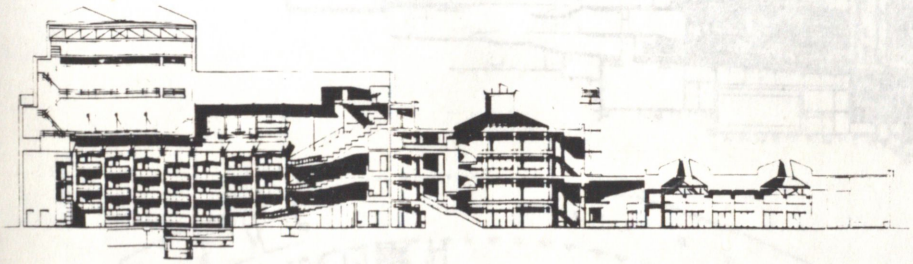


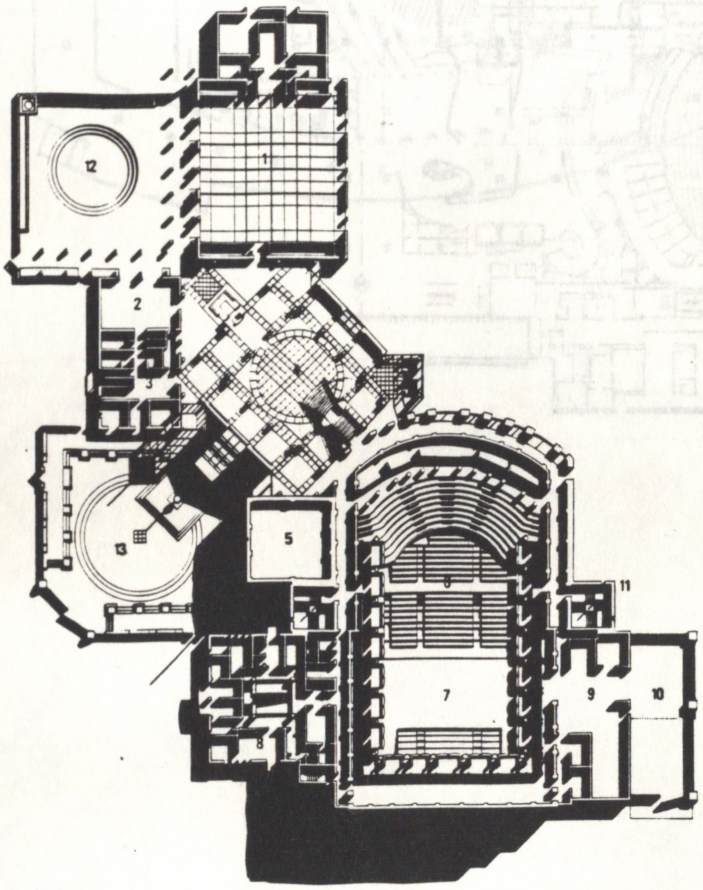


PHILADELPHIA ACADEMY OF MUSIC
1857
PHILADELPHIA, PENN.
2836-2984 SEATS

0 50 100 ft

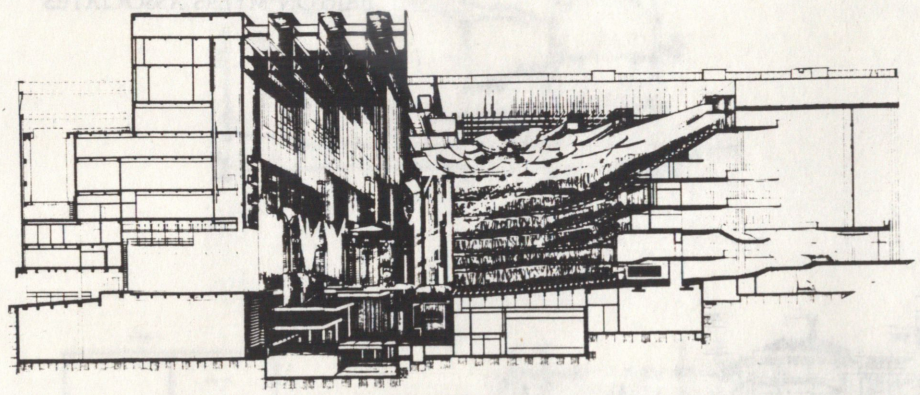
CERRITOS COMMUNITY ARTS CENTER
BARTON MYERS ASSOCIATES

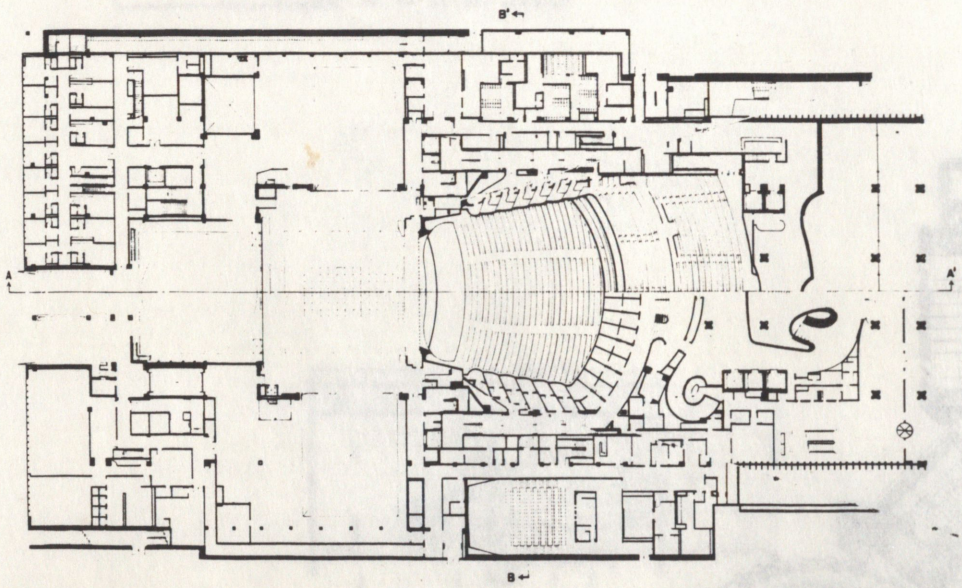




0 50 100 ft

METROPOLITAN OPERA HOUSE
1966
NEW YORK, NEW YORK
3639 SEATS





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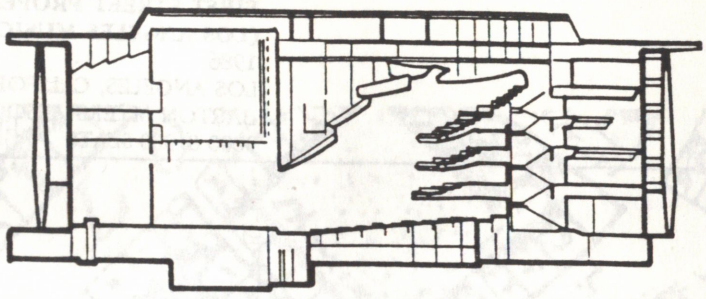
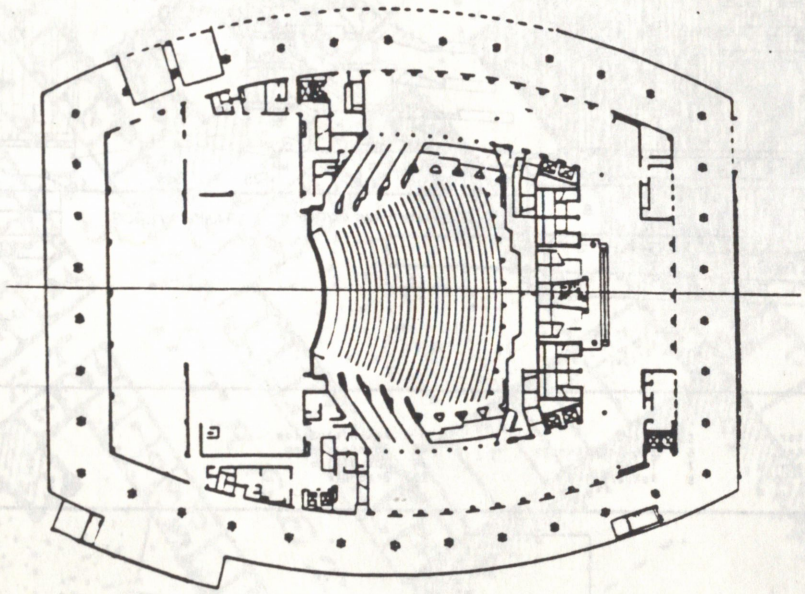
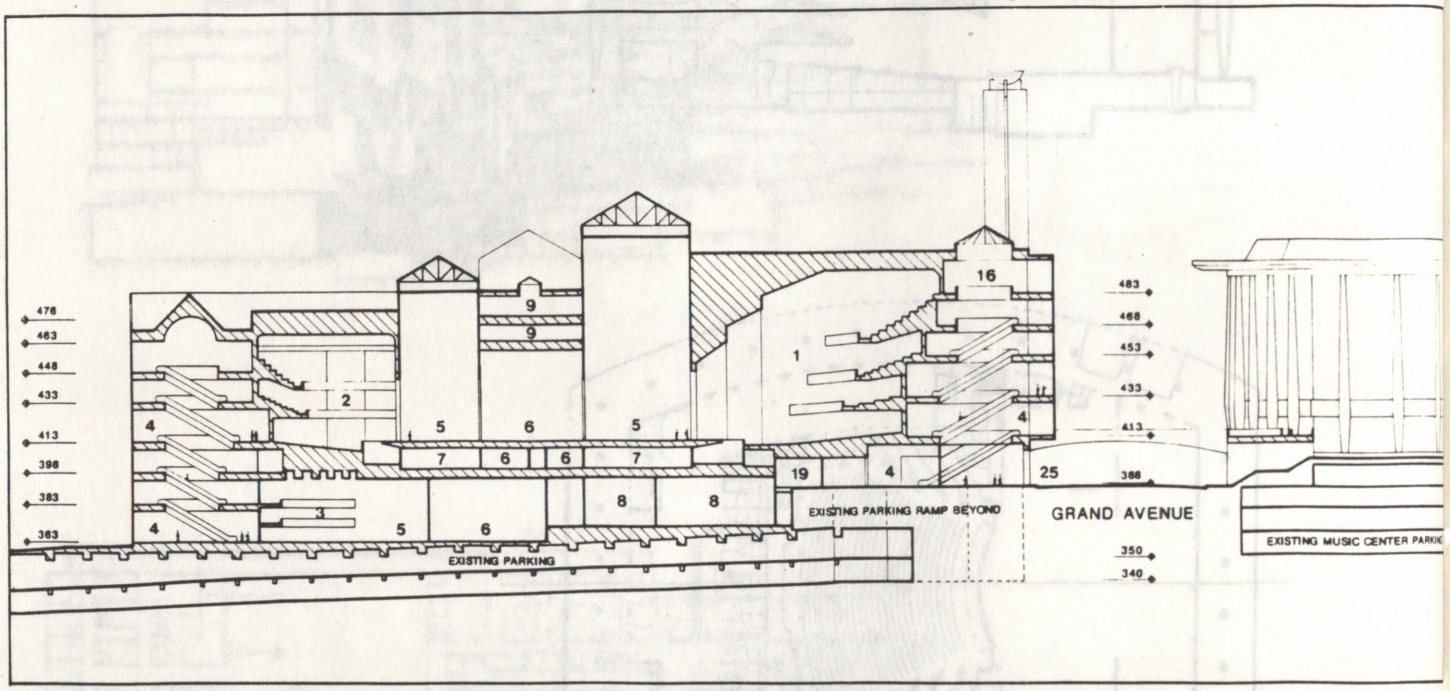




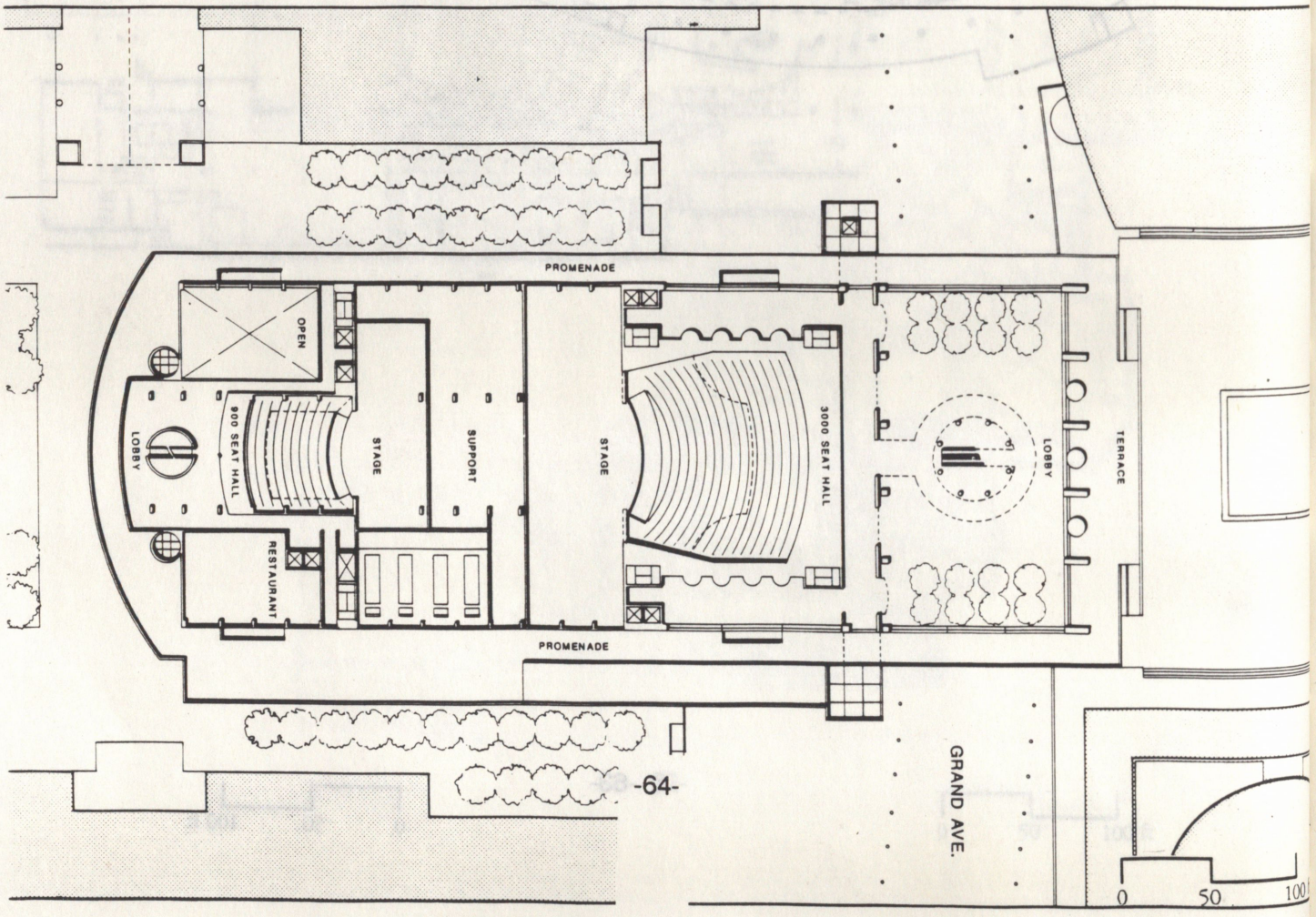
DOROTHY CHANDLER PAVILLION
1964
LOS ANGELES, CALIFORNIA
2,197 SEATS

0 50 100 ft

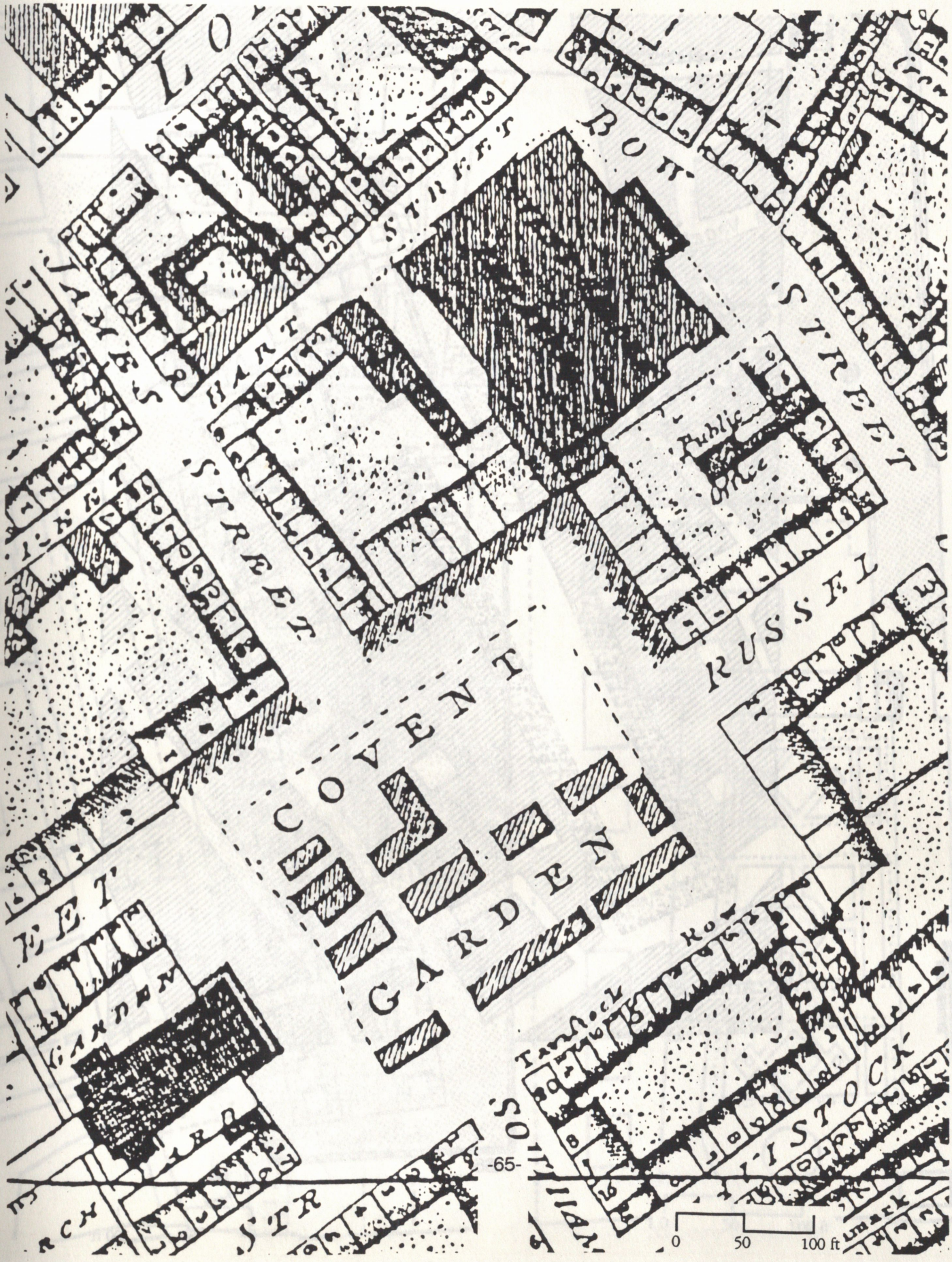
FIRST STREET PROPERTIES
(LOS ANGELES MUSIC CENTER EXPA
1986
LOS ANGELES, CALIFORNIA
BARTON MYERS ASSOCIATES
3000 & 900 SEATS



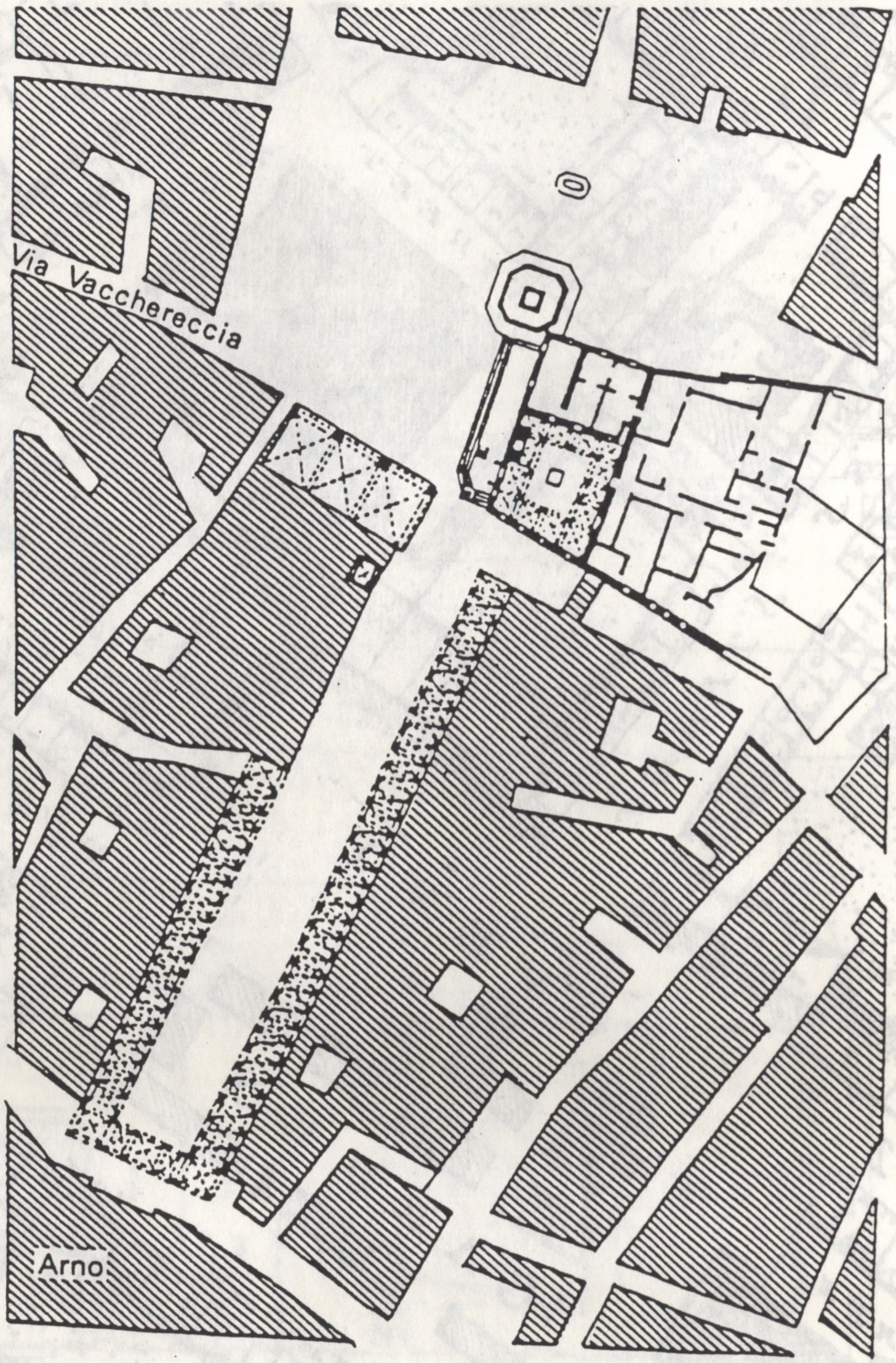
1	3000 Seat Theater	5	Stage	9	Administration
2	1200 Seat Theater	6	Support/Storage	16	Founders Room
3	500 Seat Theater	7	Traps	19	Box Office
4	Lobby	8	Rehearsal	25	Drop-Off



COVENT GARDENS
LONDON, ENGLAND



UFFIZI GALLERY
FIRENZE, ITALY



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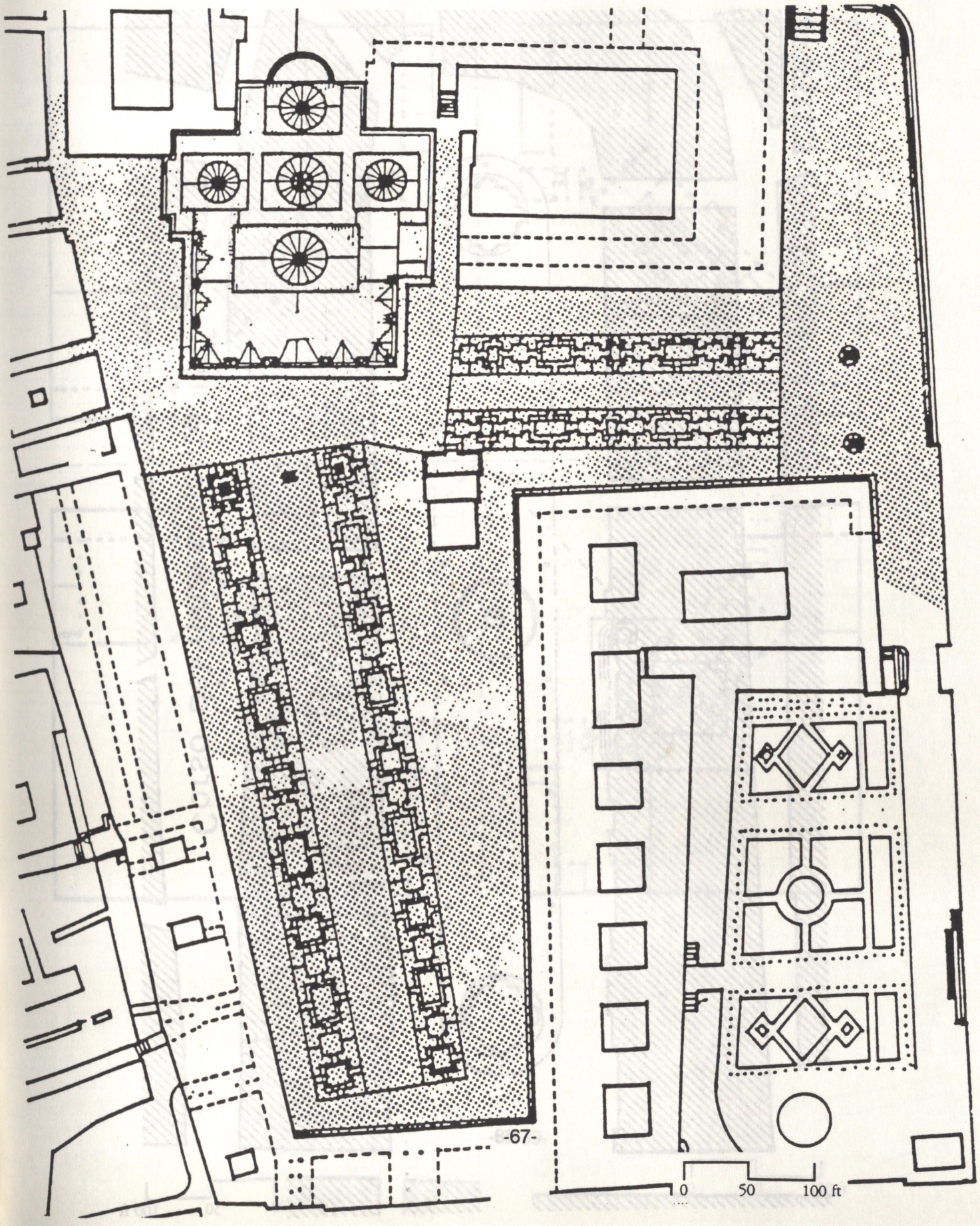
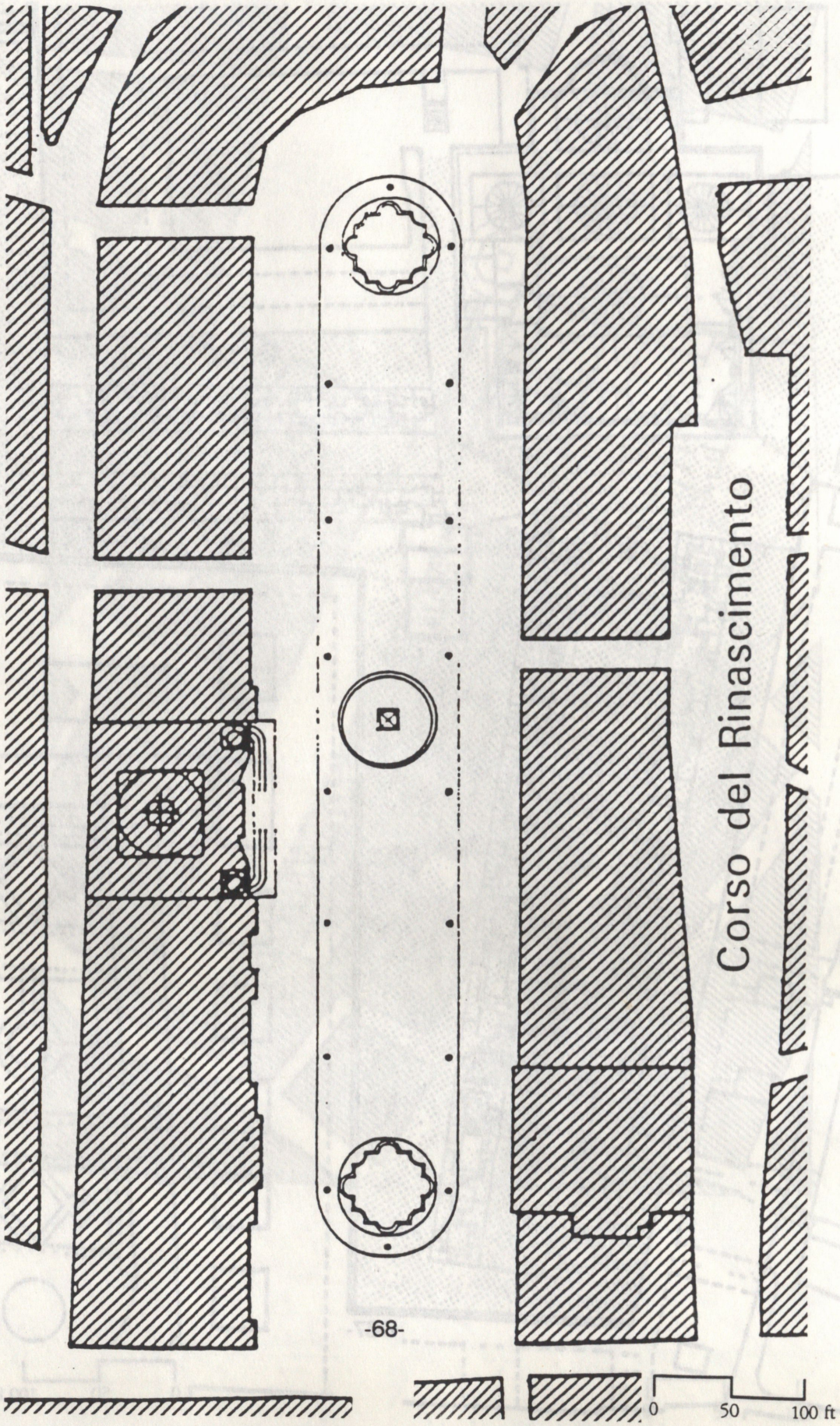
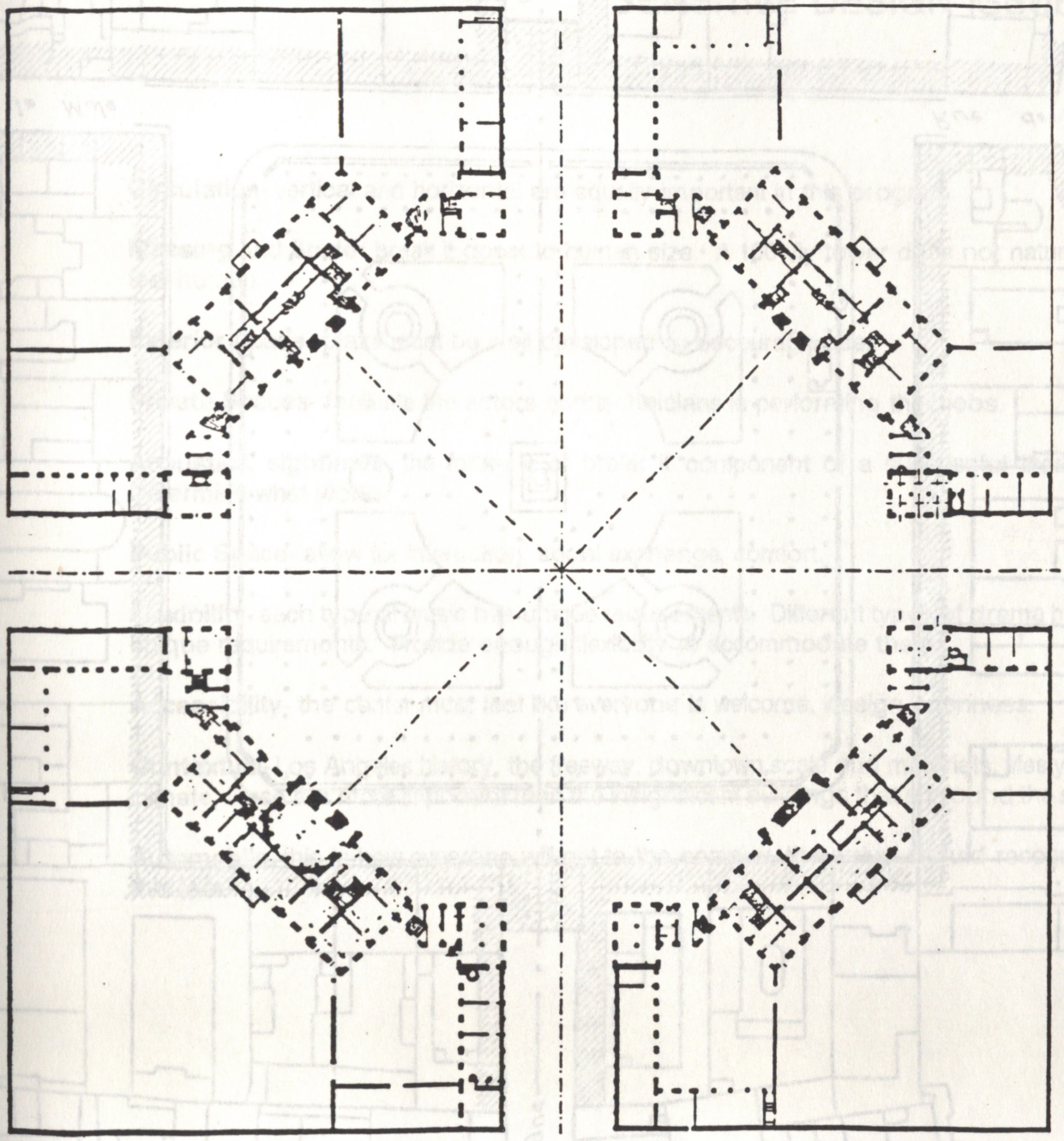
SAN MARCO
VENICE, ITALY



PIAZZA NAVONA
ROME, ITALY



AMALIENBORG PLACE
COPENHAGEN, DENMARK



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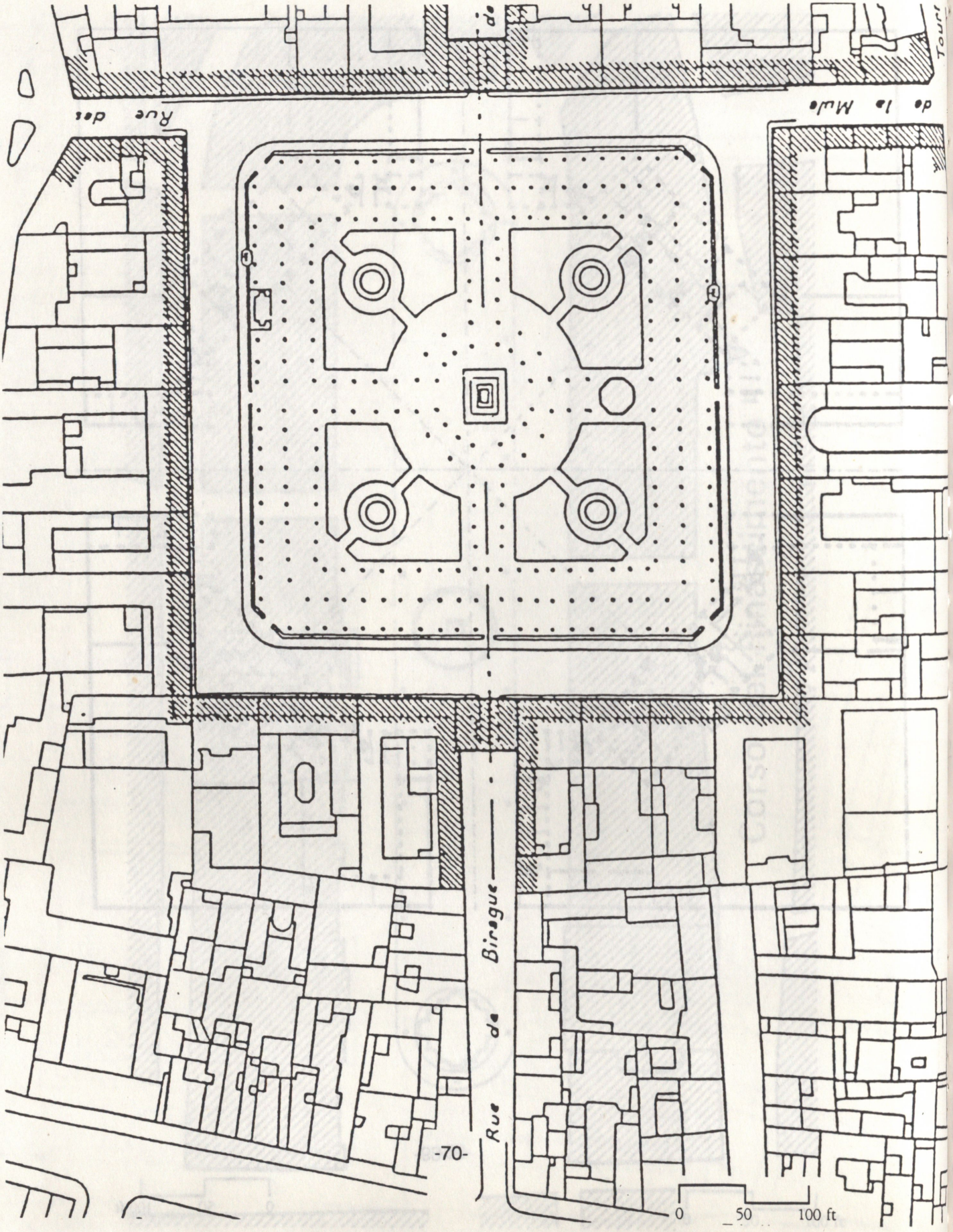
PLACE DE VOSGES
PARIS, FRANCE



SENSITIVE DESIGN ISSUES

Circulation- vertical and horizontal are equally important in this program.

Massing and Scale- break it down to human size. A 100' fly tower does not naturally feel human.

Exterior Space- plaza must be well developed to encourage use.

Private Spaces- facilitate the actors and technicians in performing their jobs.

Acoustics, sightlines- the make it or break it component of a successful theatre. Determine what works.

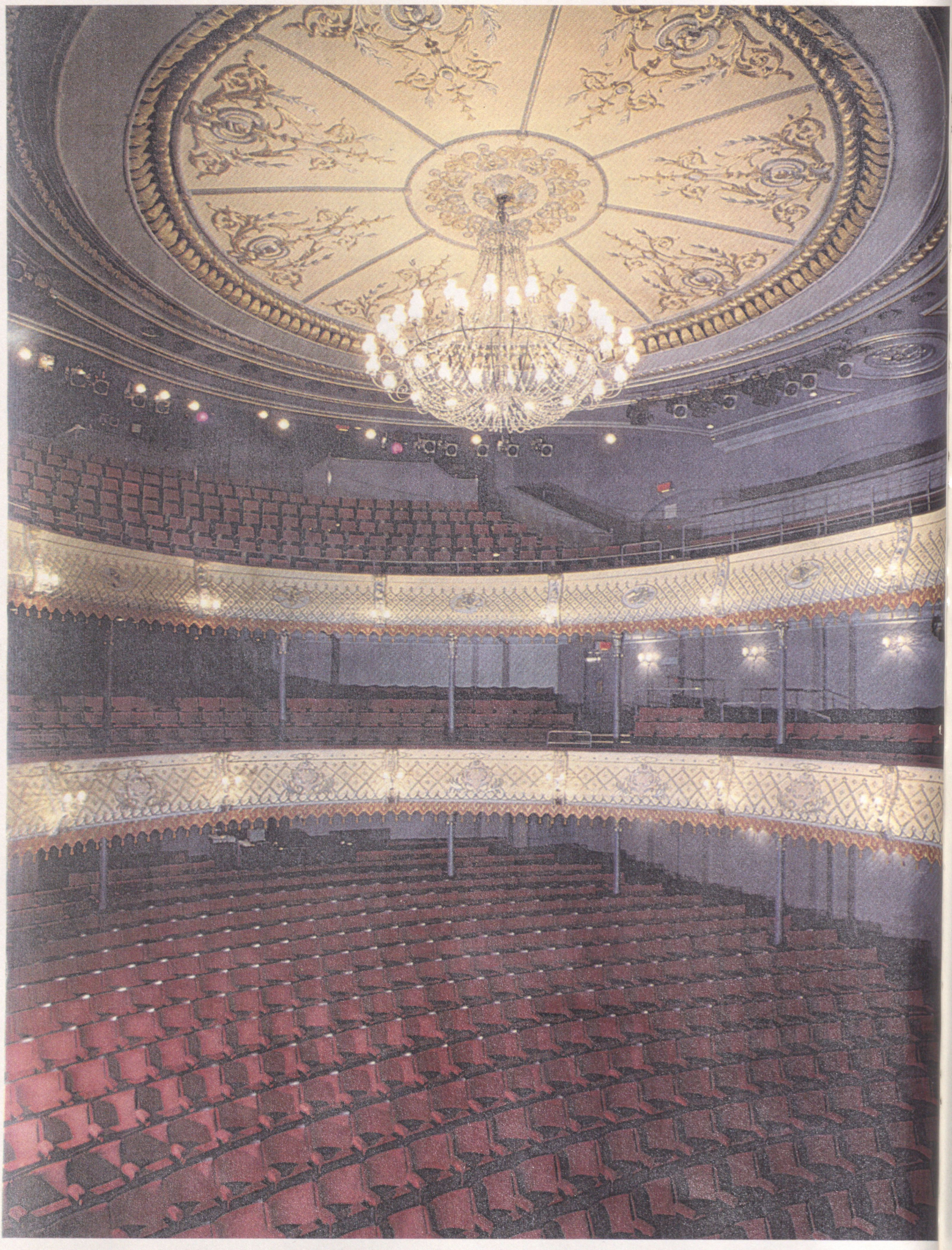
Public Space- allow for interaction, social exchange, comfort.

Flexibility- each type of music has unique requirements. Different types of drama have unique requirements. Provide enough flexibility to accommodate them.

Accessibility- the center must feel like everyone is welcome, design openness.

Contextual- Los Angeles history, the freeway, downtown scale and materials, lifestyles, climate, these are more important than the insignificant buildings that surround the site.

Automobile- this is how everyone will get to the complex, the arrival should recognize this fact.



UNIQUE REQUIREMENTS OF THE THEATRE

"Architecture implies that a building should not be slave to its program, twisting and turning to accommodate our every movement and wish- squirming to please. It should be found useful and beautiful, like a tree.
-Michael Benedikt

PROBLEM STATEMENTS

Function- Since the auditorium must provide good acoustics and sightlines, proven methods of acoustical treatment and seating rake will be used.

Since the back of house spaces must be enriching for the performers, quality and accommodating support spaces will be designed.

Since egress is a major concern of life safety, multiple circulation patterns will be developed for exit.

Form- Since the theatre will be located in the Los Angeles Central Business District, the design must respond to the unique environment through sensitive site development.

Since the building will be near Isozaki's Museum of Contemporary Art, and the historical Art Deco and Streamline Moderne area of downtown, this complex will integrate stylistic elements and materials from these projects to strengthen the urban fabric of the area.

Economy- Since the building solution should be prudent in it's attention to cost, an efficient complex which does not sacrifice creativity in design to accomplish this task will be generated.

Since maintenance and repair costs can be a significant factor in the running of a theatre complex, attention will be given to low maintenance materials, particularly on the exterior.

Accessibility- Since this complex is to be available to all resident of the city, the external form and internal function will be inviting and receptive.

Since this complex will adhere to the principles of Universal Design, ramps and all handicap access will be integrated into the mainstream flow of traffic and function.

FORM GIVING ACTIVITIES OF THE THEATRE

Entry vestibule- approach, sense of entry, gathering area, obtain information, exit

Foyers, lobbies- exhibition space, see and be seen, gathering area, lectures and impromptu performances, purchase and consume refreshments, enter/exit the auditorium, circulation

Auditorium- viewing, listening, light projection, sound control, sitting, circulation

Adjacent to stage storage- short term storage of props/scenery, holding area for performers, technicians observation of production, mechanical equipment location for fly and stage

Green room/actors garden- final review of lines/music, holding area for performers, relaxation, getting into character, adjusting costume, pick up props, practice gestures/line delivery, sitting, standing, pacing

Scene shop- painting, sawing, dust collection, hammering, moving large flats to stage, material moved in, stretching canvas, storage of materials/tools, repair of scenery

Loading dock- check in/out material and equipment, dispersal to appropriate areas, storage, telephoning, trucks backing to dock, hand dollies moving equipment

Box office- obtain information, read brochures, purchase tickets, gathering area

Stage and orchestra- acting, performing music, speaking, human movement/dance, object movement/props and scenery, lighting adjustment, entrance/exit of performers, fly objects up

Cloakroom/restroom- check coat, hat and handbag, repair hair/makeup, straighten garments. prepare to psychologically enter the theatre

Dressing rooms/costumes/props- sitting, storage, washing in sinks, performers preparation, put on costumes, take costumes on/off racks, apply make up, mirror usage, relaxation

Production/administration offices- meetings, telephoning, paperwork, fundraising, design of scenes, choreography sketching, computer usage, discussion, sitting, greeting visitors

Building services- fire inspection, waste collection and disposal, security check-in, maintenance of HVAC, monitor electrical/communication panels

THE INTANGIBLE BEING OF ARCHITECTURE

The human quality of physical space must be addressed at the same time one is providing for the hard spatial requirements of the program. As Amos Ih Tiao Chang stated in *The Tao of Architecture*; "It is the existence of intangible elements which make them come alive."

Entry vestibule- welcoming, inviting, warm, bright, friendly, deliberate provision of emptiness, sense of entry, human scale

Foyers, lobbies- warm, friendly, woven space, transparency, cheerful, extroverted

Auditorium- focused, relationship of aboutness, accessible, articulate, relaxed, efficient, emotional satisfaction, physical integrity

Adjacent to stage storage- bright, efficient, functional, spacious

Green room/actors garden- relaxing, inspiring, vividness, emotional satisfaction, friendly

Scene shop- efficient, functional, bright, form with out rhetoric

Loadingdock-efficient, accommodating

Box office- welcoming, intelligent, human scale, articulate, clarity

Stage and orchestra- articulate, focused, extroverted, functional, flexible, emotional satisfaction

Cloakroom/restroom- clarity, silence, friendly

Dressing rooms/costumes/props- bright, calming, supportive, functional, warm, human scale

Production/administration offices- quiet, productive, efficient, functional, introverted, human scale

Building services- efficient, integrated whole, secure, functions

USER IMPLICATIONS

User Types

Served-Front of House	Server-Back of House
First time patron	Performers
Frequent patron	Artistic Director
Children	Stage Technicians
Elderly	Administrators
Handicapped	Maintenance Staff
Groups	Docents

GENERAL IMPLICATIONS

provide ample circulation space- avoid bottlenecks at end of performance
provide easy to read circulation- readily identifiably doors into the auditorium
provide ample viewing areas in lobby- people still want to see and be seen
provide for user comfort and personal safety- well lit stairwells and adequate egress
provide semi-private areas for personal space- allow visitors to establish territory

USER IMPLICATIONS

FIRST TIME PATRONS
provide clear circulation- the first time visitor should never get lost
provide non-confrontational scale- keep it human
provide embracing interiors- should feel warm and welcoming

FREQUENT PATRONS
provide stimulating environment- do not boor someone who has seen it before
provide variety of public spaces- should be able to explore new areas on each visit
provide the best in acoustics and sightlines- they return to see and hear

CHILDREN
provide information comprehendible by children- written and graphics at their level
provide children's gallery- photos of colorful performances, information of puppets
provide facilities at child's level- reachable water fountains

ELDERLY
provide seating for elderly to rest- scattered throughout complex, not isolated
provide waiting space in lobby- identifiable areas to meet
provide easily accessible bathrooms- no obstructions

HANDICAPPED
provide universal design- equal access for all
provide optimum viewing access- a full range of seating areas, integrated
provide easily accessible bathrooms- no obstructions

GROUPS
provide ample bathroom facilities- handle many people at once
provide ample gathering spaces- indoor and outdoor identifiable spaces
provide rapid ticket distribution- several windows at booth

PERFORMERS
provide quality work space- ample area, designed to be used
provide stimulating areas to work- bring light into support areas
provide easy access to stage- keep greenroom, dressing rooms close

ARTISTIC DIRECTOR
provide private space- allow them to get away from activity
provide adequate support- writing, drawing, playing space
provide quality environment- clean, well lit

TECHNICAL STAFF
provide areas that work- enough space to perform the necessary tasks
provide quality space- bring in light, and make it interesting
provide areas in proximity- keep it close to the stage and performers

ADMINISTRATORS
provide space for breaks- own refreshment area
provide up to date office- flexibility for spacing and equipment organization
provide quality office space- personal, well lit, spacious

MAINTENANCE AND STAFF
provide easy to maintain spaces- security as well as cleaning
provide convenient circulation for cleaning routine- low maintenance facility
provide ample areas for moving equipment- production and permanent

DOCENTS
provide gathering areas for tours- forming groups will not impede other circulation
provide clear signage- fewer questions will be asked
provide storage- printed information, maps, etc.

2500 SEAT OPERA AND DRAMA THEATRE

SPACE	AREA	SQUARE FOOTAGE	FOOTPRINT	TOTAL
Performance Space	Stage 60X60X100(h)	10,800	10,800	42,000
	Auditorium*	20,250	10,500	
	Orch. Pit	900	900	
	Other	10,000	3,500	
Storage and Office Adj. to Stage	Scenery,Instruments Props, Shell Storage	8,000	4,500	8,000
Performers Support	Dressing Rooms Green Room Scene Shop Prop Storage Backstage W.C. Make-up, Costumes Actors Garden	8,000	4,000	8,000
Production Spaces	Rehearsal 60X60X16 dance	3,600	4,500	8,100
	Rehearsal 60X60X50 music	3,600		
	Rehearsal 30X30X16	900		
Production Offices	Artistic Director General Manager, etc.		2,000	4,500
Administration	Includes Box Office		4,500	9,000
Building Services	Loading Dock(2) Security, Fire, Maintenance, Waste		1,500	4,000
Public Spaces	Foyers, Lobbies, Cloak, W.C.		12,500	25,000
Net S.F.			59,200	101,400
Total S.F.**			66,300	113,600

* based on 8.1 s.f. per person

** includes misc. circulation, structure, HVAC, elect., and communications-approx. 12%

1800 SEAT CONCERT HALL

SPACE	AREA	SQUARE FOOTAGE	FOOTPRINT	TOTAL
Performance Space	Stage 40X60X45(h)	3,500	3,500	26,100
	Auditorium*	14,600	8,500	
	Orch. Pit	8,000	3,500	
	Other			
Storage and Office Adj. to Stage	Scenery,Instruments Shell Storage		1,000	4,000
Performers Support	Dressing Rooms Green Room Backstage W.C. Make-up, Costumes Musicians Court		3,000	7,000
Production Spaces	Rehearsal 40X60X45	2,400	2,400	3,600
	Rehearsal 30X40X16	1,200		
Production Offices	Music Director General Manager, etc.		1,000	2,000
Administration	Includes Box Office		1,500	2,500
Building Services	Loading Dock Security, Fire, Maintenance, Waste		1,500	3,000
Public Spaces	Foyers, Lobbies, Cloak, W.C.		11,000	22,000
Net S.F.			40,400	70,200
Total S.F.**			48,400	78,600

* based on 8.1 s.f. per person

** includes misc. circulation, structure, HVAC, elect., and communications-approx. 12%

750 SEAT LYRIC THEATRE

SPACE	AREA	SQUARE FOOTAGE	FOOTPRINT	TOTAL
Performance Space	Stage 40X40X32(h)	1,600	1,600	11,600
	Auditorium*	9,000	9,000	
	Orch. Pit	500	500	
	Other	1,000	500	
Storage and Office Adj. to Stage	Scenery,Instruments Props		500	1,200
Performers Support	Dressing Rooms Green Room Backstage W.C. Make-up, Costumes		800	1,800
Production Spaces	Rehearsal 40X40X32	1,600	1,600	2,400
	Rehearsal 20X40X16	800		
	Rehearsal 30X30X16			
Production Offices	Artistic Director General Manager, etc.		1,000	2,000
Administration	Includes Box Office		1,000	2,000
Building Services	Loading Dock Security, Fire, Maintenance, Waste		550	750
Public Spaces	Foyers, Lobbies, Cloak, W.C.		6,000	6,000
Net S.F.		23,250	27,750	
Total S.F.**		26,000	31,000	

* based on 12 s.f. per person

** includes misc. circulation, structure, HVAC, elect., and communications-approx. 12%

200 SEAT CHILDREN'S THEATRE

SPACE	AREA	SQUARE FOOTAGE	FOOTPRINT	TOTAL
Performance Space	Stage 30X30X32(h)	900	900	4,300
	Auditorium*	2,400		
	Other	1,000		
Storage and Office Adj. to Stage	Scenery,Instruments Props		500	500
Performers Support	Dressing Rooms Green Room Backstage W.C. Make-up, Costumes Actors Garden		800	800
Production Spaces	Rehearsal 30X30X32		900	900
Production Offices	Artistic Director General Manager, etc.		250	500
Administration	Includes Box Office		500	1,000
Building Services	Loading Dock Security, Fire, Maintenance, Waste		550	750
Public Spaces	Foyers, Lobbies, Cloak, W.C.		3,000	3,000
Net S.F.			7,400	11,750
Total S.F.**			8,300	13,200

* based on 12 s.f. per person

** includes misc. circulation, structure, HVAC, elect., and communications-approx. 12%

ADDITIONAL PERFORMING ARTS CENTER FACILITIES

FUNCTION	TOTAL G.S.F.
Library	20,000
Gift Shop	10,000
Banquet Facilities	16,200
Restaurant	12,000
Open Court Dining	15,000
Central Box Office	2,400
Founders Room	6,000
Total Additional Area	**81,600**
Parking*	190,000

* Parking based on 525 required spaces
  375 s.f per vehicle

LOS ANGELES PERFORMING ARTS CENTER SUMMARY

2500 seat Opera and Drama Theatre	113,600
1800 seat Concert Hall	78,600
750 seat Lyric Theatre	31,000
200 seat Children's Theatre	13,200
Additional Performing Arts Center Facilities	81,600
Parking	190,000
Total Square Footage of Center	394,800

FINANCIAL ANALYSIS AND COMPARISONS

The following estimates are based on the tables in the *Means Cost Estimating Guide 1990*. All cost per square foot figures are based on face-brick with concrete backup construction. The cost figures have been adjusted to reflect the estimated square footage for this project.

SPACE	MEDIAN COST PER S.F.	TOTAL S.F.	TOTAL COST
Auditorium and Stage	$97.00	84,000	$8,148,000
Storage	39.85	13,700	545,945
Performers Support (Dressing, Scene Shop, etc.)	74.50	17,600	1,311,200
Rehearsal	39.85	15,000	597,750
Offices (Including Box Office)	58.95	25,900	1,526,800
Building Services (Loading Dock, Security)	75.90	8,500	645,150
Foyers, Lobbies	75.55	56,000	4,230,800
Library	70.00	20,000	1,400,000
Gift Shop	48.20	10,000	482,000
Restaurant, Banquet, and Dining	53.45	43,200	2,309,000
Founders Room	75.55	6,000	453,300
Theatre Equipment[1]		2,165,000	
Theatre Seating[2]			509,250
Total Building Costs[3]	**$103.99**	**299,900**	**$31,187,899**
Parking Garage[3]	27.89	190,000	5,298,592
Total estimated cost	**$74.48**	**489,900**	**$36,486,491**

[1]10% of Direct Building Cost
[2]5250 seats at $97.00 each
[3]Includes site development at 6% of Total Estimated Costs, location factor for Los Angeles at 1.12, and Architects and Engineers Fees at 8%.

There is no longer an illusion that theatre in the United States is likely to be a large money making proposition. Perhaps the last time that opinion was held was 1885 when Chicago businessmen invested in the Chicago Auditorium-Theatre, with the hopes of a large return on their investment. That project was refinanced twice, went bankrupt in 1940, and all moveable contents were removed the next year.

Today capital funding for theatre, as well as ongoing maintenance and operation, relies heavily on corporate and civic subsidy. With this realization understood, one should examine how these precious funds are spent on the building. The continuum of financing for purely architectural considerations versus the technical, engineering concerns of the theatre operation is broad indeed. Should more money be allocated to the materials in the facade, or the acoustical materials in the auditorium? It must be allocated appropriately between them both.

The solution for the Los Angeles Center of the Performing Arts should demonstrate prudence and attention to cost as an important factor in the design development. Solutions should be pursued which reflect consideration of life-cycle cost and offer evidence of careful attention to analysis of initial and operation costs.

The following budget analysis shows a detailed breakdown on several theatre and concert halls in the United States. They are all single auditorium facilities, with the exception of Krannart Center for the Performing Arts. Krannart has four separate buildings housing five unique performance spaces. The cost figures presented are borrowed from "Theatre Design" by George Izenour, and are in terms of 1974 dollars. The current estimate for the Los Angeles Center for the Performing Arts is $36,486,491 with 5,250 seats projecting $6,949 per seat. In order to make a comparison with this estimate, an approximate conversion to 1991 dollars is provided for each auditorium, as well as a current cost per seat.

Creative Arts Center, West Virginia University

	Amount
Phase I:	
Music school, art school, and administration, total cost	$ 4,871,000
Music theater, total cost*	2,479,000
Phase II:	
Experimental theaters (two) and art school studios, total cost	1,825,000
Phase III:	
Drama theater and school facilities, total cost	3,000,000
Total project cost†	$12,175,000

1991 Cost $18,384,250
1560 Seats
$11,784 per seat

*See breakdown of cost for music theater (Fig. 11.8).
†Theater equipment cost: $884,000, or 8% of total project building cost, including estimate for Phase III.

1991 Cost $33,496,330
4,800 Seats
$6,978 per seat

Krannert Center for the Performing Arts, University of Illinois: Budget analysis

	Amount	Percent
Direct building cost:		
General construction*	$16,786,000	79.3
Heating, ventilation, air conditioning, plumbing	1,950,000	9.2
Electrical wiring	1,515,000	7.2
Passenger elevators	68,000	0.3
Furnishings	350,000	1.6
Theater equipment:†		
Orchestra pit-apron lifts	98,000	0.5
Stage lighting	120,000	0.6
Stage special steel	113,000	0.5
Stage rigging	173,000	0.8
Total direct building cost	$21,173,000	100
Indirect cost:		
Fees	$ 1,010,000	
Total indirect cost	$ 1,010,000	
Total cost	$22,183,000	

* Includes seating.
† Theater equipment cost: $504,000, or 2% of total direct building costs of project.

1991 Cost $19,026,000
3000 Seats
$6,340 per seat

Edwin Thomas Performing Arts Hall: Budget analysis

	Amount	Percent
Direct building cost:		
General construction*	$ 5,180,000	57.0
Heating, ventilation, air conditioning	1,315,000	14.5
Electrical wiring	809,000	8.9
Plumbing	484,000	5.3
Passenger elevators	115,000	1.3
Auditorium seating	172,000	1.9
Furnishings	188,000	2.1
Theater equipment:†		
Orchestra pit-apron lifts	62,000	0.7
Stage lighting	93,000	1.0
Stage and auditorium special steel‡	320,000	3.5
Stage and auditorium rigging§	300,000	3.3
Sound reinforcement system	44,000	0.5
Total direct building cost	$ 9,082,000	100
Indirect cost:		
Parking deck	$ 2,187,000	
Site cost	300,000	
Site development	97,000	
Fees	910,000	
Other	24,000	
Total indirect cost	$ 3,518,000	
Total cost	$12,600,000	

* Parking deck deleted.
† Theater equipment cost: $819,000, or 9% of total direct building cost.
‡ Includes orchestra shell and auditorium ceiling.
§ Includes orchestra shell and auditorium ceiling rigging.

Center for the Performing Arts, University of New Mexico: Budget analysis

1991 Cost $11,907,860
2092 Seats
$5,719 per seat

	Amount	Percent
Phase I: Music School:		
General construction	$1,690,000	67.3
Heating, ventilation, air conditioning	189,000	7.5
Electric wiring	315,000	12.5
Plumbing	155,000	6.2
Passenger elevators	40,000	1.6
Furnishings	57,000	2.3
Recital hall stage equipment	64,000	2.6
Total Music School cost	$2,510,000	100
Addition to Phase I:*		
General construction	$ 185,000	
Heating, ventilation, air conditioning	26,000	
Electrical wiring	15,000	
Plumbing	8,000	
Furnishings	39,000	
Total Phase I addition cost	$ 273,000	
Phase II: Popejoy Hall	$2,715,000	
Phase III: Rodey Drama Theater	$2,388,000	
Total project cost†	$7,886,000	

*Principally administrative offices.
†Theater equipment cost: $843,000, or 12% of total project direct building cost.

Multi-Purpose Coliseum, Washington State University: Budget analysis

1991 Cost $13,355,950
2670 Seats
$5,002 per seat

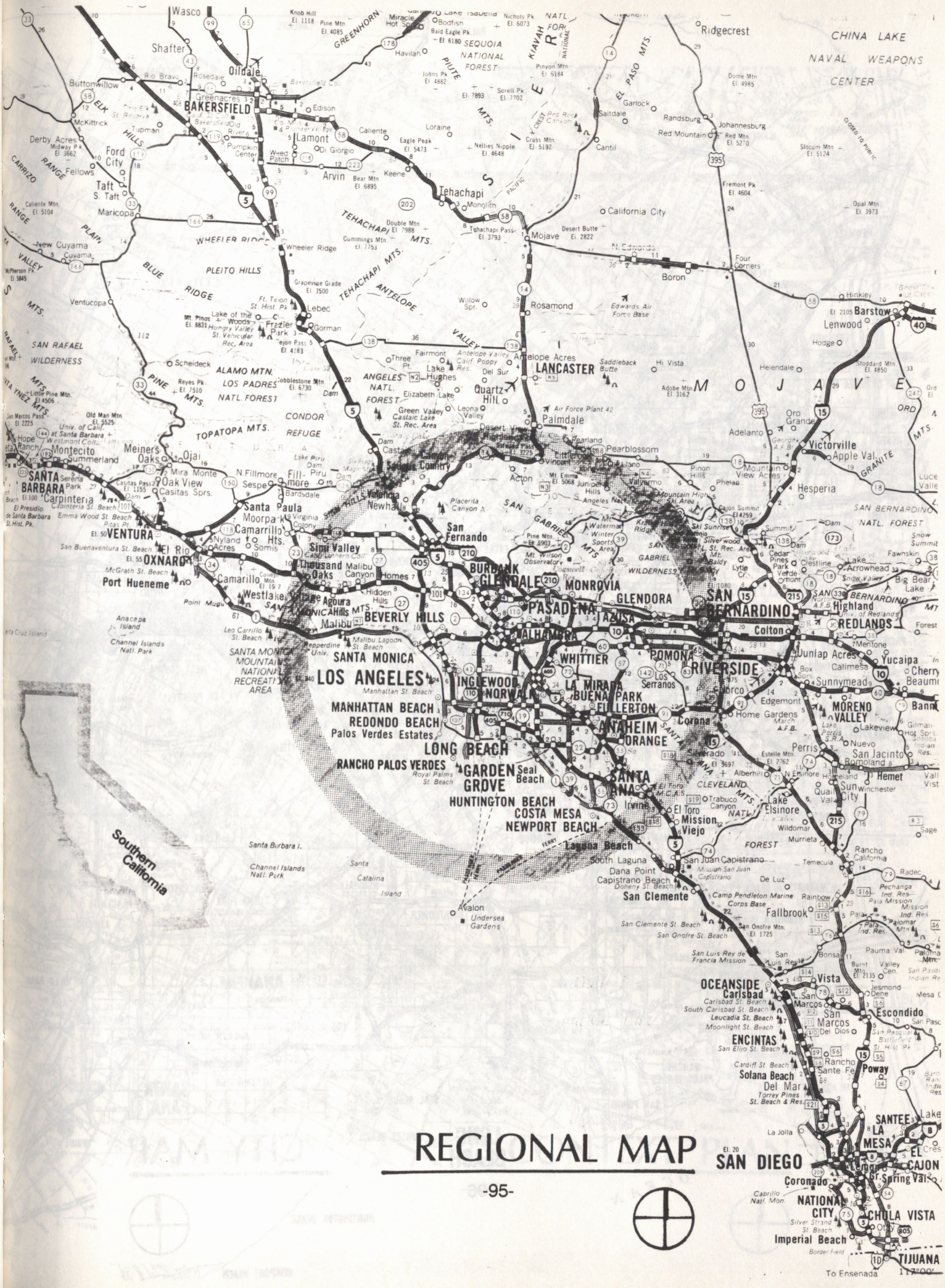
	Amount	Percent
Direct building cost:		
General construction	$4,200,000	54.7
Heating, ventilation, air conditioning	1,210,000	15.8
Electrical wiring	476,000	6.2
Plumbing	321,000	4.2
Passenger elevators	—	—
Arena seating	446,000	5.8
Furnishings	136,000	1.8
Theater equipment:*		
Stage lighting	72,000	0.9
Stage rigging and special steel†	676,000	8.8
Electroacoustical envelopment and reinforcement system	142,000	1.8
Total direct building cost	$7,679,000	100
Indirect cost:		
Fees	$ 568,000	
Site development	71,000	
Taxes	345,000	
Other	182,000	
Total indirect cost	$1,166,000	
Total cost	$8,845,000	

*Theater equipment cost: $890,000, or 12% of total direct building cost.
†Includes orchestra shell and conversion equipment.

SITE ANALYSIS

A building with presence is not apologetic, but asserts itself as architecture, having a right to be there, to bump off a few trees (and defer to others), to take up its position as a new entity in the physical world.

-Michael Benedikt


REGIONAL MAP
-95-
Wasco
Shafter
Oildale
BAKERSFIELD
Buttonwillow
Rio Bravo
Greenacres
Rosedale
McKittrick
Derby Acres
Ford City
Taft
S. Taft
Maricopa
Fellows
New Cuyama
Caliente Mtn.
Lamont
Arvin
Edison
Caliente
Loraine
Tehachapi
Monolith
Cummings Mtn.
Wheeler Ridge
Grapevine Grade
Lebec
Gorman
Frazier Park
Lake of the Woods
Ventucopa
Scheideck
Meiners Oaks
Ojai
Montecito
Summerland
SANTA BARBARA
Carpinteria
Mira Monte
Oak View
Casitas Spgs.
Santa Paula
Moorpark
Fillmore
Sespe
Bardsdale
Piru
Valencia
Newhall
VENTURA
El Rio
OXNARD
Port Hueneme
Camarillo
Somis
Simi Valley
Thousand Oaks
Malibu Canyon
Agoura Hills
Westlake Village
Hidden Hills
Calabasas
BEVERLY HILLS
Malibu
Pepperdine Univ.
SANTA MONICA
LOS ANGELES
Manhattan St. Beach
MANHATTAN BEACH
REDONDO BEACH
Palos Verdes Estates
RANCHO PALOS VERDES
LONG BEACH
GARDEN GROVE
Seal Beach
HUNTINGTON BEACH
COSTA MESA
NEWPORT BEACH
Laguna Beach
South Laguna
Dana Point
Capistrano Beach
San Clemente
Avalon
Undersea Gardens
Santa Barbara I.
Channel Islands Natl. Park
Santa Catalina Island
Southern California
San Fernando
BURBANK
GLENDALE
PASADENA
ALHAMBRA
MONROVIA
GLENDORA
AZUSA
SAN BERNARDINO
REDLANDS
Colton
Highland
Yucaipa
Calimesa
Sunnymead
Moreno Valley
Riverside
Norco
Corona
Home Gardens
Edgemont
Lake Elsinore
Perris
San Jacinto
Hemet
Winchester
Romoland
Nuevo
Menifee
Wildomar
Murrieta
Temecula
Rancho California
Pechanga Ind. Res.
Pala Mission Ind. Res.
Fallbrook
Rainbow
Camp Pendleton Marine Corps Base
San Onofre Mtn.
San Onofre St. Beach
San Clemente St. Beach
San Luis Rey de Francia Mission
Bonsall
Pauma Valley
Palomar Mtn.
OCEANSIDE
Carlsbad
Carlsbad St. Beach
South Carlsbad St. Beach
Leucadia St. Beach
Moonlight St. Beach
Vista
San Marcos
Escondido
Del Dios
ENCINITAS
San Elijo St. Beach
Cardiff St. Beach
Solana Beach
Del Mar
Torrey Pines St. Beach & Res.
Rancho Santa Fe
Poway
SANTEE
LA MESA
EL CAJON
Gr. Spring Valley
La Jolla
SAN DIEGO
Coronado
Cabrillo Natl. Mon.
NATIONAL CITY
CHULA VISTA
Silver Strand St. Beach
Imperial Beach
Border Field
TIJUANA
To Ensenada
Ridgecrest
CHINA LAKE NAVAL WEAPONS CENTER
Randsburg
Johannesburg
Red Mountain
Cantil
California City
Mojave
Boron
N. Edwards
Four Corners
Rosamond
Edwards Air Force Base
Willow Spr.
Tehachapi Pass
Desert Butte
Saltdale
Garlock
Barstow
Lenwood
Hinkley
Helendale
Oro Grande
Victorville
Apple Val.
Hesperia
Adelanto
Pearblossom
Palmdale
Lancaster
Antelope Acres
Saddleback Butte
Hi Vista
Quartz Hill
Leona Valley
Elizabeth Lake
Green Valley
Castaic Lake
Del Sur
Lake Hughes
Three Pt.
Fairmont
Acton
Agua Dulce
Vasquez Rocks
Placerita Canyon
Newhall
Valencia
Santa Clarita
Saugus
Canyon Country
Sand Canyon
Soledad Canyon
Mt. Emma
Juniper Hills
Valyermo
Pinon Hills
Mountain View Acres
Phelan
Cajon Summit
Summit
Cedar Pines Park
Crestline
Lake Arrowhead
Big Bear Lake
Snow Valley
Fawnskin
Lytle Cr.
Verdemont
Devore
Glen Helen
Cajon
Lucerne Valley
Granite Mts.
Ord Mts.
Rand Mts.
Sierra Nevada
Mojave
Antelope Valley
Tehachapi Mts.
Pleito Hills
Blue Ridge
Wheeler Ridge
Alamo Mtn.
Los Padres Natl. Forest
Condor Refuge
Topatopa Mts.
San Rafael Wilderness
Sierra Madre Mts.
San Gabriel Mts.
San Gabriel Wilderness
San Bernardino Natl. Forest
Cleveland Natl. Forest
Santa Ana Mts.
Santa Ana
Anaheim
Orange
Tustin
Irvine
El Toro
Mission Viejo
Lake Forest
Aliso Viejo
Laguna Niguel
San Juan Capistrano
Mission San Juan Capistrano
Dana Point
Capistrano Beach
Doheny St. Beach
Laguna Beach
Seal Beach
Los Alamitos
Cypress
Buena Park
La Mirada
Whittier
Norwalk
Inglewood
Manhattan St. Beach
Los Serranos
Chino
Ontario
Upland
Claremont
Pomona
Walnut
Diamond Bar
Rowland Heights
La Habra Heights
Whittier Narrows Rec. Area
Hacienda Heights
Puente Hills
Montebello
Pico Rivera
Santa Fe Springs
Whittier Hills
Brea
Fullerton
Placentia
Yorba Linda
Anaheim Hills
Orange Co. Fairgrounds
Orange Co. Airport
Irvine Ranch
Irvine Lake
Silverado Canyon
Trabuco Canyon
Modjeska Peak
Santiago Peak
Cleveland Natl. Forest
Elsinore Mts.
Lake Elsinore
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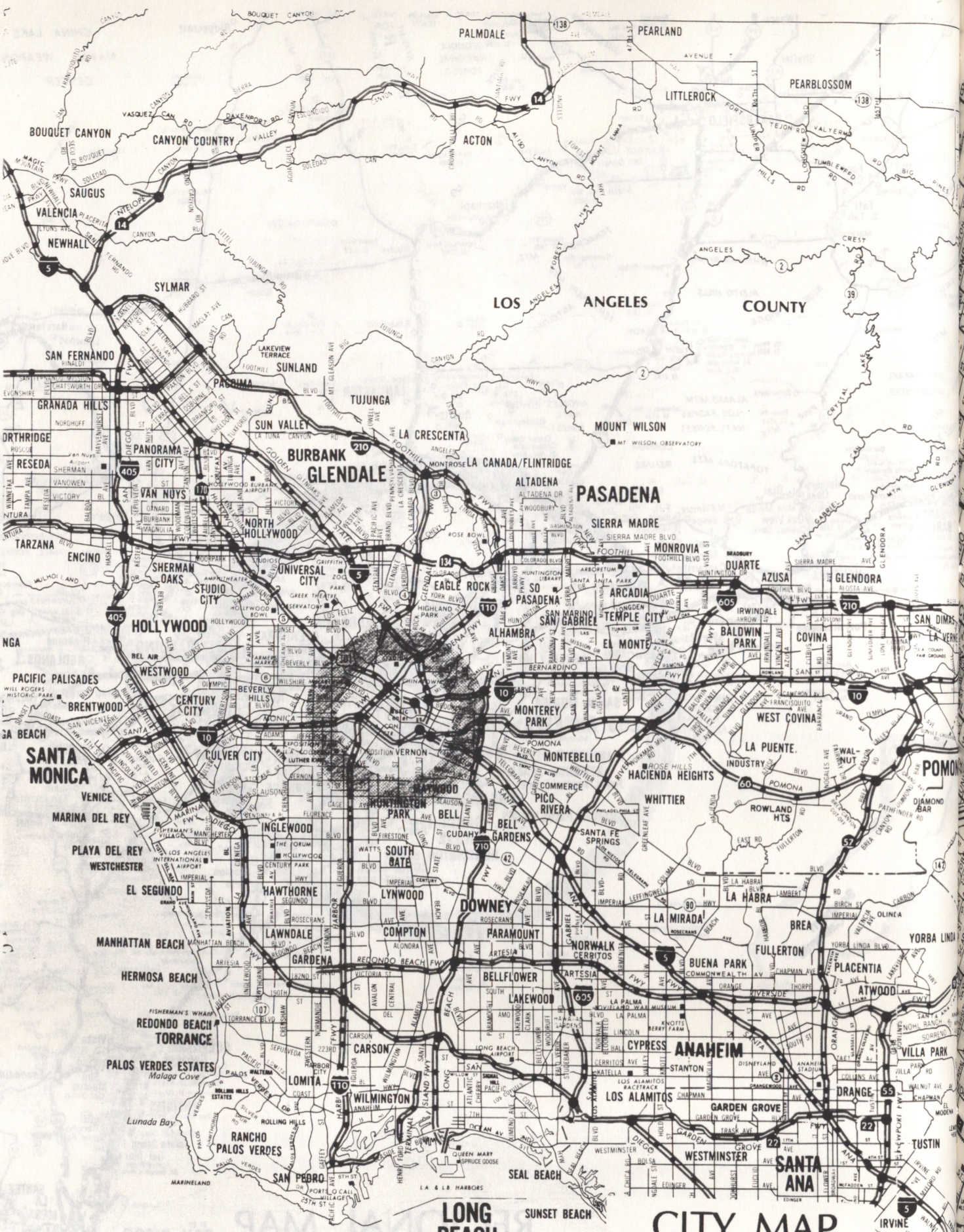
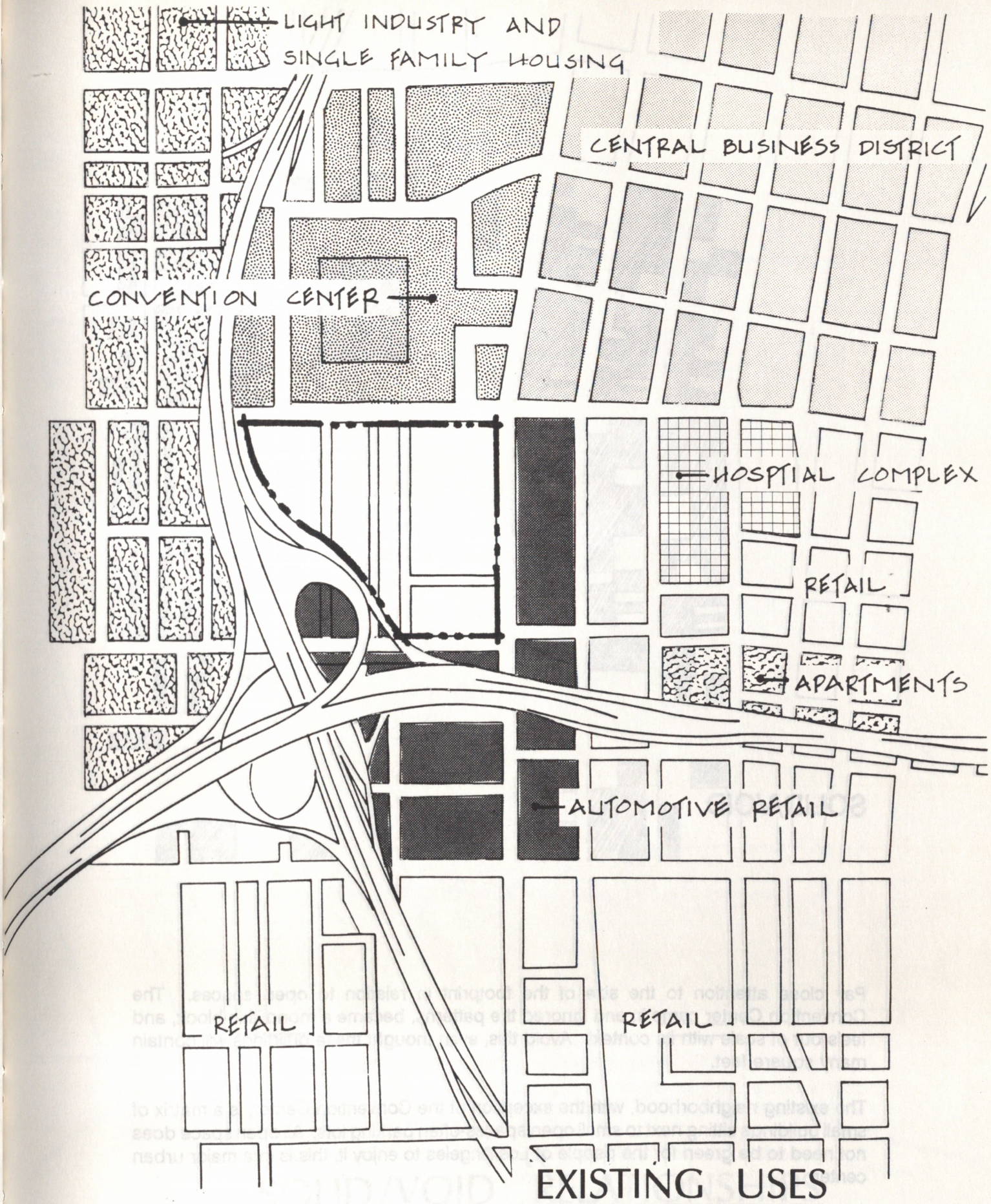

PALMDALE
PEARLAND
LITTLEROCK
PEARBLOSSOM
BOUQUET CANYON
CANYON COUNTRY
ACTON
SAUGUS
VALENCIA
NEWHALL
SYLMAR
LOS ANGELES COUNTY
SAN FERNANDO
SUNLAND
TUJUNGA
MOUNT WILSON
MT. WILSON OBSERVATORY
GRANADA HILLS
SUN VALLEY
LA CRESCENTA
LA CANADA/FLINTRIDGE
PACOIMA
BURBANK
GLENDALE
PASADENA
RESEDA
PANORAMA CITY
VAN NUYS
NORTH HOLLYWOOD
SIERRA MADRE
TARZANA
ENCINO
SHERMAN OAKS
UNIVERSAL CITY
STUDIO CITY
EAGLE ROCK
SO PASADENA
ARCADIA
MONROVIA
DUARTE
AZUSA
GLENDORA
HOLLYWOOD
SAN GABRIEL
TEMPLE CITY
BALDWIN PARK
COVINA
ALHAMBRA
EL MONTE
PACIFIC PALISADES
BRENTWOOD
WESTWOOD
BEVERLY HILLS
CENTURY CITY
MONTEREY PARK
WEST COVINA
SANTA MONICA
CULVER CITY
VERNON
MONTEBELLO
LA PUENTE
INDUSTRY
HACIENDA HEIGHTS
WALNUT
VENICE
MARINA DEL REY
HUNTINGTON PARK
BELL
PICO RIVERA
WHITTIER
ROWLAND HTS
DIAMOND BAR
INGLEWOOD
BELL GARDENS
SANTA FE SPRINGS
PLAYA DEL REY
WESTCHESTER
SOUTH GATE
EL SEGUNDO
HAWTHORNE
LYNWOOD
DOWNEY
LA HABRA
LA MIRADA
BREA
MANHATTAN BEACH
LAWNDALE
COMPTON
PARAMOUNT
NORWALK
CERRITOS
FULLERTON
YORBA LINDA
GARDENA
HERMOSA BEACH
BELLFLOWER
BUENA PARK
PLACENTIA
LAKEWOOD
ATWOOD
REDONDO BEACH
TORRANCE
CARSON
CYPRESS
ANAHEIM
VILLA PARK
PALOS VERDES ESTATES
Malaga Cove
LOMITA
STANTON
LOS ALAMITOS
ORANGE
WILMINGTON
GARDEN GROVE
Lunada Bay
ROLLING HILLS
RANCHO PALOS VERDES
WESTMINSTER
TUSTIN
SAN PEDRO
SEAL BEACH
SANTA ANA
IRVINE
LONG BEACH
SUNSET BEACH
HUNTINGTON BEACH
NEWPORT BEACH
OCEAN
CITY MAP


CONTEXT PLAN

EXISTING USES

The great diversity of surrounding uses should be kept in mind while designing scale. This is a predominantly two story neighborhood, with the automobile as the primary source of transportation between points.

There are people walking in this area because of the many activities, from work to housing, that is in close proximity. Plazas and open space that can be utilized by them as they pass will make the Performing Arts Center feel more inviting.

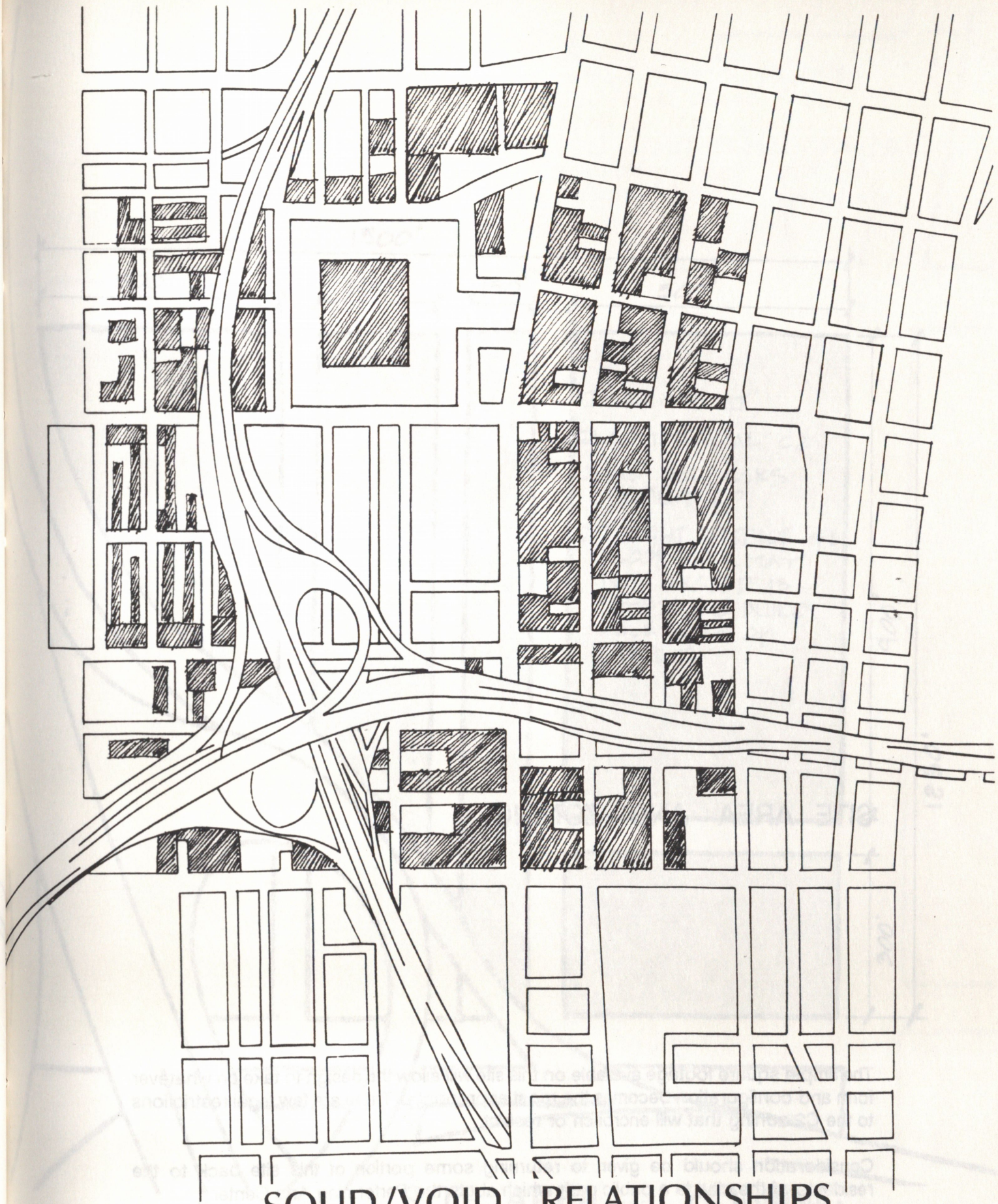


EXISTING USES

SOLID/VOID

Pay close attention to the size of the footprint in relation to open spaces. The Convention Center came in and ignored the patterns, became a monolithic block, and feels out of scale with its context. Avoid this, even thought these buildings will contain many square feet.

The existing neighborhood, with the exception of the Convention Center, is a matrix of small buildings sitting next to small open spaces-often parking lots. All open space does not need to be green for the people of Los Angeles to enjoy it, this is in a major urban center.

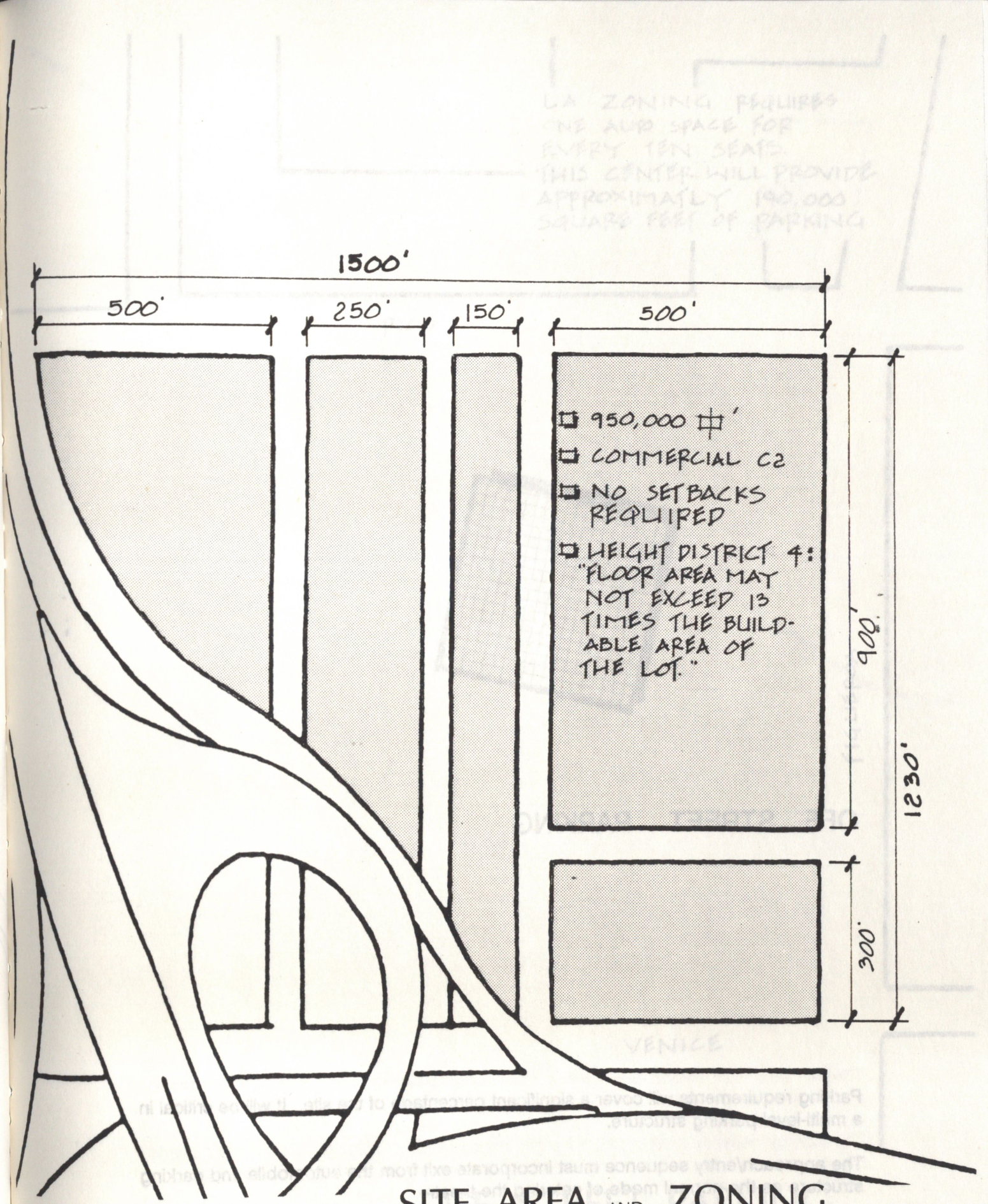


SOLID/VOID RELATIONSHIPS

SITE AREA AND ZONING

The ample square footage available on this site will allow the design to take on whatever form and configuration becomes the most appropriate. There are few legal restrictions to the C2 zoning that will encroach or restrict.

Consideration should be given to returning some portion of this site back to the residents of the city, ie a public park which abuts the Performing Arts Center.

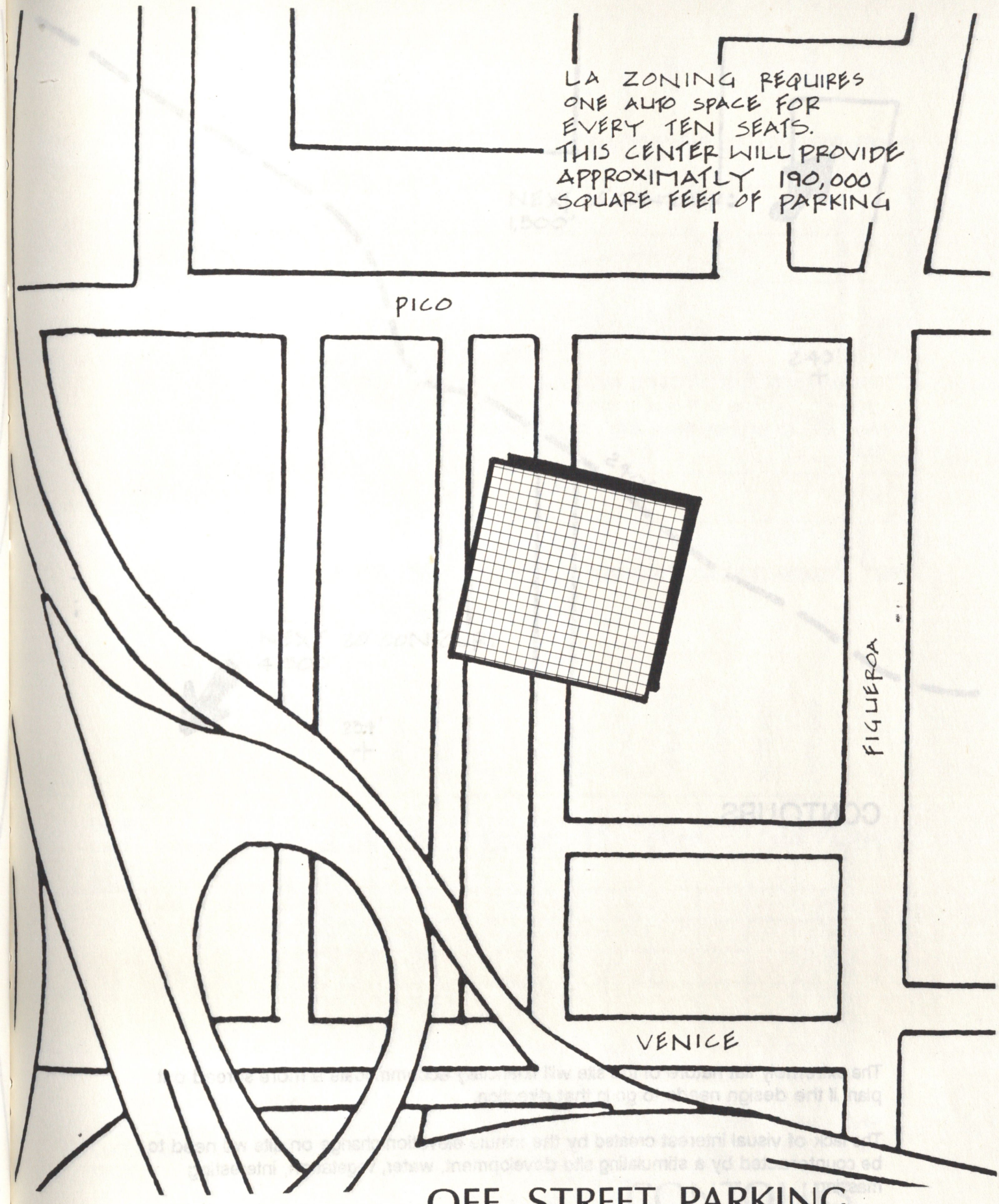


SITE AREA AND ZONING

OFF STREET PARKING

Parking requirements will cover a significant percentage of the site. It will be critical in a multi-level parking structure.

The approach/entry sequence must incorporate exit from the automobile and parking structure as the normal mode of entering the theatre.

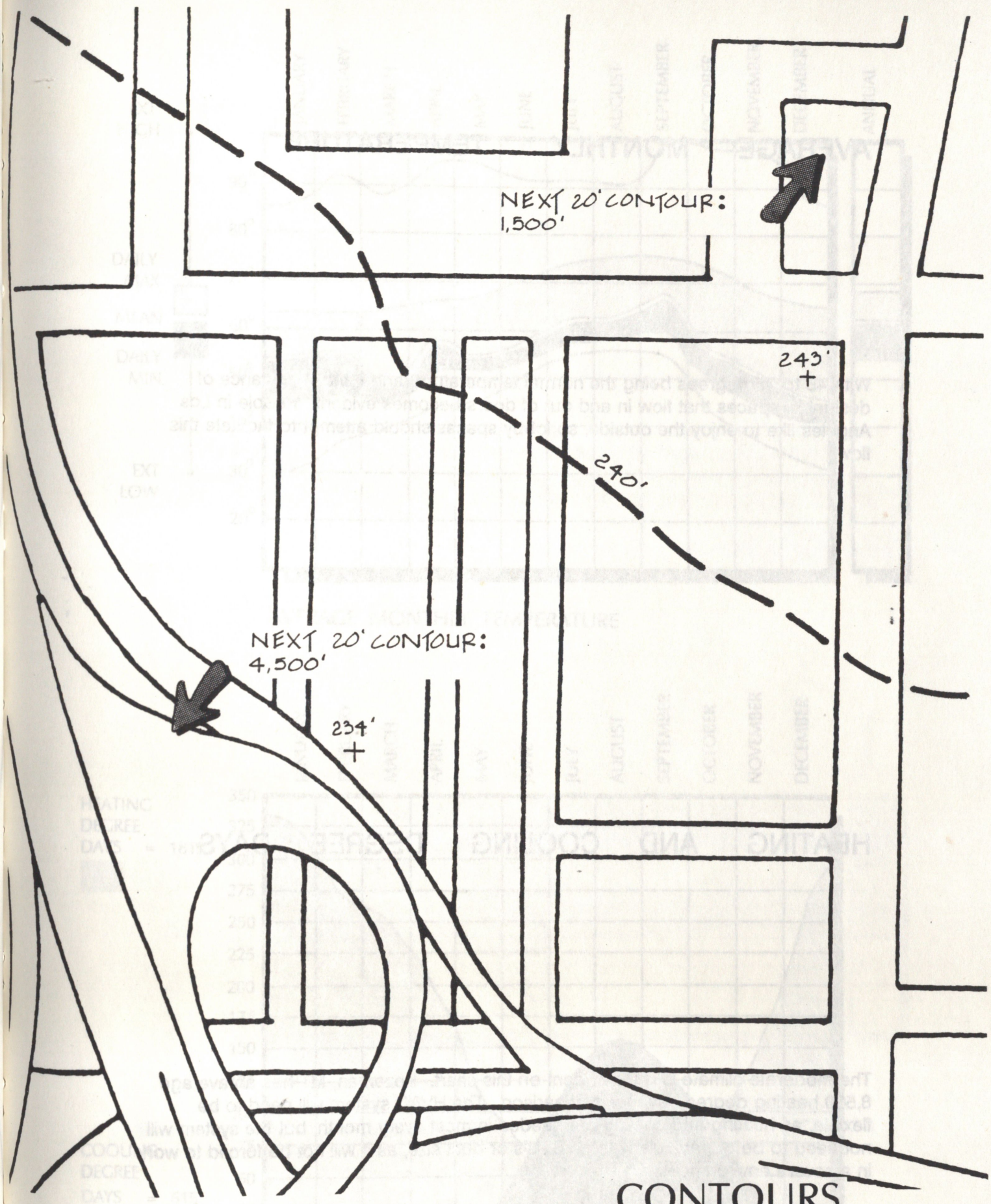


OFF STREET PARKING

CONTOURS

The extremely flat nature of this site will financially accommodate a more spread out plan, if the design needs to go in that direction.

The lack of visual interest created by the minute elevation change on site will need to be counteracted by a stimulating site development, water, vegetation, interesting massing.



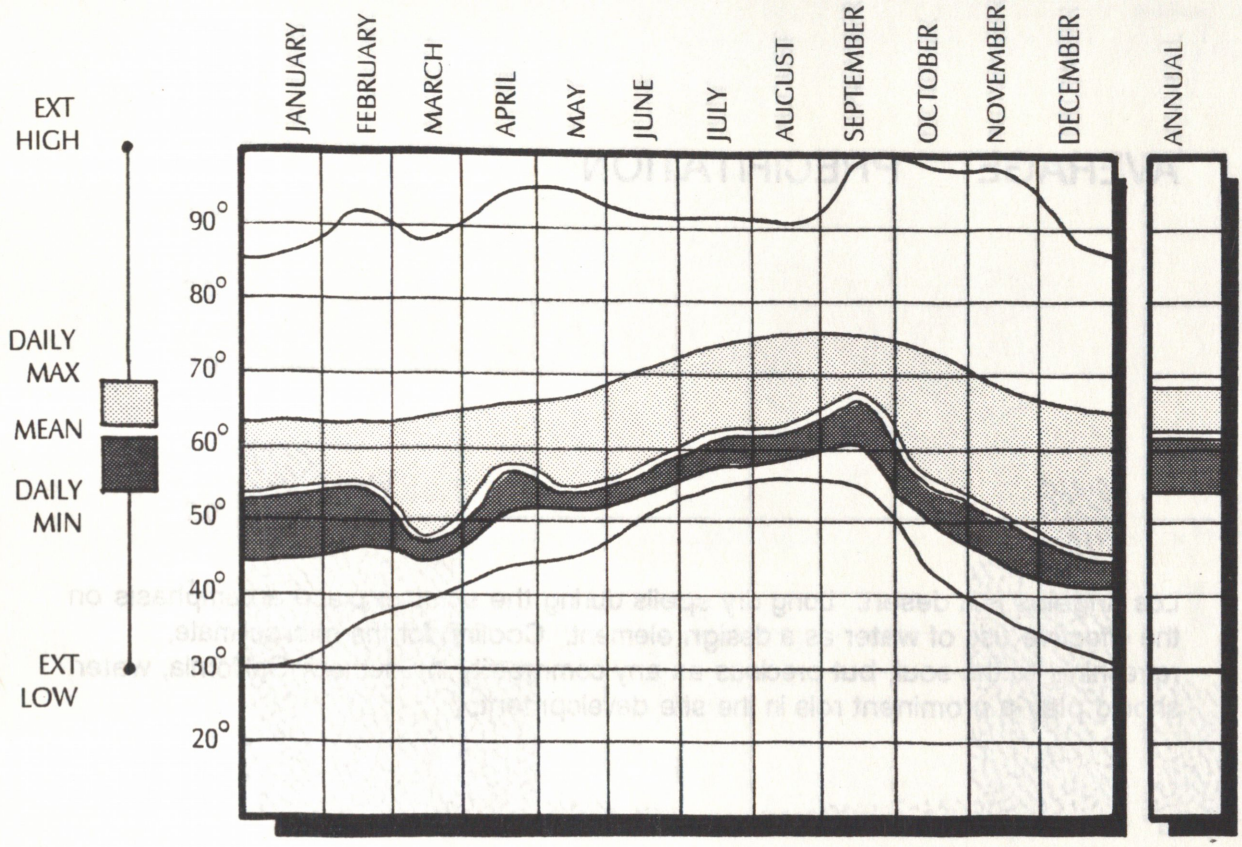
CONTOURS

AVERAGE MONTHLY TEMPERATURE

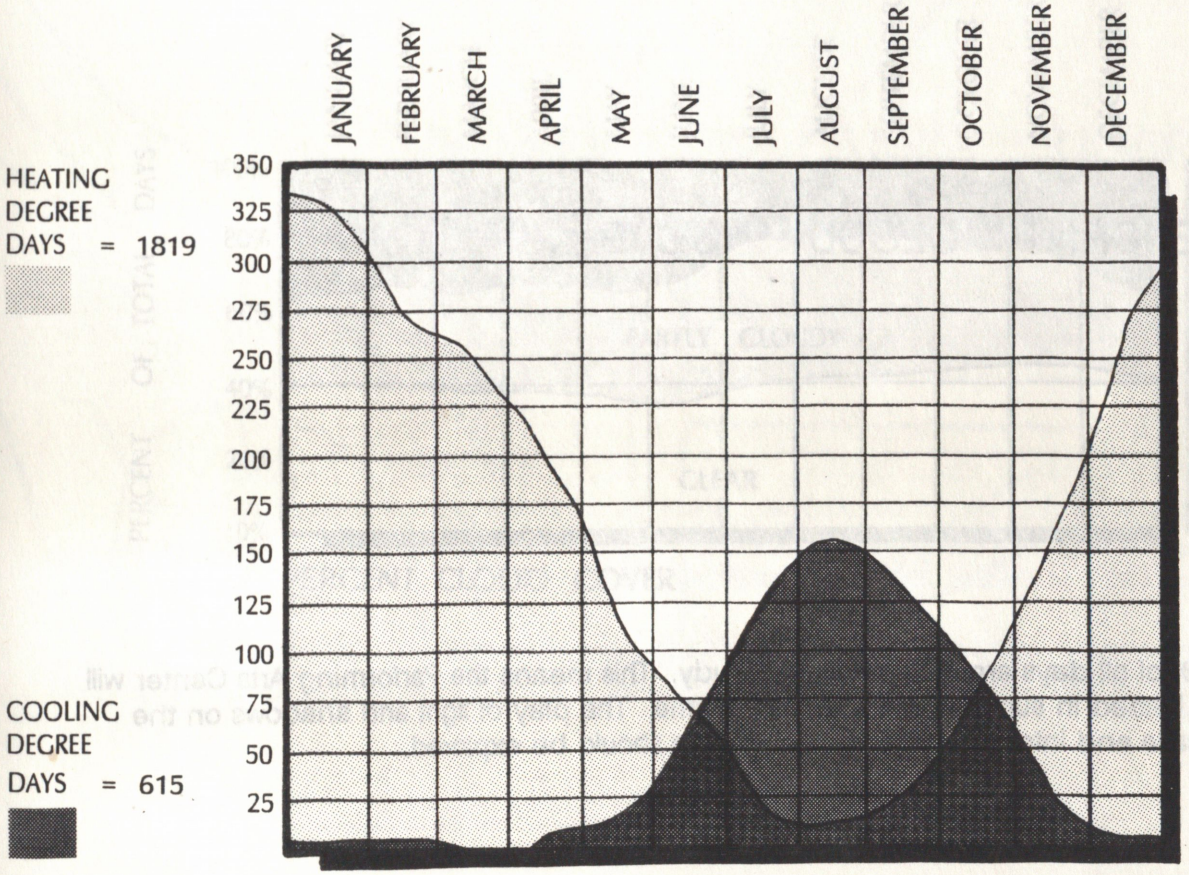
With 45 to 75 degrees being the normal temperature range, the importance of designing spaces that flow in and out of doors becomes evident. People in Los Angeles like to enjoy the outside, so lobby spaces should attempt to facilitate this flow.

HEATING AND COOLING DEGREE DAYS

The moderate climate is quite evident on this chart. Bozeman, MT has an average 8,500 heating degree days for comparison. The HVAC system will need to be flexible, as heating and cooling are needed in most every month, but the system will not need to be of particularly large BTU's or duct size, as it will not be forced to work in a severe environment.

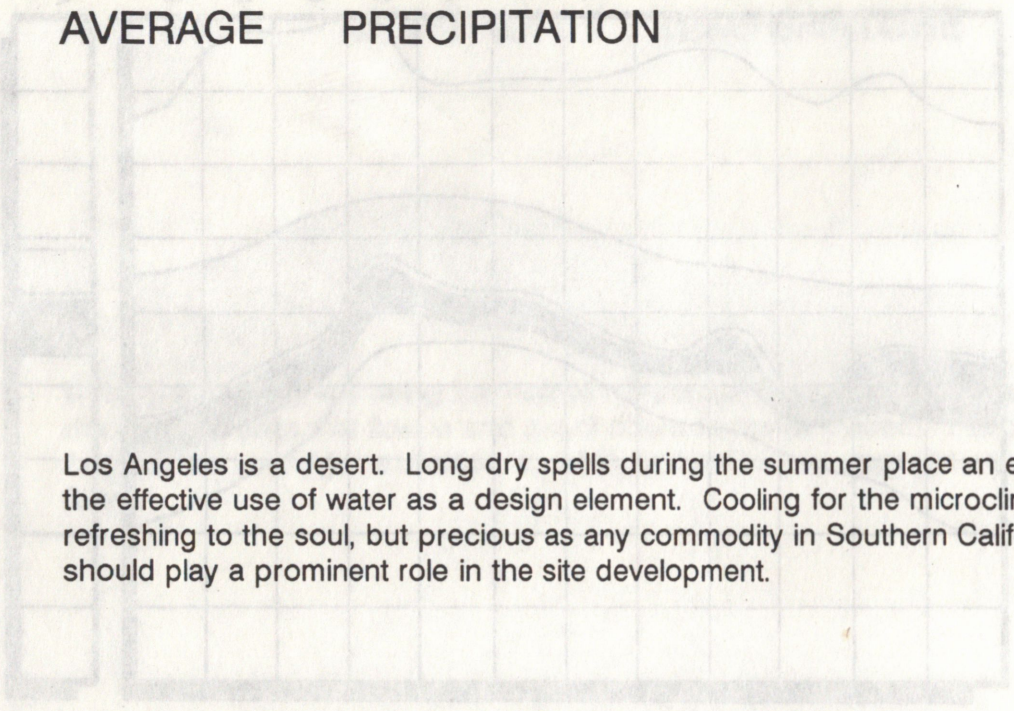


AVERAGE MONTHLY TEMPERATURE



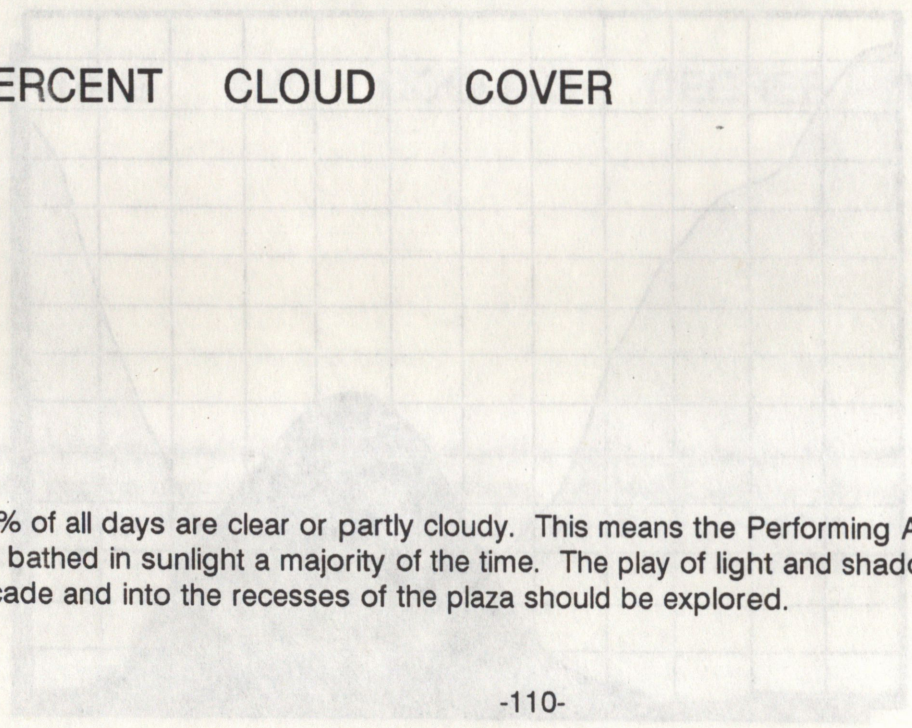
HEATING AND COOLING DEGREE DAYS

AVERAGE PRECIPITATION

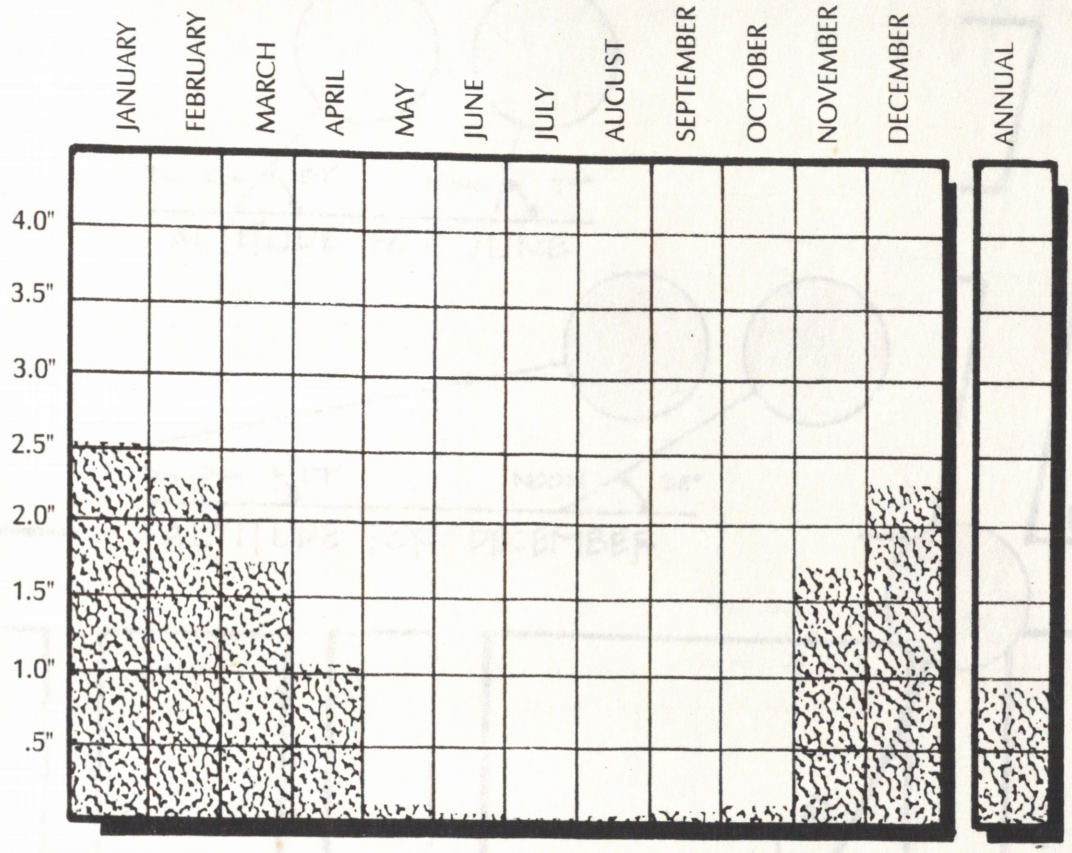


Los Angeles is a desert. Long dry spells during the summer place an emphasis on the effective use of water as a design element. Cooling for the microclimate, refreshing to the soul, but precious as any commodity in Southern California, water should play a prominent role in the site development.

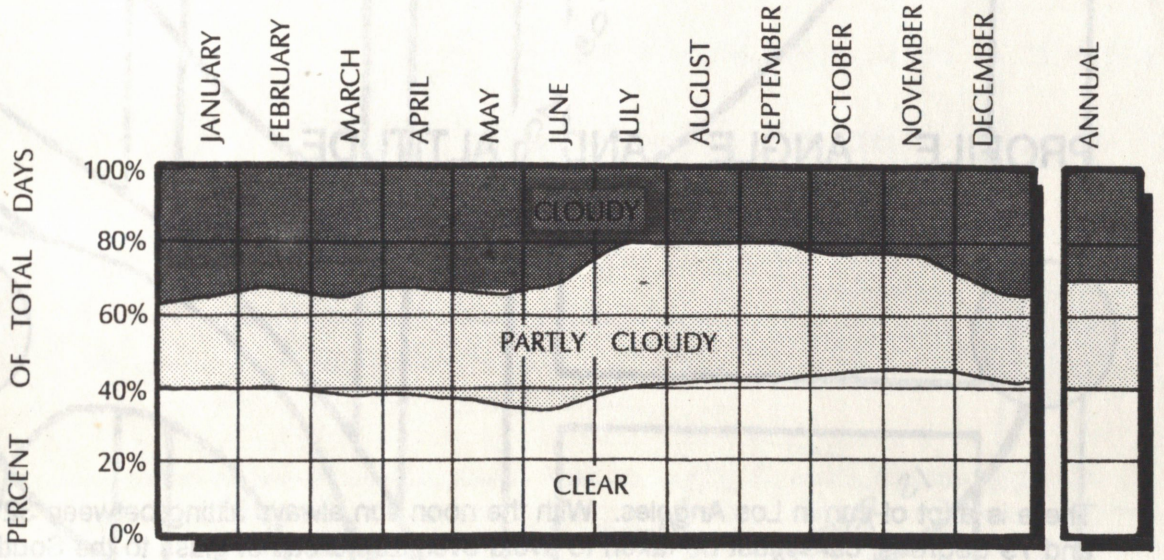
PERCENT CLOUD COVER



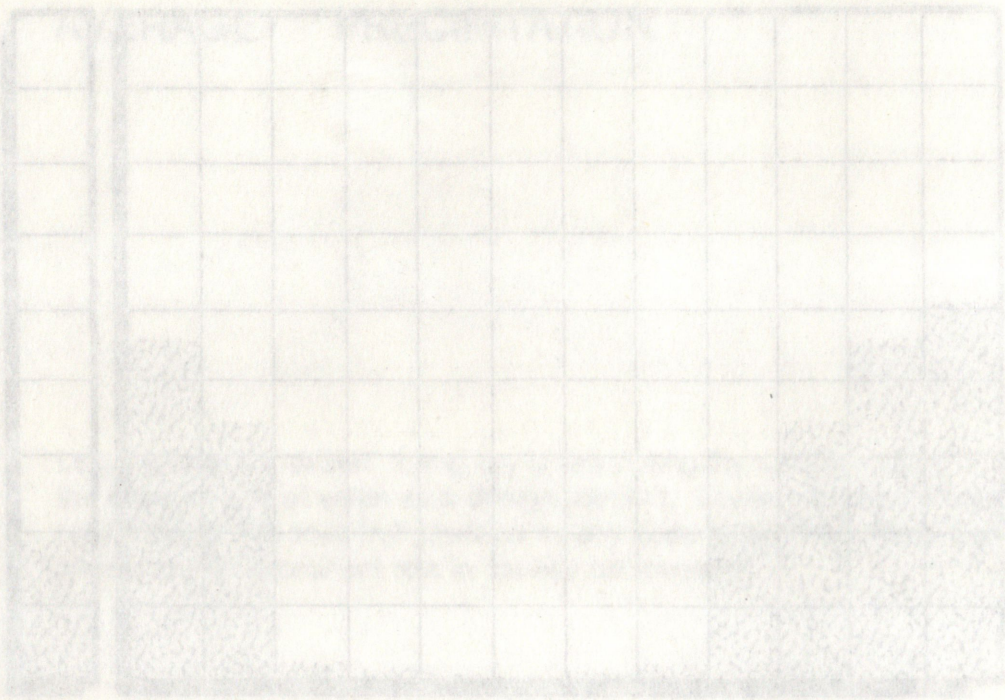
65% of all days are clear or partly cloudy. This means the Performing Arts Center will be bathed in sunlight a majority of the time. The play of light and shadows on the facade and into the recesses of the plaza should be explored.



AVERAGE PRECIPITATION



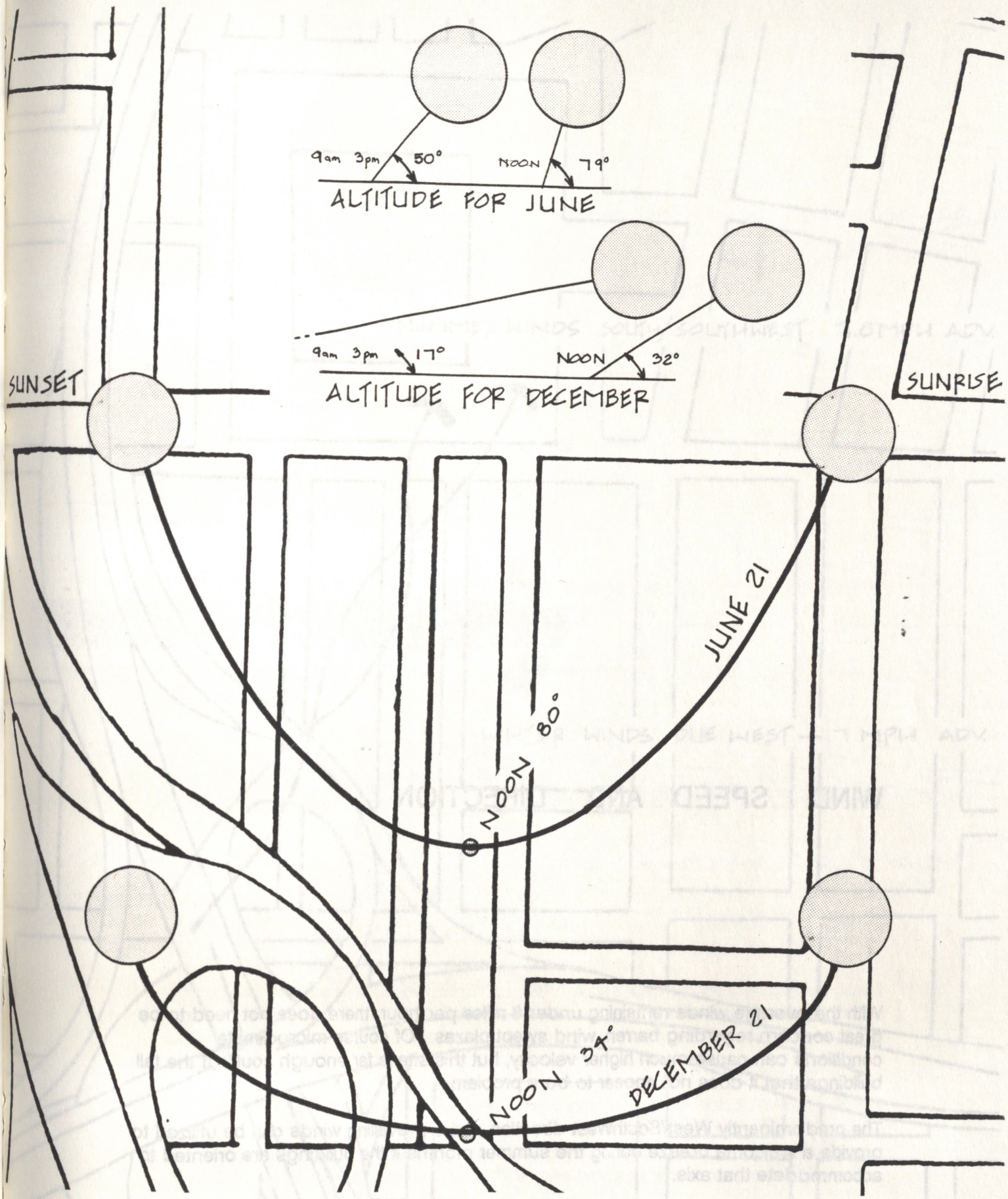
PERCENT CLOUD COVER



PROFILE ANGLE AND ALTITUDE

There is a lot of sun in Los Angeles. With the noon sun always hitting between 32 and 79 degrees, care must be taken to avoid oversized areas of glass to the South and West, or severe overheating problems will occur.

These paths and angles should be utilized to provide sun-filled outdoor areas in the plaza. In Southern California, there is no reason to have dark, uninviting exterior space.

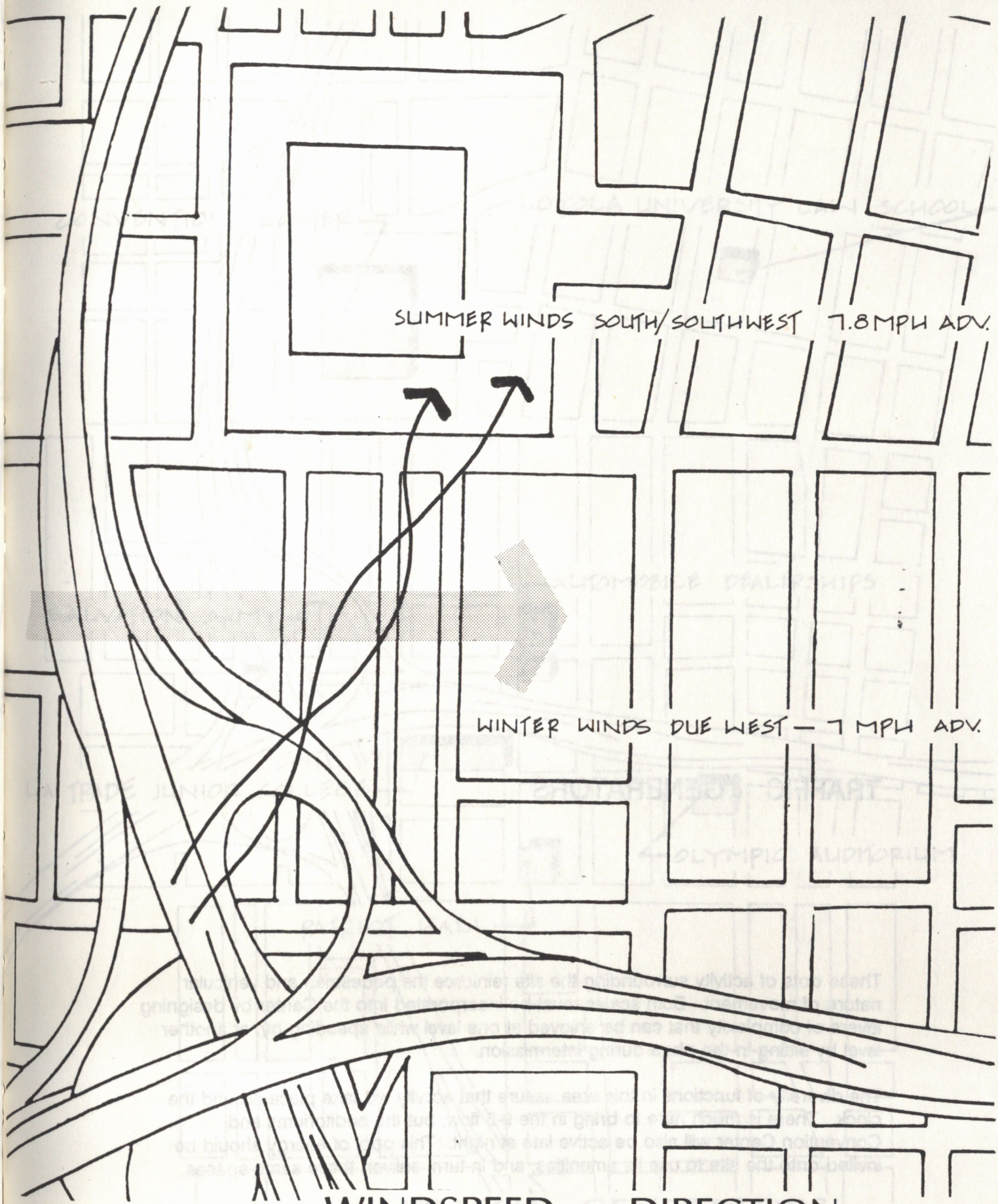


PROFILE ANGLE AND ALTITUDE

WIND SPEED AND DIRECTION

With the average winds remaining under 8 miles per hour, there does not need to be great concern regarding barren, wind swept plazas. Of course microclimate conditions can cause much higher velocity, but this site is far enough south of the tall buildings that it does not appear to be a problem.

The predominantly West/SouthWest direction of the prevailing winds can be utilized to provide a welcome breeze during the summer months if the buildings are oriented to accommodate that axis.

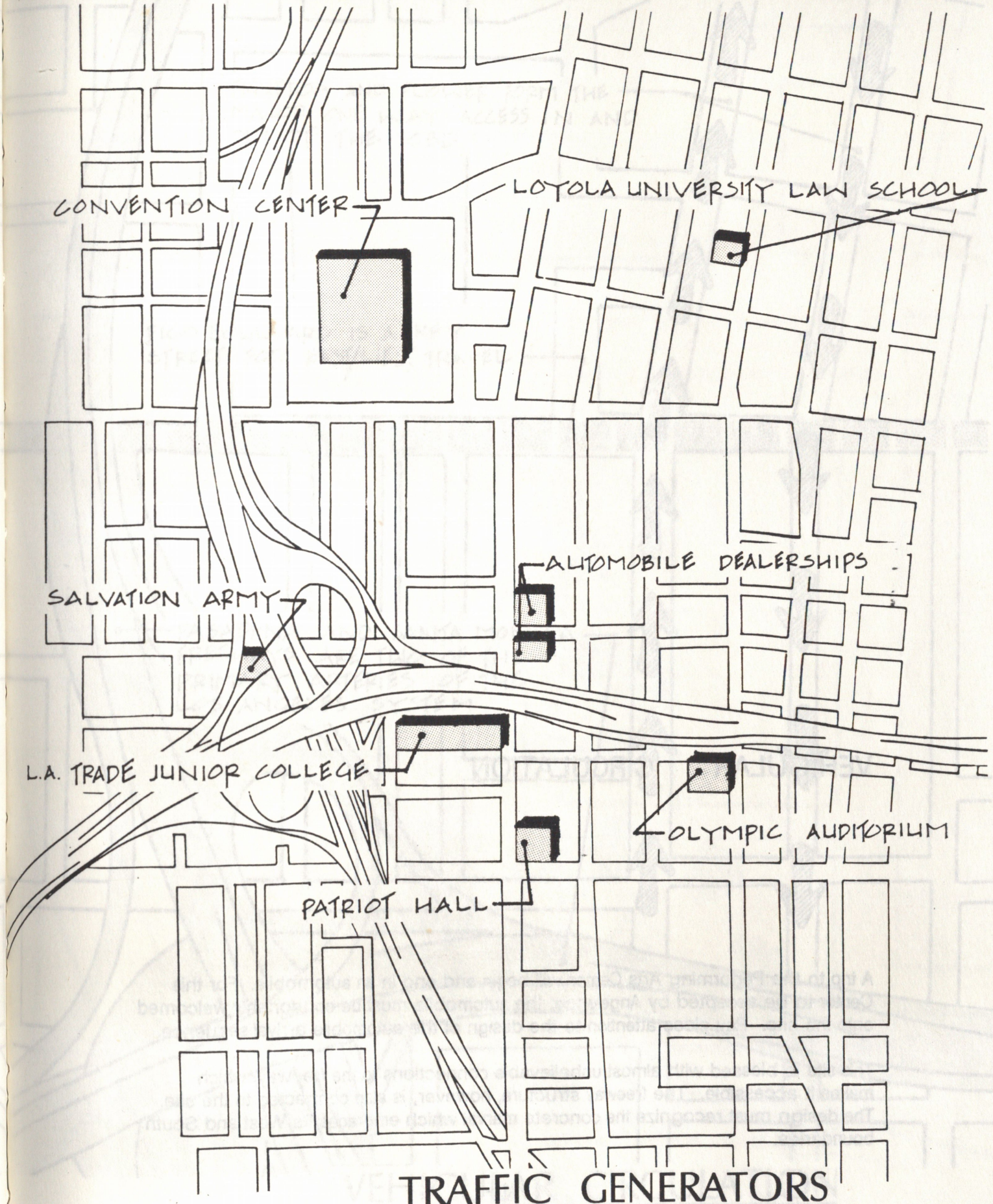


WINDSPEED AND DIRECTION

TRAFFIC GENERATORS

These dots of activity surrounding the site reinforce the pedestrian and vehicular nature of movement. Both scales must be incorporated into the Center by designing layers of complexity that can be enjoyed at one level while speeding by, at another level by sitting in the plaza during intermission.

The diversity of functions in this area assure that activity will take place around the clock. There is much here to bring in the 9-5 flow, but the auditoriums and Convention Center will also be active late at night. This pool of energy should be invited onto the site to use its amenities, and in turn, enliven those same spaces.

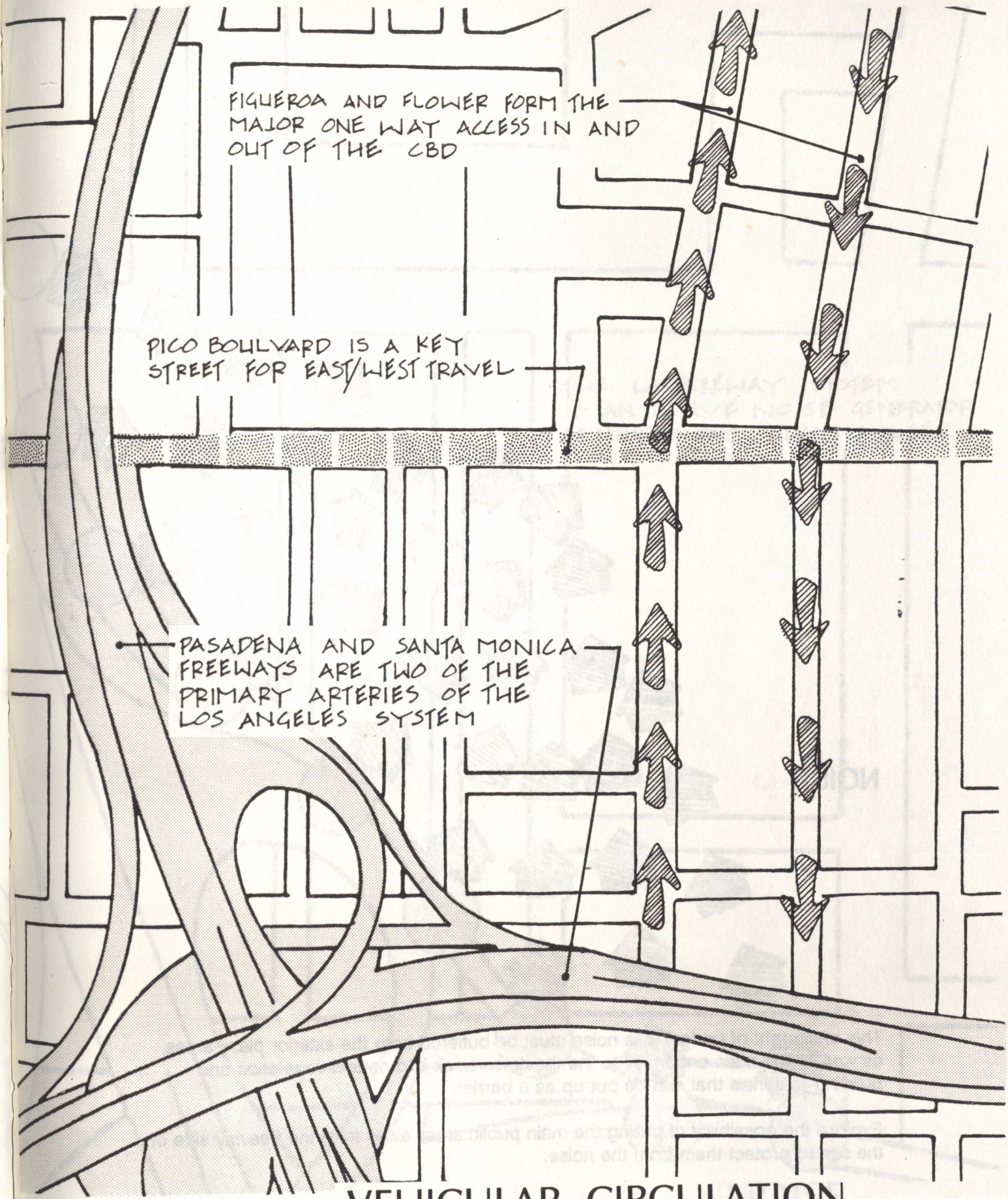


TRAFFIC GENERATORS

VEHICULAR CIRCULATION

A trip to the Performing Arts Center will begin and end in an automobile. For this Center to be accepted by Angelenos, the automobile must be comfortably welcomed onto the site. Pay close attention to the design of the automobile arrival sequence.

This site is blessed with almost unbelievable connections to the freeway, which makes it accessible. The freeway structure, however, is also connected to the site. The design must recognize the concrete marvel which embraces its West and South boundaries.

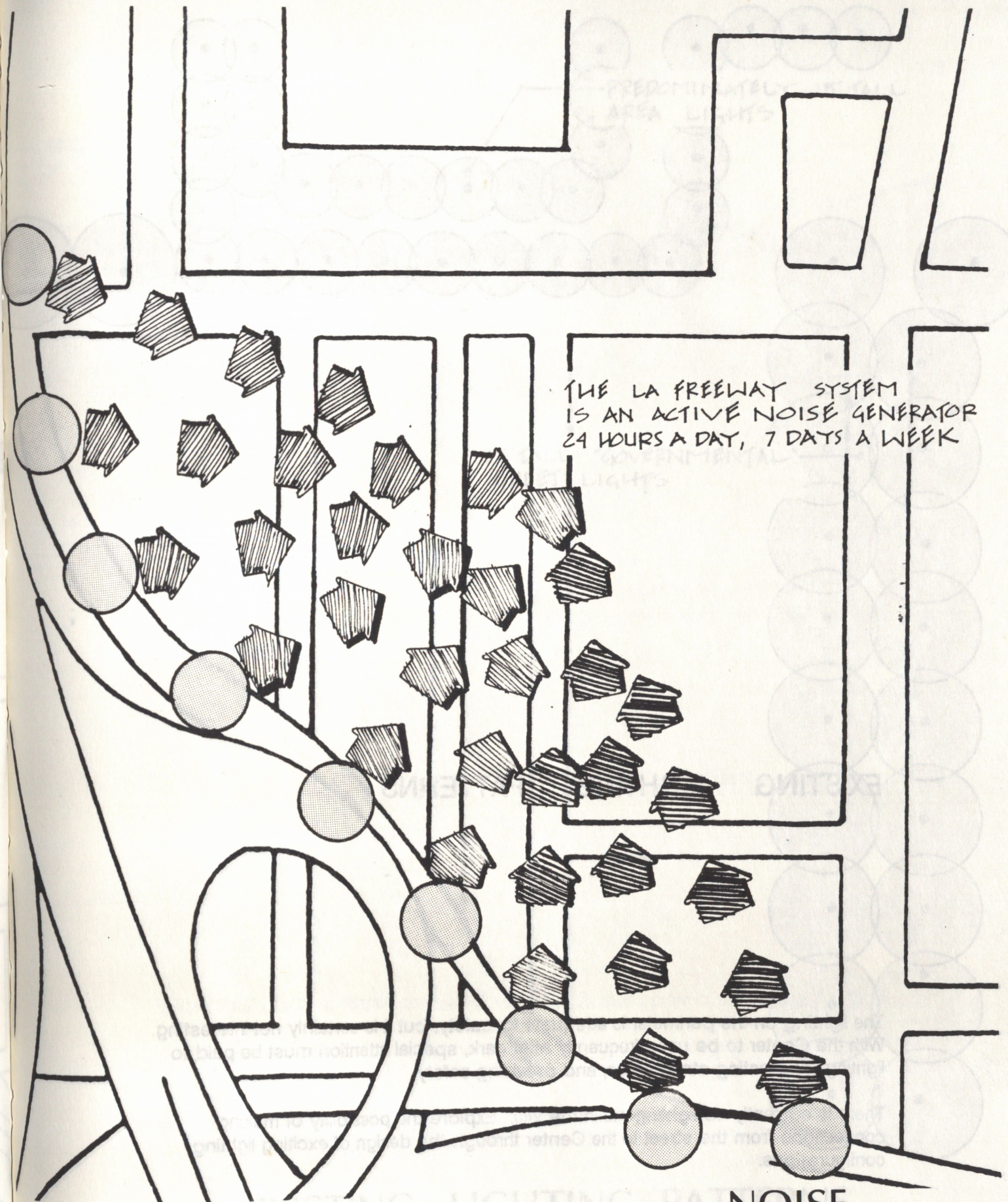


VEHICULAR CIRCULATION

NOISE

This onslaught of undesirable noise must be buffered from the exterior plaza areas, as well as the main entrances to the theatres. Look into natural vegetation and building materials that can be put up as a barrier.

Explore the possibility of pulling the main public areas away from the freeway side of the site to protect them from the noise.

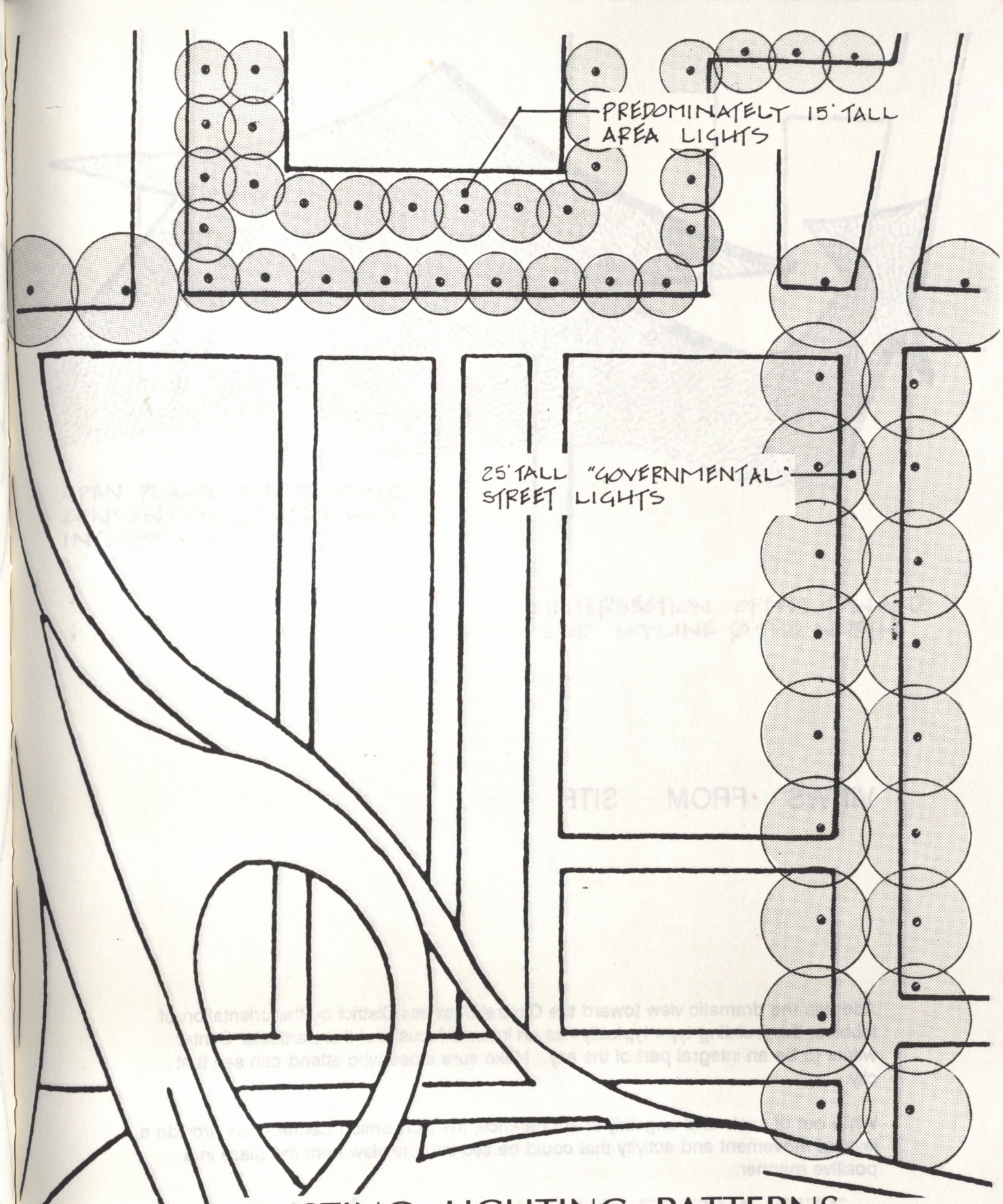

THE LA FREEWAY SYSTEM
IS AN ACTIVE NOISE GENERATOR
24 HOURS A DAY, 7 DAYS A WEEK

NOISE

EXISTING LIGHTING PATTERNS

The lighting on the perimeter is adequate for safety, but it is certainly not interesting. With the Center to be used frequently after dark, special attention must be paid to lighting for creating atmosphere, and providing safety.

There is currently no lighting within the site. Explore the possibility of making connections from the street to the Center through the design of exciting lighting configurations.

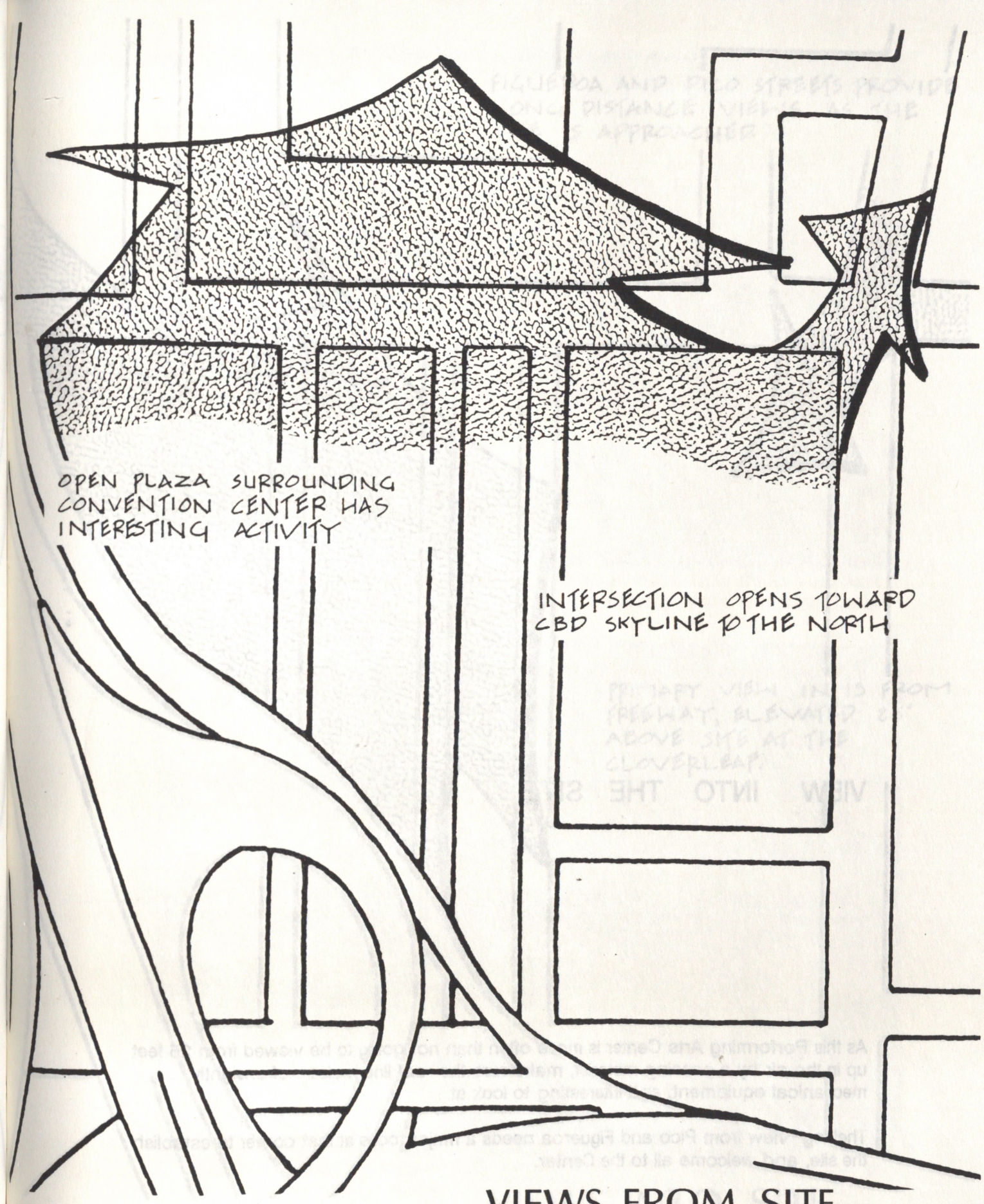


EXISTING LIGHTING PATTERNS

VIEWS FROM SITE

Address the dramatic view toward the Central Business District by the orientation of lobbies, this building type typically has an internal focus, but this particular Center wants to be an integral part of the city. Make sure those who attend can see that city.

While out of scale and ungainly in appearance, the Convention Center does provide a level of movement and activity that could be tied into the view from the plaza in a positive manner.

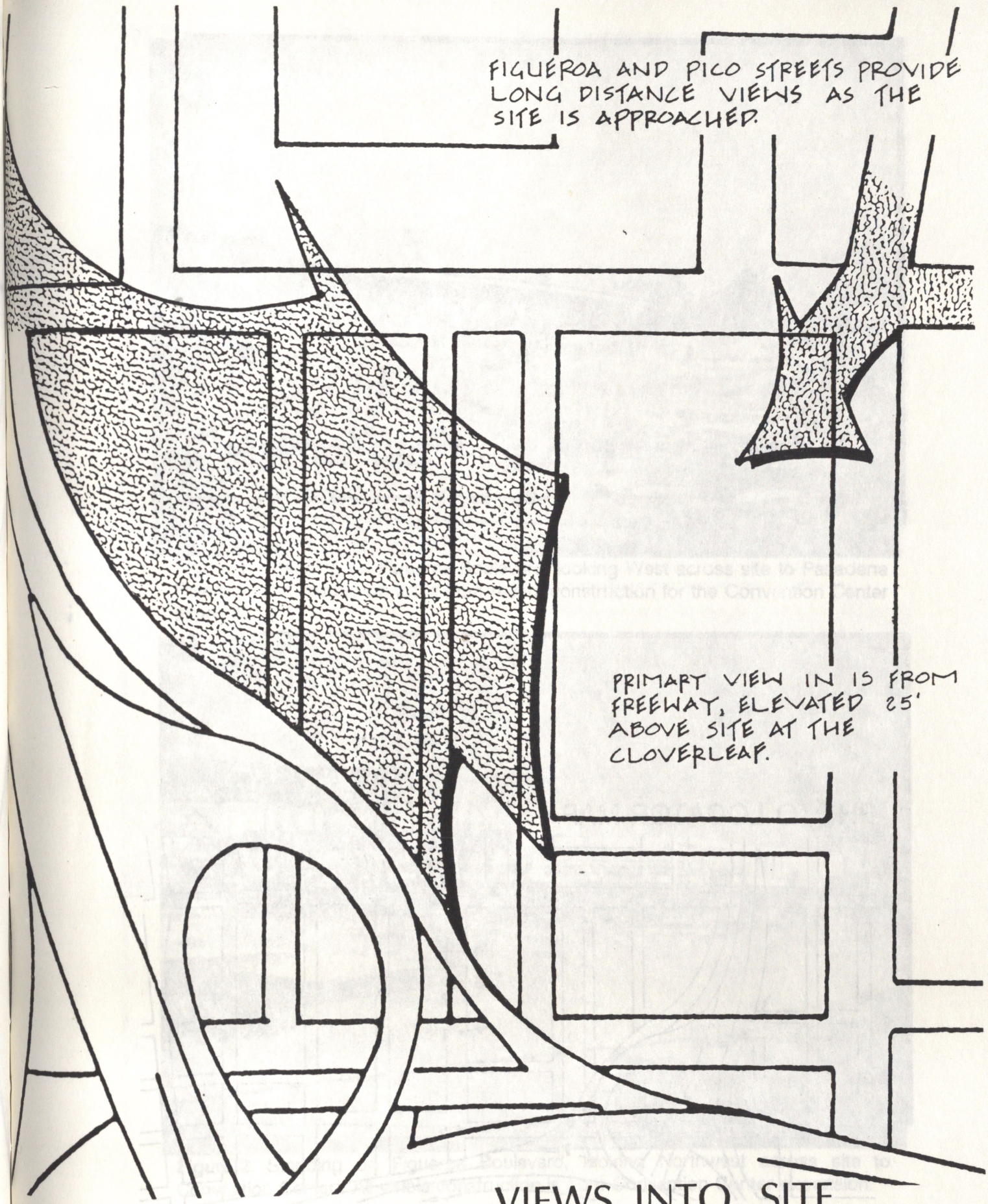


VIEWS FROM SITE

VIEW INTO THE SITE

As this Performing Arts Center is more often than not going to be viewed from 25 feet up in the air by a passing motorist, make sure the roof line is clean of unsightly mechanical equipment, and interesting to look at.

Thelong view from Pico and Figueroa needs a major focus at that corner to establish the site, and welcome all to the Center.



VIEWS INTO SITE

PHOTO LOCATOR MAP

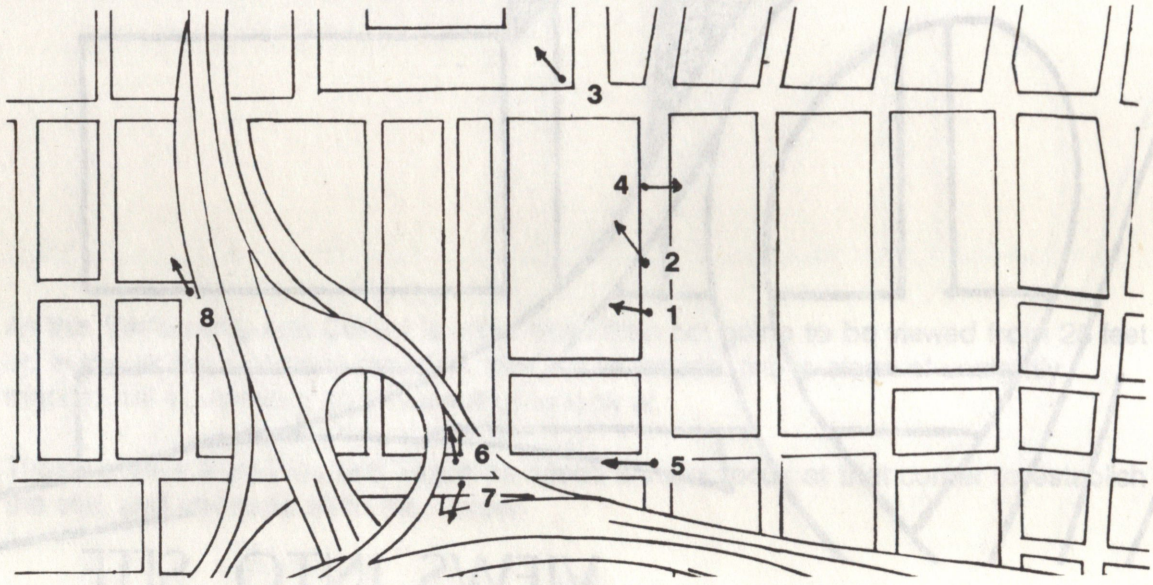




Figure 1. Standing on Fiqueroa Boulevard, looking West across site to Pasadena Freeway. Dirt mound on left is from recent construction for the Convention Center expansion.

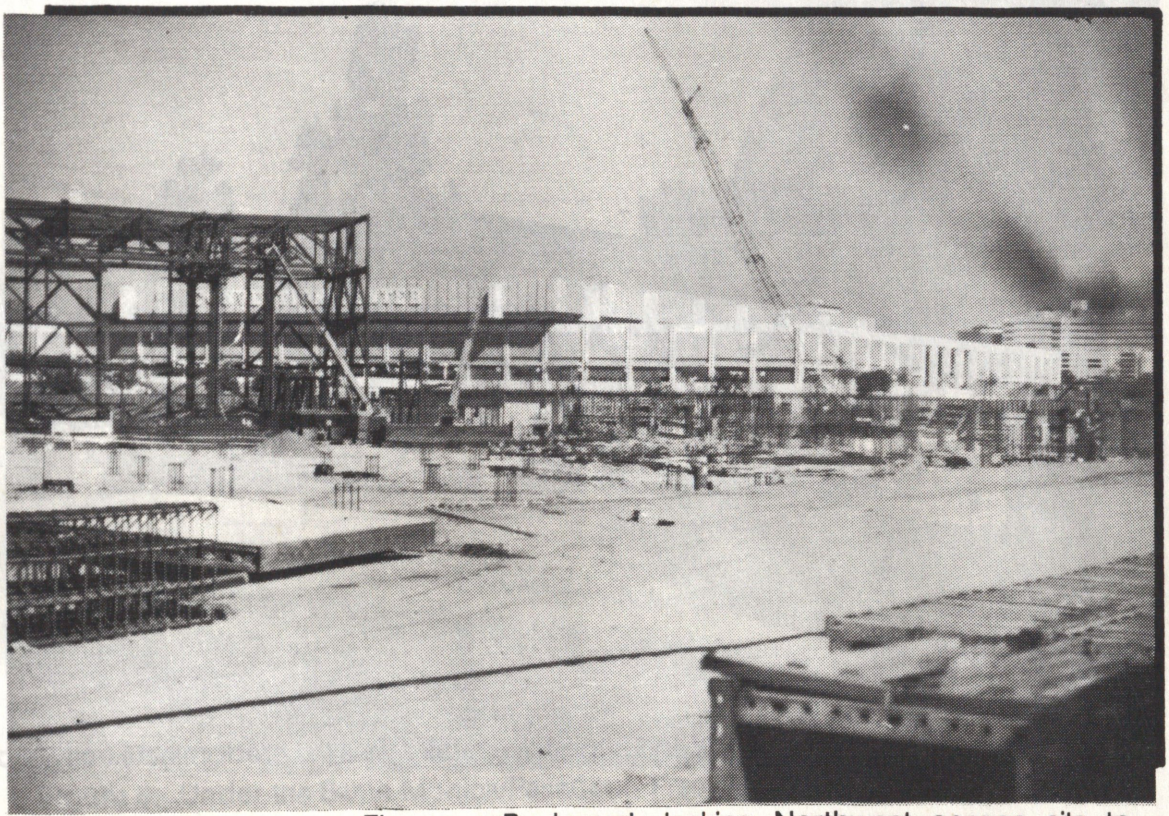


Figure 2. Standing on Figueroa Boulevard, looking Northwest across site to Convention Center. All visible construction is from Convention Center expansion.



Figure 3. Los Angeles Convention Center.



Figure 4. Example of single story automotive retail that is the predominate activity on this block of Figueroa.



Figure 5. Looking West on Venice Boulevard to Santa Monica/Pasadena Freeway interchange. Site with construction mound is on the right.



Figure 6. Under the Santa Monica/Pasadena Freeway interchange, looking North.



Figure 7. Under the Santa Monica/Pasadena Freeway interchange, looking South.



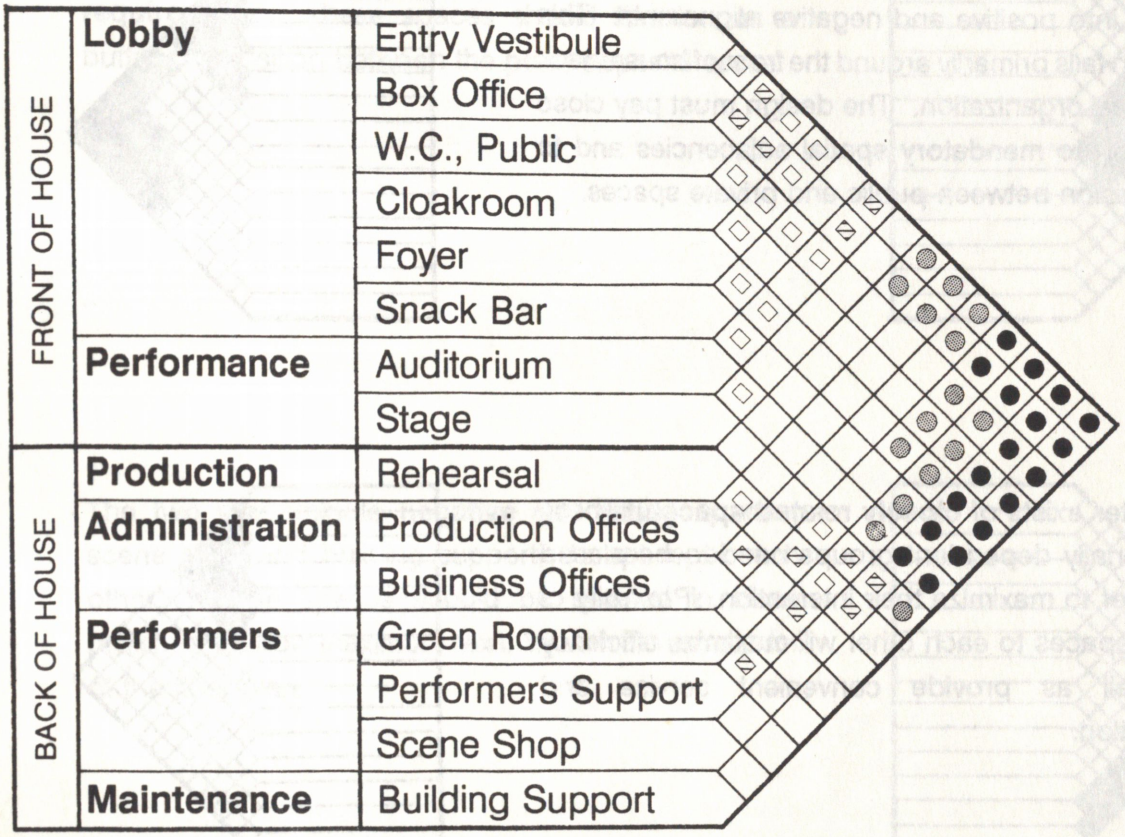
Figure 8. Example of the one to two story light manufacture typical on the West side of the Pasadena Freeway.

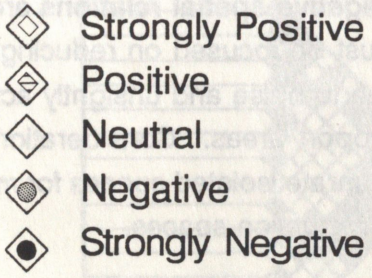
DIAGRAMING

"The only danger would be to remain bound to the external form and to neglect the content."

- Wassily Kandinsky

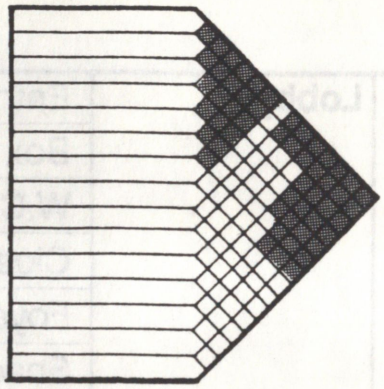




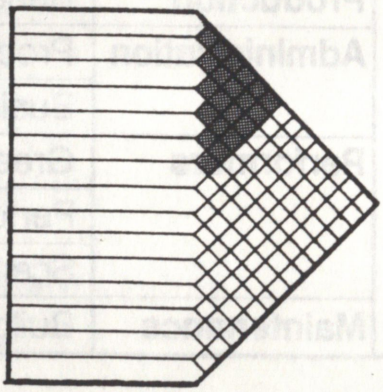


SPACE ADJACENCY MATRIX

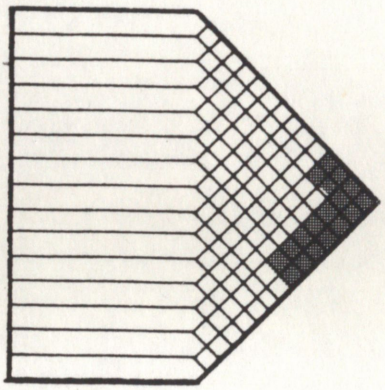
There is an extremely **polar arrangement** of the matrix into positive and negative alignments. This division falls primarily around the front of house/back of house organization. The design must pay close attention to mandatory spatial adjacencies and to the division between public and private spaces.



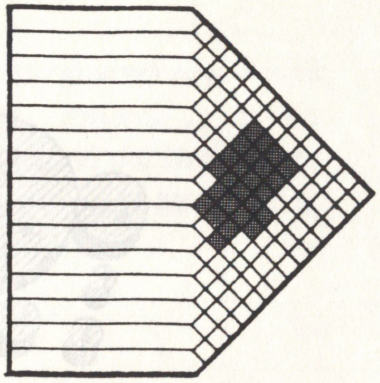
A cluster exists of **closely related spaces.** These functionally dependent groups need to be placed together to maximize their interaction. Proximity of these spaces to each other will maximize efficiency as well as provide convenient service and circulation.



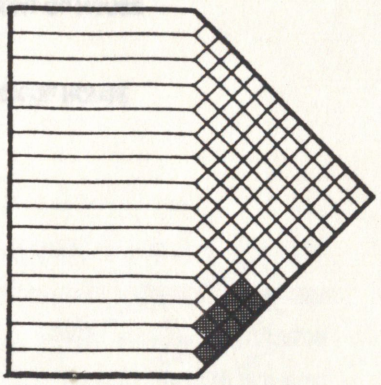
Negative spatial relations are frequent. Attention must be focused on reducing operational conflicts due to noise and unsightly activities in the building support areas. Consideration should be given to separate isolated spaces for mechanical and scene construction spaces.



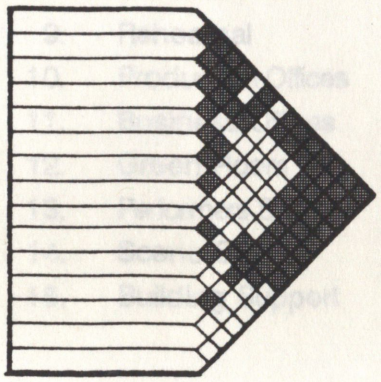
A number of spaces exist with **minimal adjacencies requirements.** These spaces should function as a buffer or transition between the polar opposite areas.



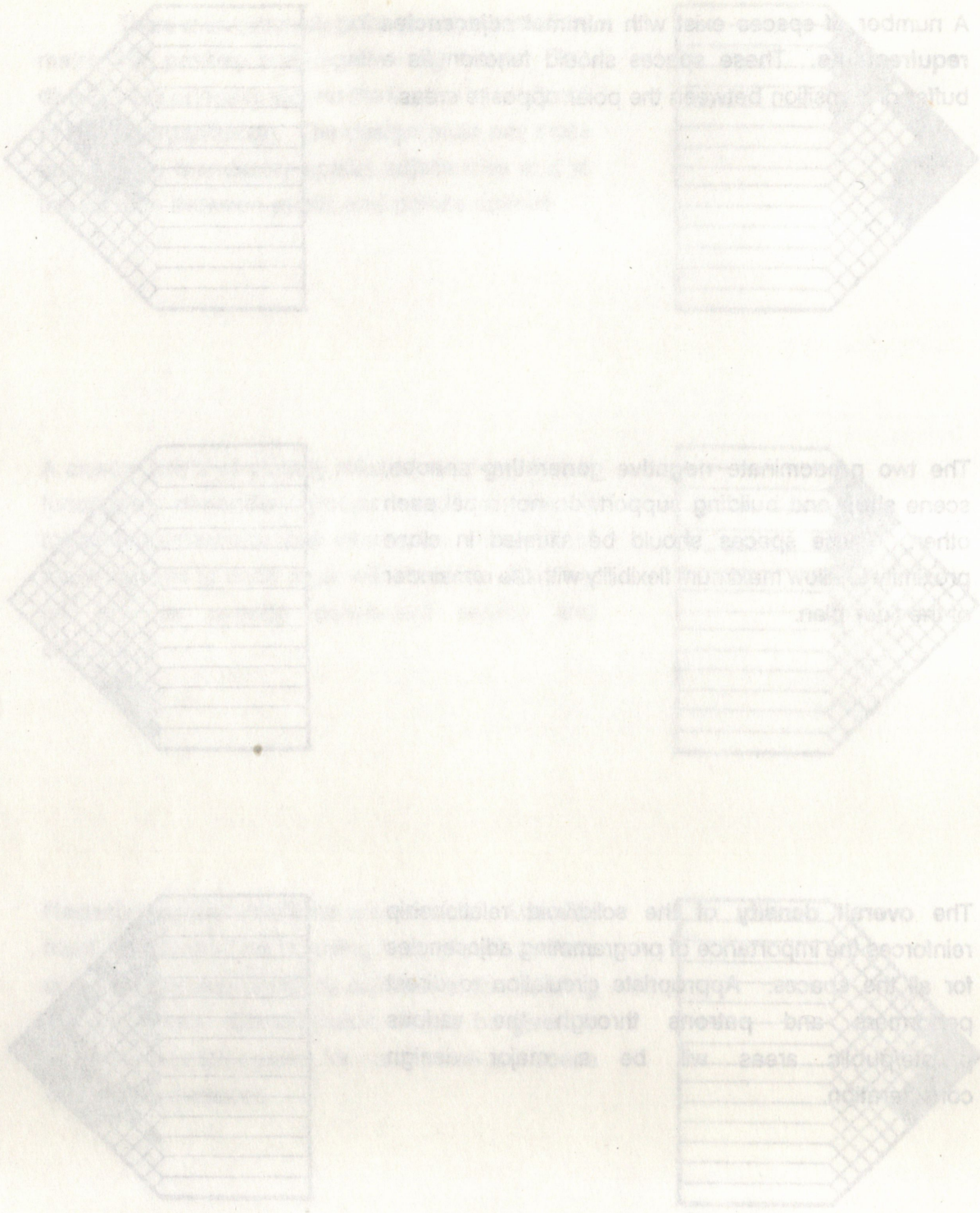
The two predominate **negative generating spaces**, scene shop and building support, do not repel each other. These spaces should be situated in close proximity to allow maximum flexibility with the remainder of the floor plan.

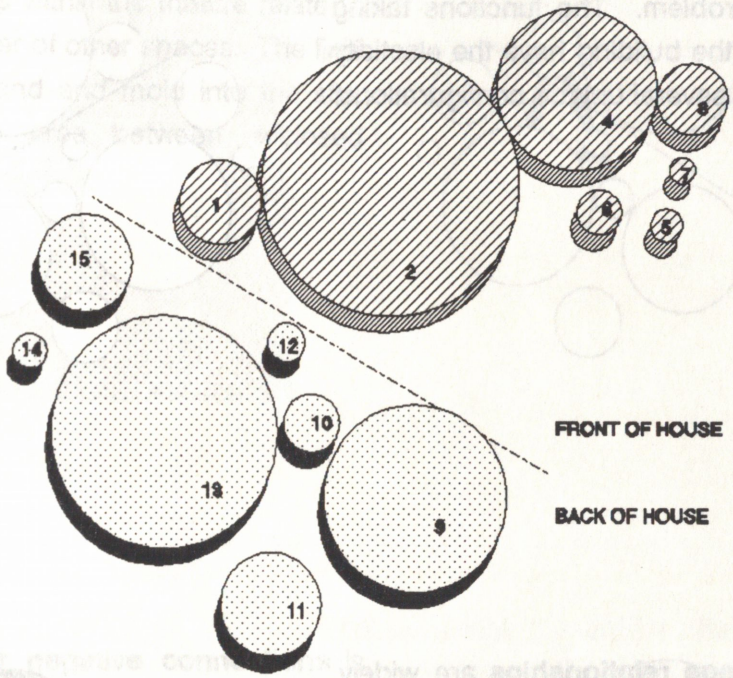


The **overall density** of the solid/void relationship reinforces the importance of programming adjacencies for all the spaces. Appropriate circulation to direct performers and patrons through the various private/public areas will be a major design consideration.



MATRIX IMPLICATIONS

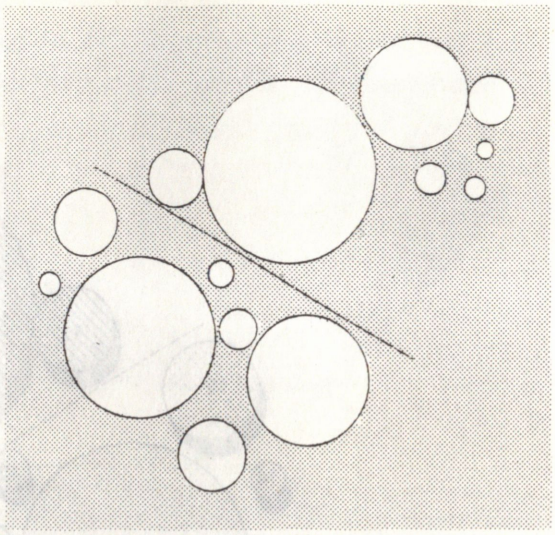




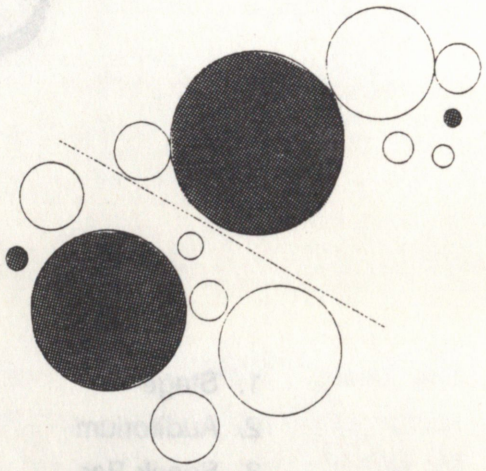
1. Stage
2. Auditorium
3. Snack Bar
4. Foyer
5. Cloakroom
6. W.C., Public
7. Box Office
8. Entry Vestibule
9. Rehearsal
10. Production Offices
11. Business Offices
12. Green Room
13. Performers Support
14. Scene Shop
15. Building Support

THEATRE BUBBLE DIAGRAM

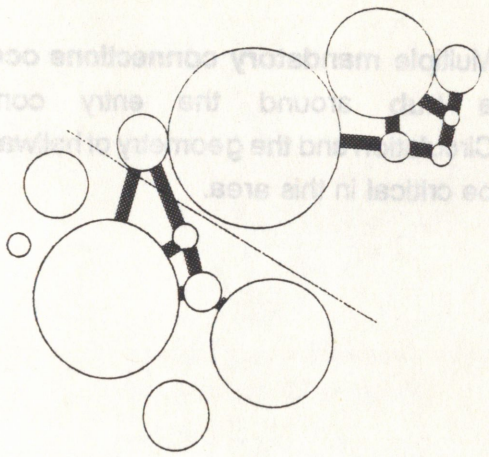
The **overall density** of the diagram is not an overriding problem. The functions taking place within the building have the elasticity to move into several unique configurations.



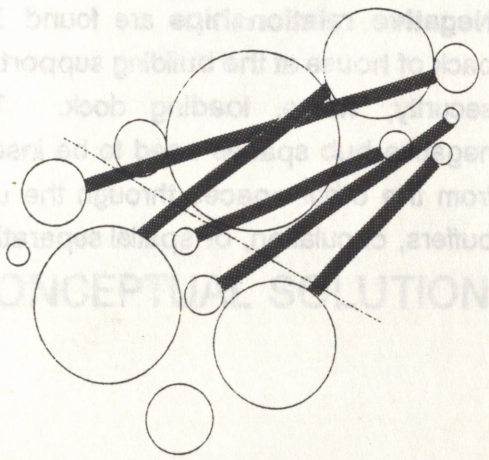
Square footage relationships are widely varied. Large volumes form the pivots, smaller square footage spaces radiate around them. The functions requiring small areas must maintain their own identity.



Percentage of mandatory connections is small. Activities within the theatre relate to a limited number of other spaces. The final form may expand and mold into the site, allowing more area between enclosed spaces.

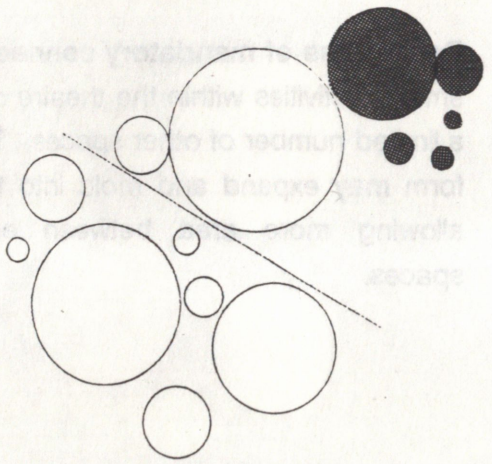


Percentage of negative connections is relative high. Conflicts do exist between front of house/back of house which reinforces the need to separate these areas architecturally.

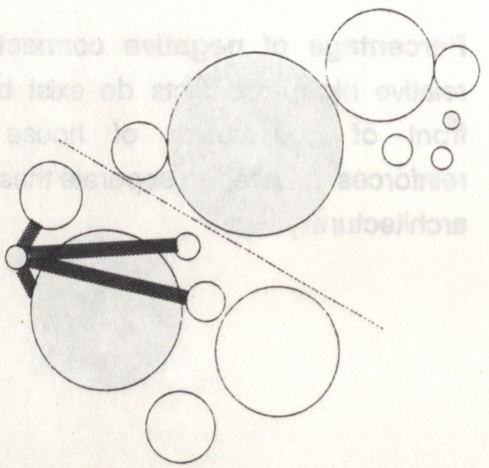


BUBBLE DIAGRAM IMPLICATIONS

Multiple **mandatory connections occur in a hub** around the entry complex. Circulation and the geometry of hallways will be critical in this area.



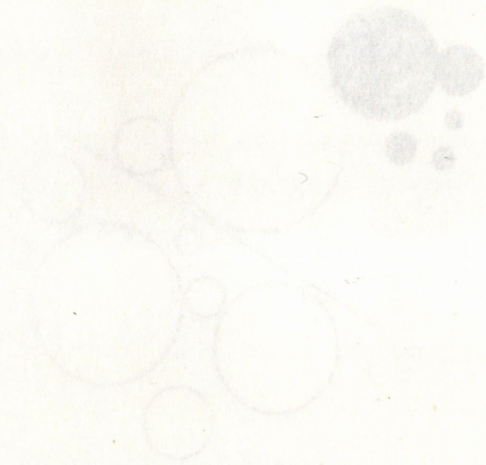
Negative relationships are found in the back of house at the building support area- security, waste, loading dock. These negative hub spaces need to be insulated from the other spaces through the use of buffers, circulation, or spatial separation.



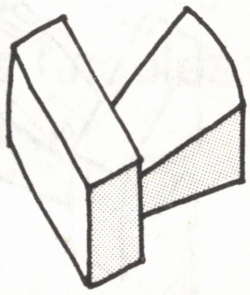
CONCEPTUAL SOLUTIONS

"The theatre design problem is one of the most complex an architect can be called upon to solve, and in the end probably gives him less satisfaction than others because initially it allows less freedom."

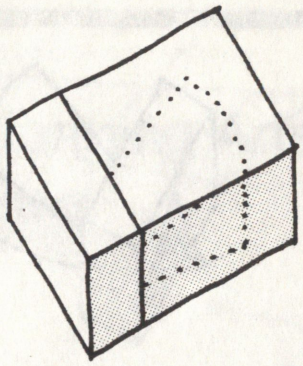
-George Izenour



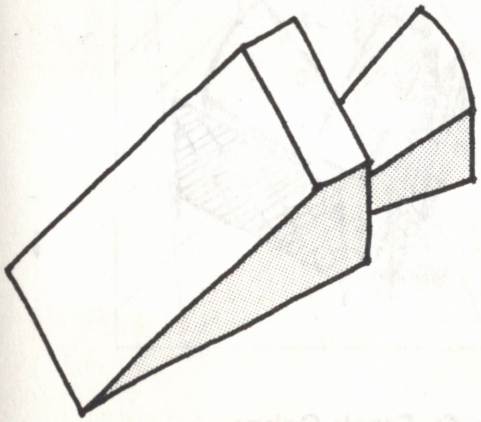
TECHNIQUES UTILIZED TO DEAL WITH THE OVER-SCALED MASSING OF THE FLY TOWER



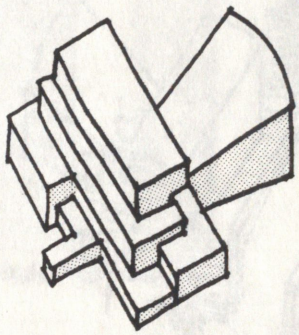
Egyptian Theatre
Hollywood, California
Architect Unknown



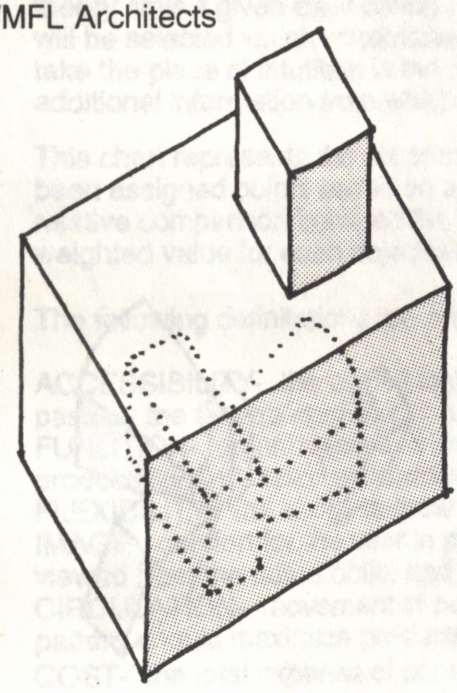
Lyric Opera House
Baltimore, Maryland
Daniel Burnham



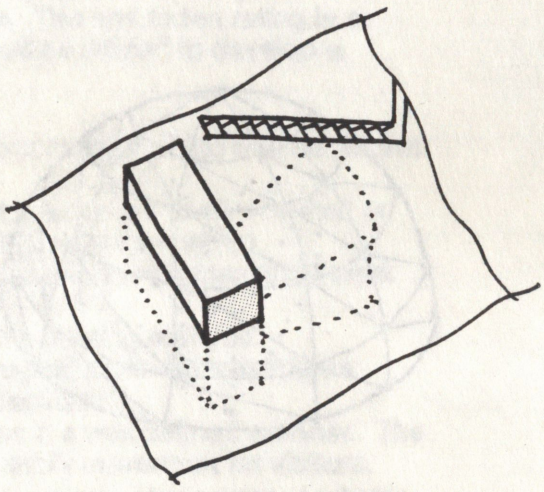
Spokane Performing Arts Center
Spokane, Washington
WMFL Architects



Poway Performing Arts Center
Poway, California
CRS

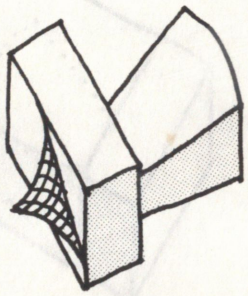


Chicago Auditorium-Theatre
Chicago, Illinois
Alder and Sullivan

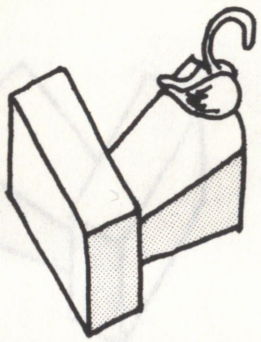


Auditorium, East Wing
Washington, D.C
I.M. Pei

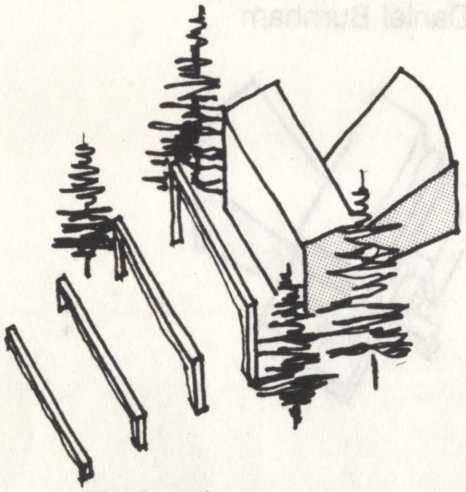
TECHNIQUES **WHICH COULD BE** UTILIZED TO DEAL WITH THE OVER-SCALED MASSING OF THE FLY TOWER



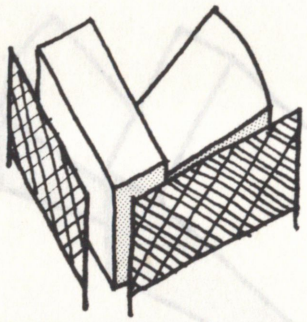
SITE



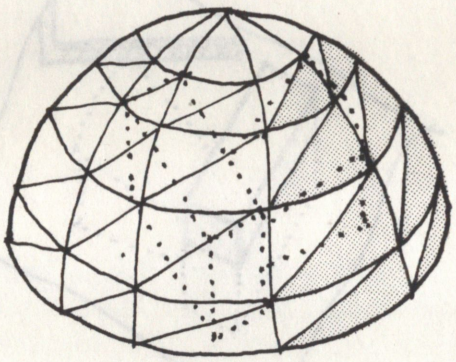
Michael Graves



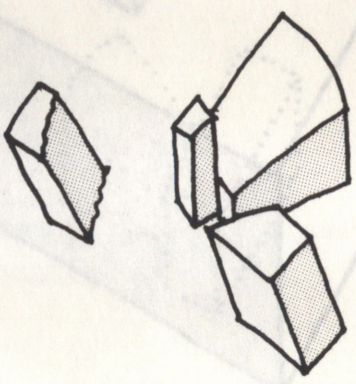
E. Fay Jones



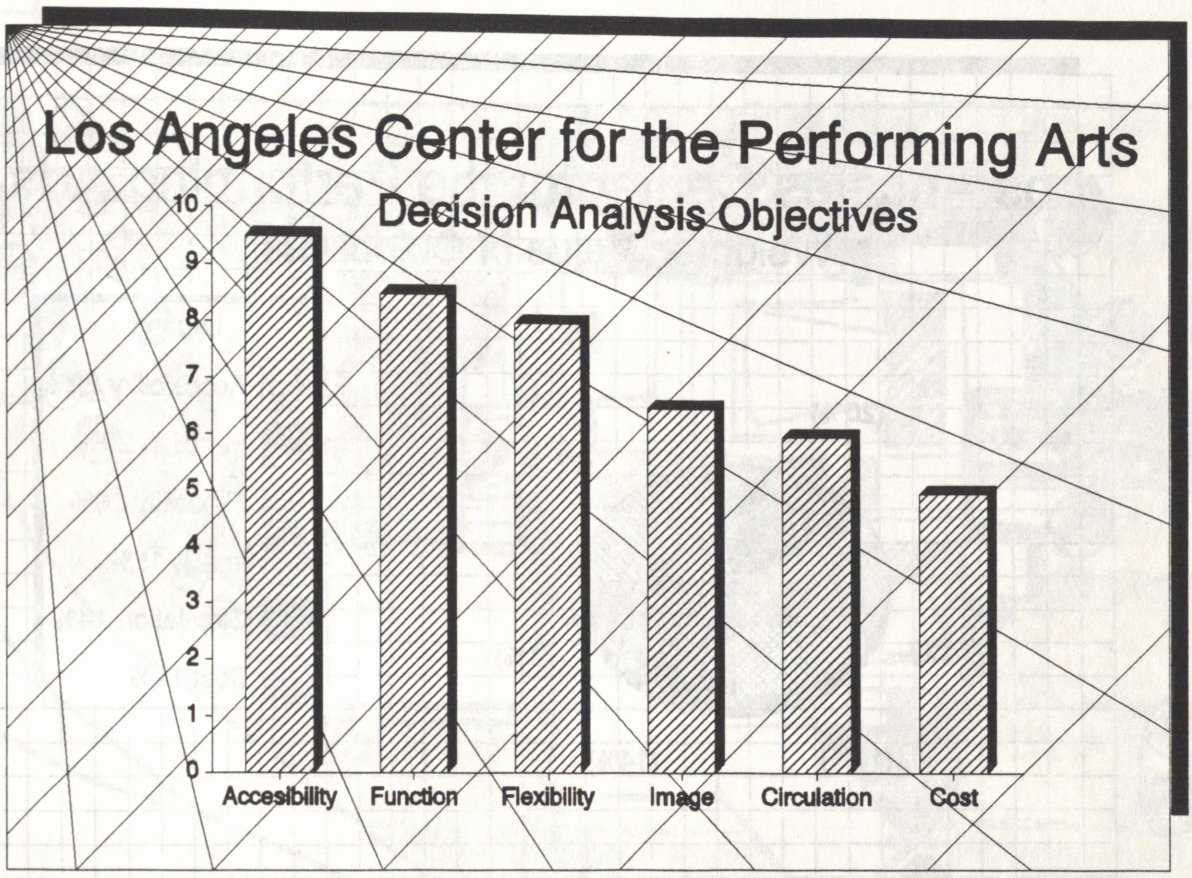
O. Frank Gehry



Buckminister Fuller



Peter Eisenman

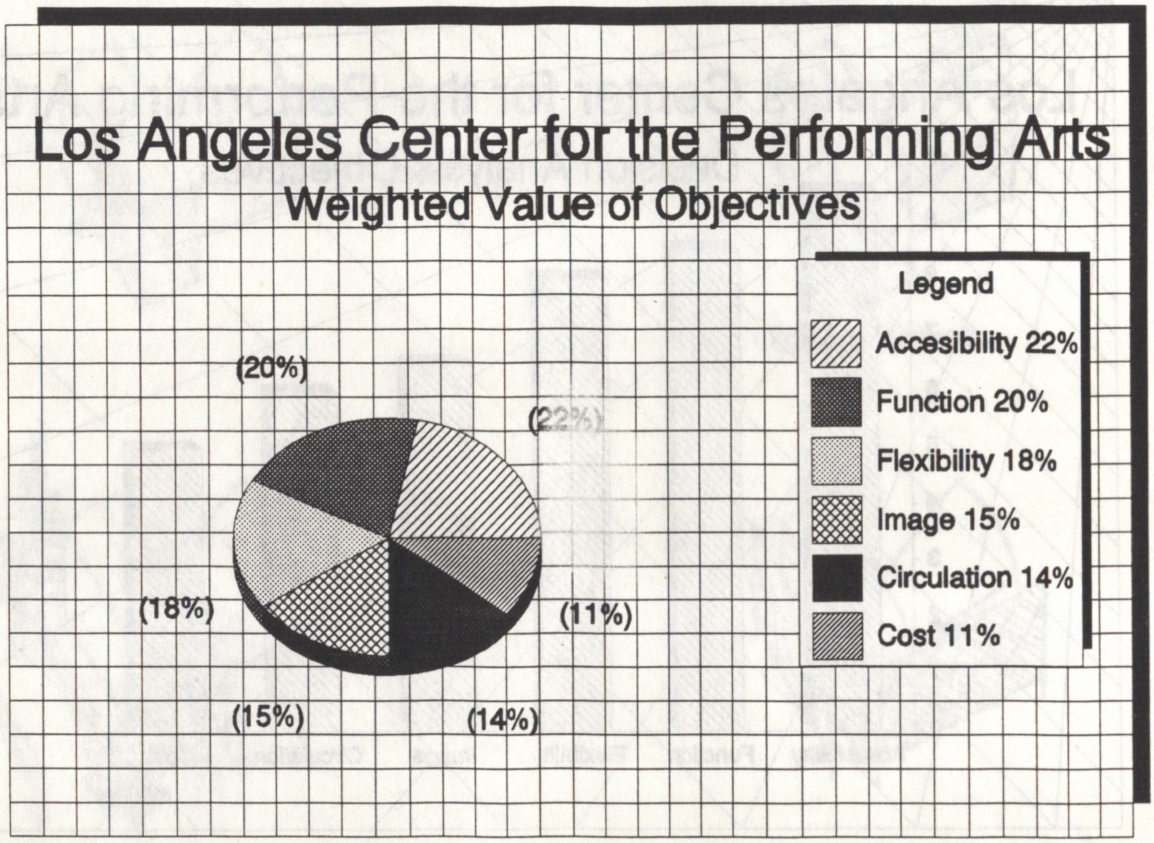


Decision Analysis techniques are used to illuminate the consequences of a range of design solutions rather than to prescribe precise answers to complex questions. The theory says if given clear options with well-defined consequences, the course of action will be selected which maximizes the satisfaction of a problem. This approach does not take the place of intutition in the design process. Instead it is a method to provide additional information from which to make an intutitive decision.

This chart represents the six primary objectives of this project. Each objective has been assigned points based on a scale of importance. This one to ten rating is a relative comparison between the six objectives, and will be utilized to develop a weighted value for each objective.

The following definitations are provided to explain the concepts behind each objective:

ACCESSIBILITY- the overall feeling of welcome that is extended to all who visit or pass by the theatre complex. An approachable attitude toward the street.
FUNCTION- organization and arrangement of activities to allow for maximum work productivity and visitor satisfaction.
FLEXIBILITY- the ability to grow and change within the building and site.
IMAGE- comfort for the user in physical and psychological form. Stimulating as viewed from the automobile, and engaging to the pedestrian.
CIRCULATION- movement of performers and patrons in a well defined manner. The pattern should maximize productivity for actors, and clairify movement for visitors.
COST- the total expense of constructing and maintaing the theatre center. Includes inital capital requirements, as well as ongoing environmental control expenses.



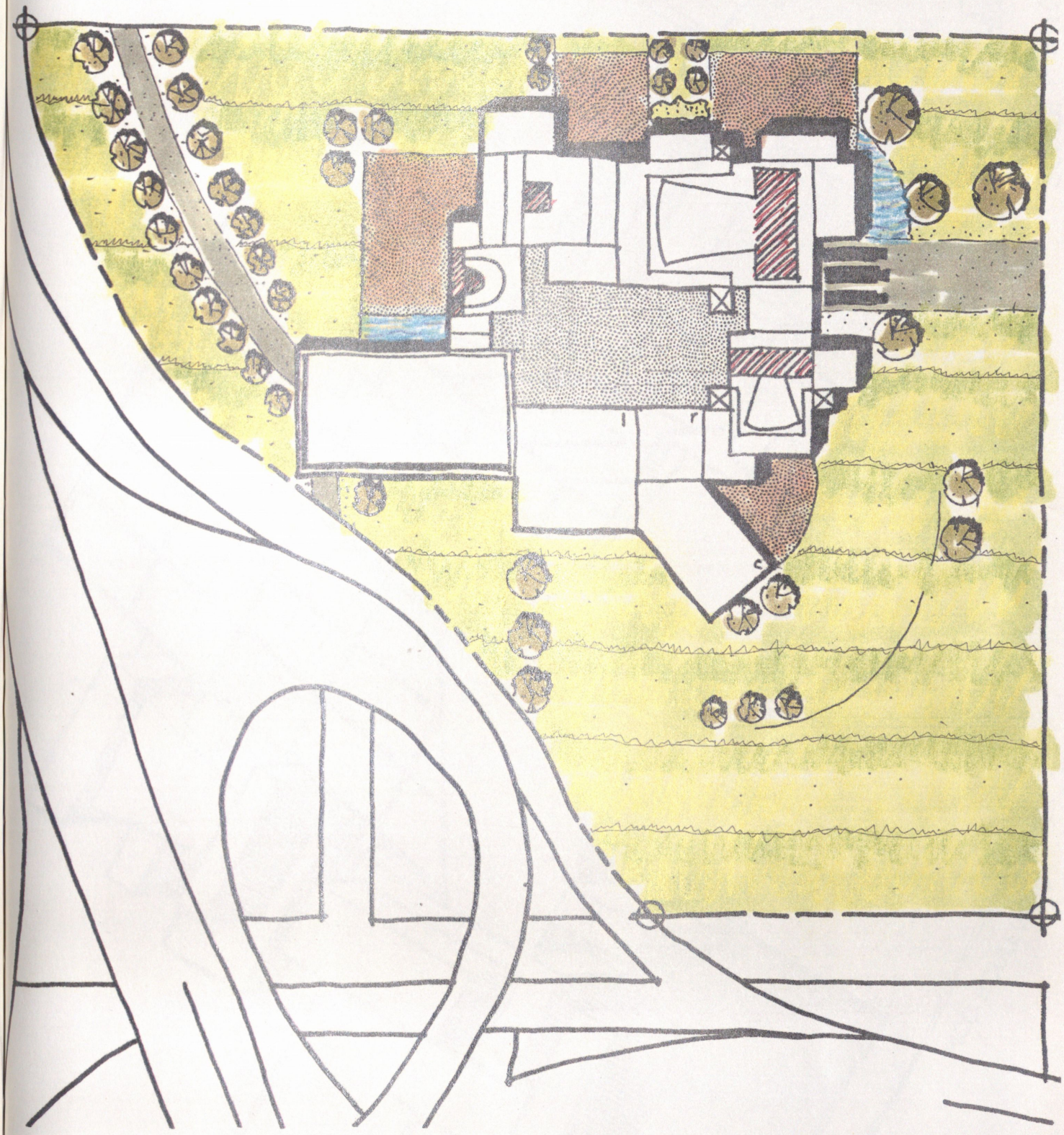
This chart illustrates the weighted value priorities of the previously listed objectives. These priorities are based on the assumption that one particular design objective is more important to the success of the project than all other objectives.

The percentage allocation was derived by dividing the aggregate total of all six objective ratings by their individual rating.

Conceptual solutions will be evaluated against each of the objectives. Utilizing a five point measurement scale, each of the six objectives will be assigned a rating regarding the success of achieving that particular objective. This rating will then be factored by the weighted value priorities listed on this chart. This process will produce a numerial score representing an approximation of how the effectiveness of a particular alternative is viewed.

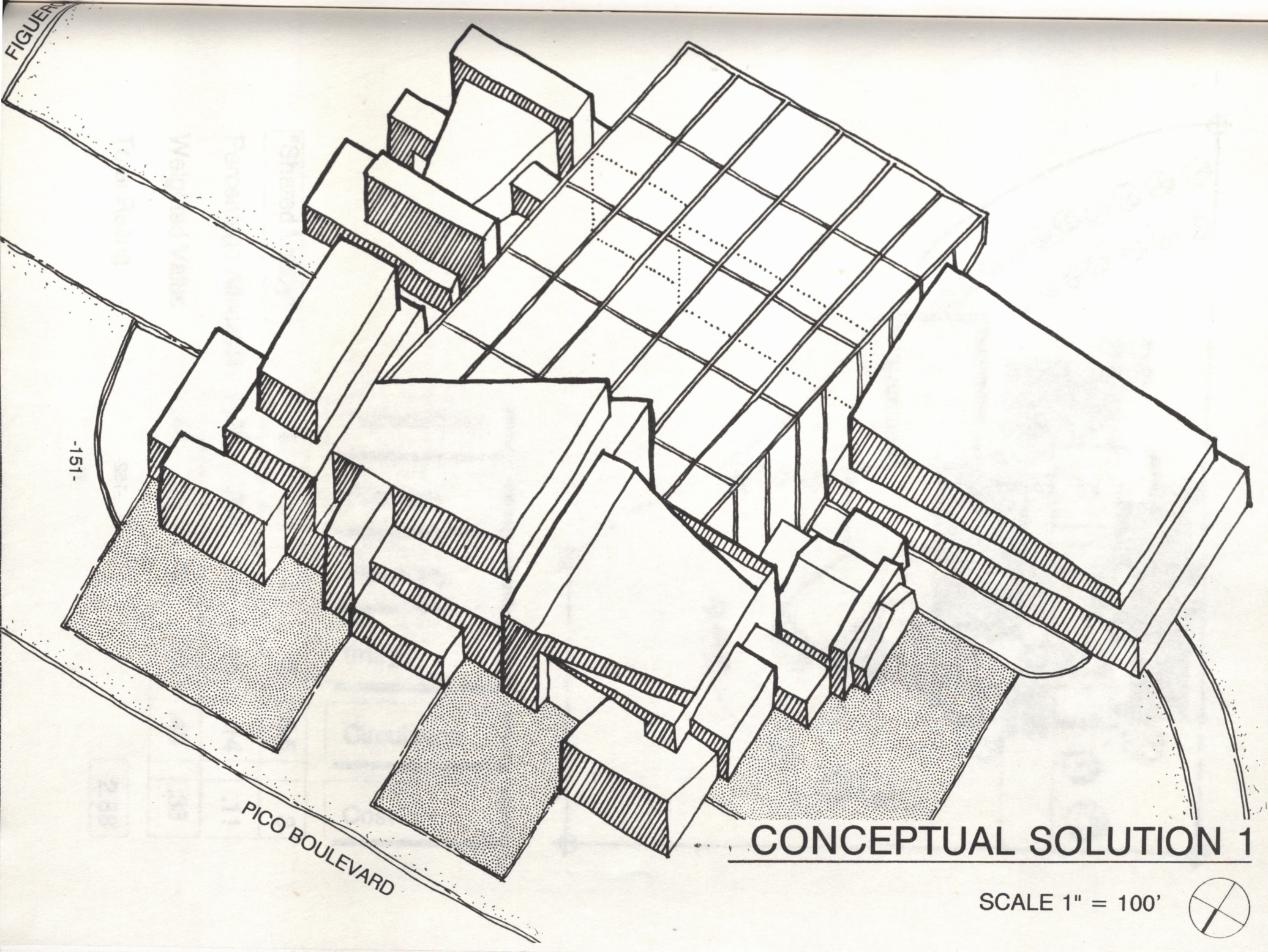
It should be noted the outcome of this process is not to select a single "correct" solution, but to systematically explore the range of alternatives.

"Shared Lobby"



CONCEPTUAL SOLUTION 1

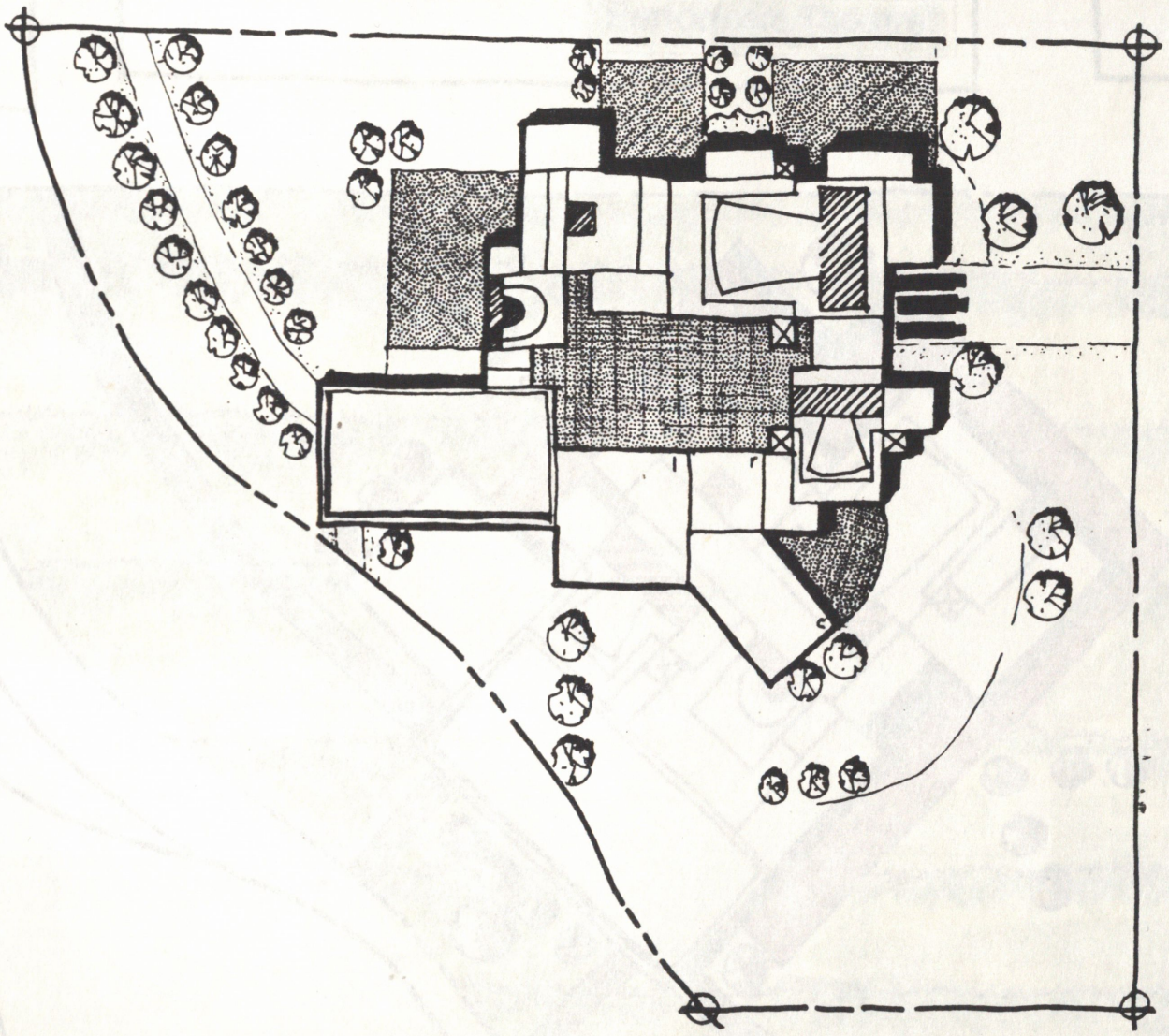
SCALE 1" = 200'



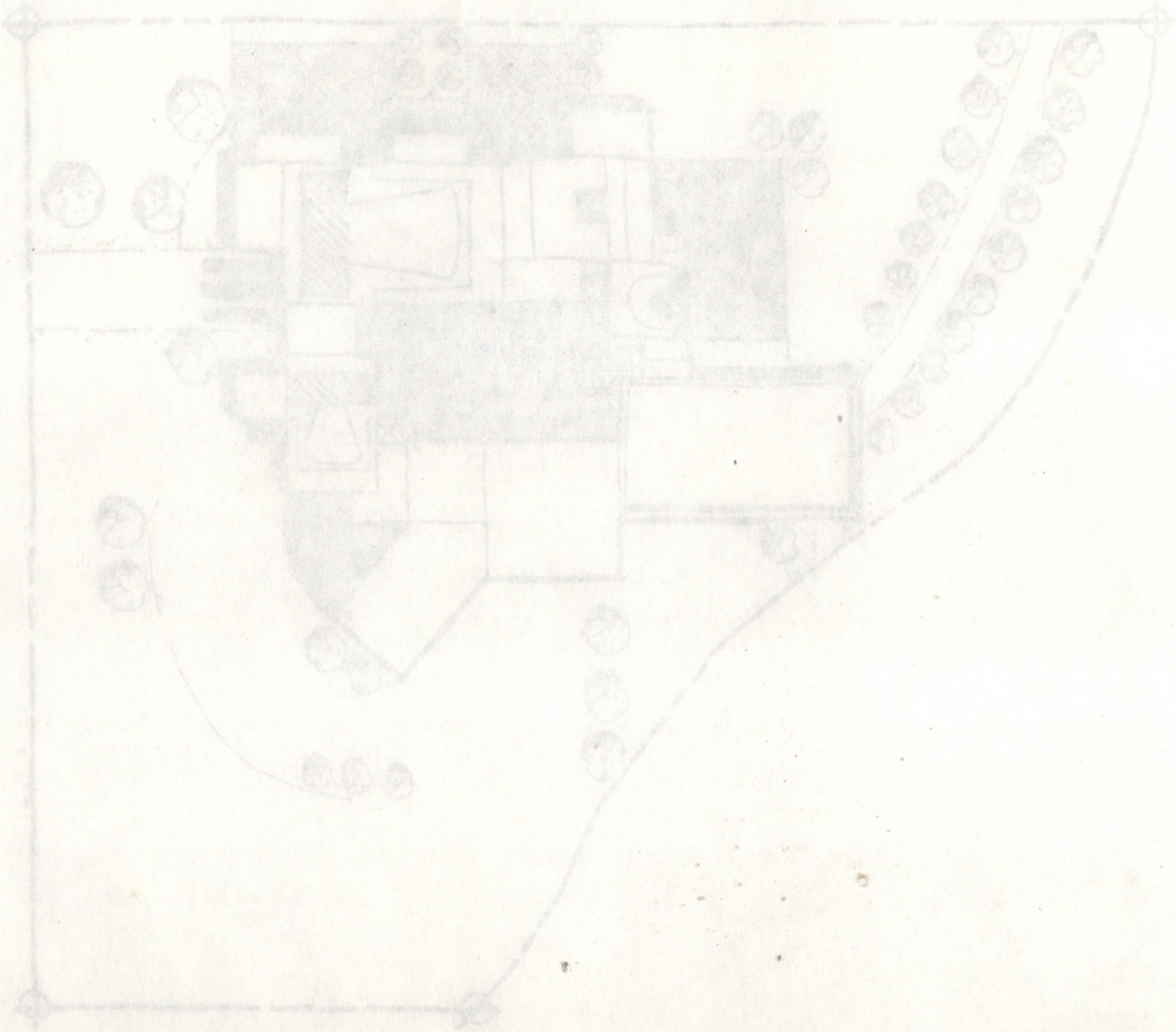
CONCEPTUAL SOLUTION 1

SCALE 1" = 100'

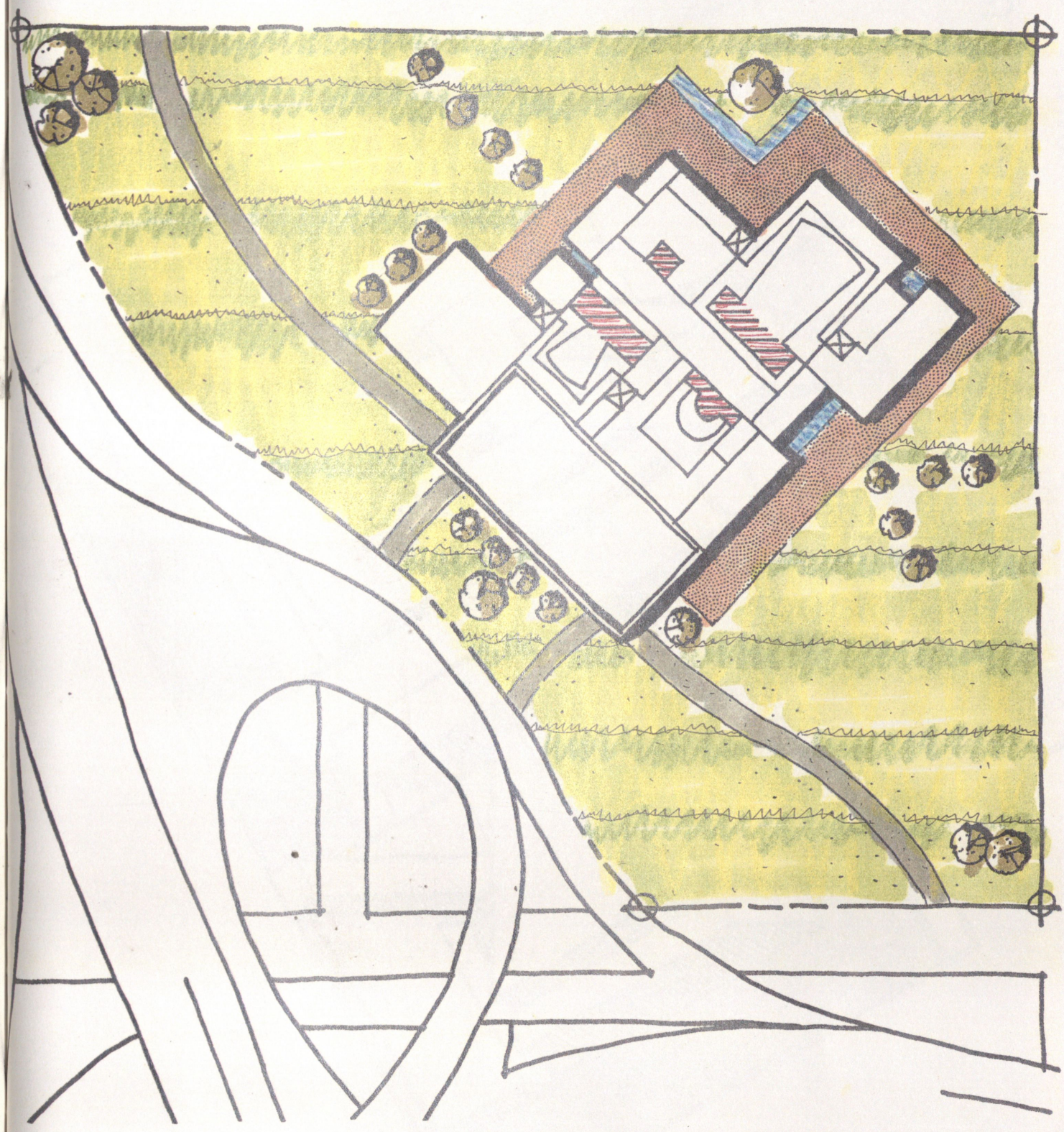
CONCEPTUAL SOLUTION I



	Accessibility	Function	Flexibility	Image	Circulation	Cost
"Shared Lobby"	2	3	4	2	3.5	3
Percentage Allocation	.22	.20	.18	.15	.14	.11
Weighted Value	.44	.60	.72	.30	.49	.33
Total Rating						2.88

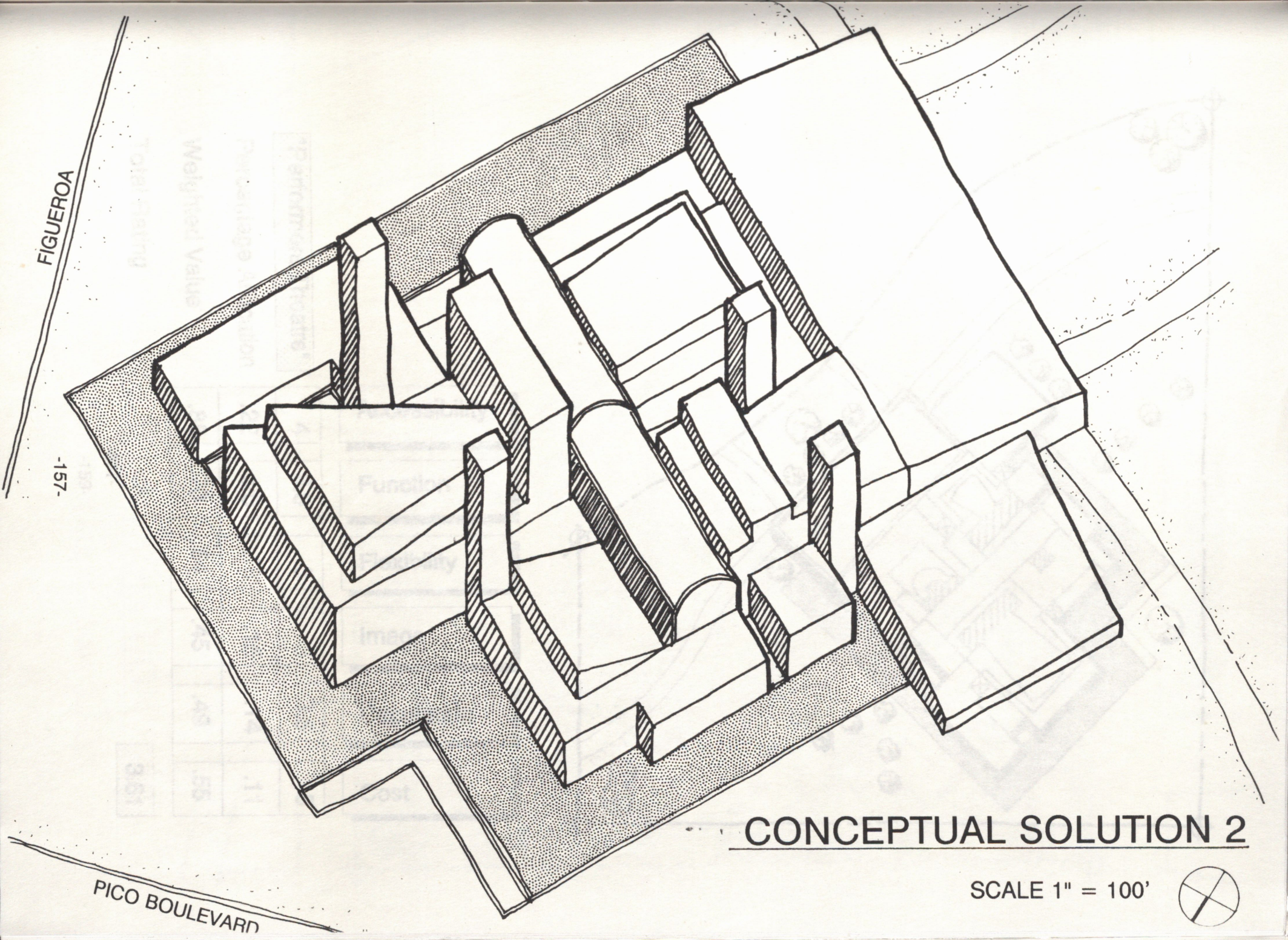


"Performers Theatre"



CONCEPTUAL SOLUTION 2

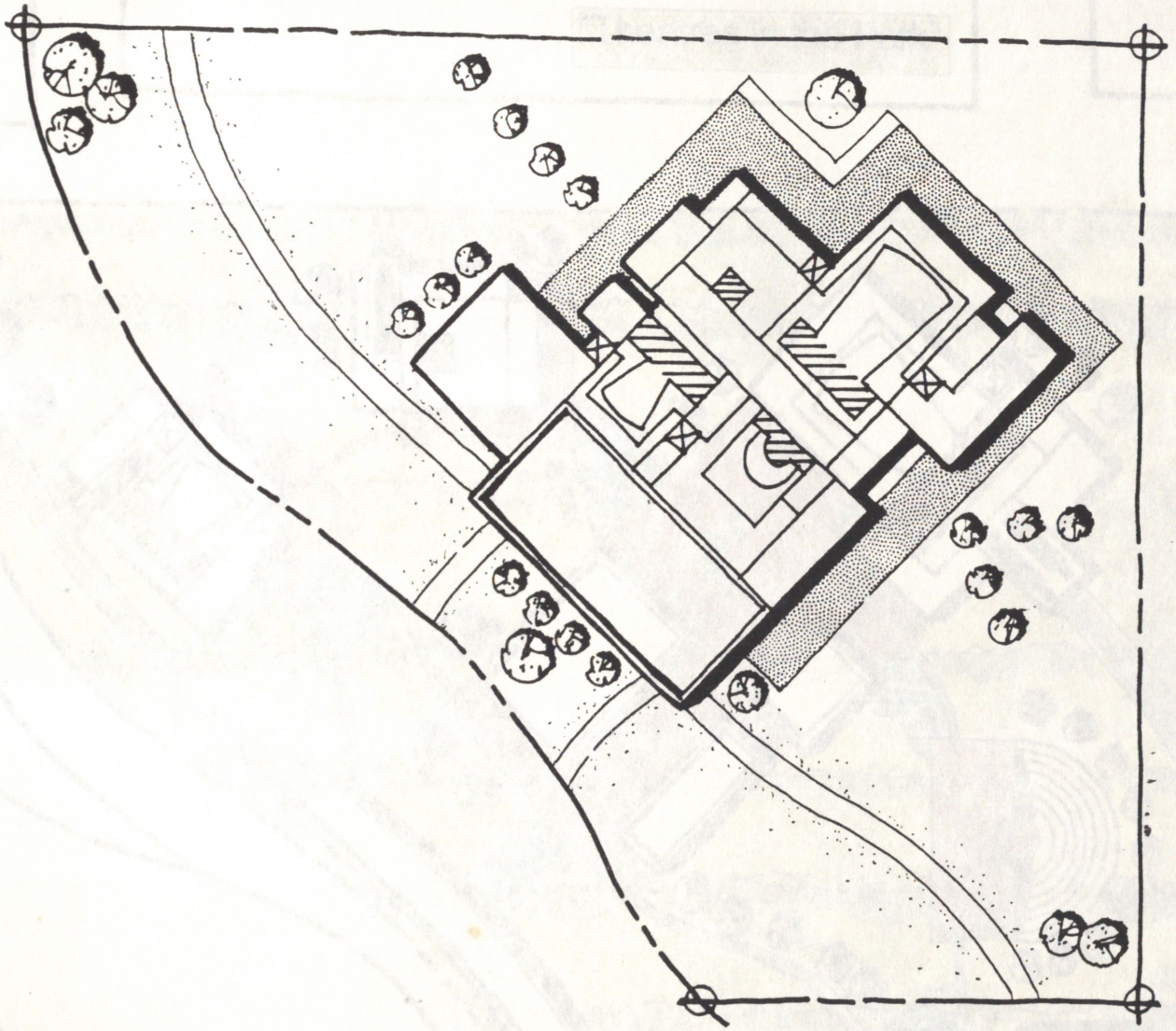
SCALE 1" = 200'



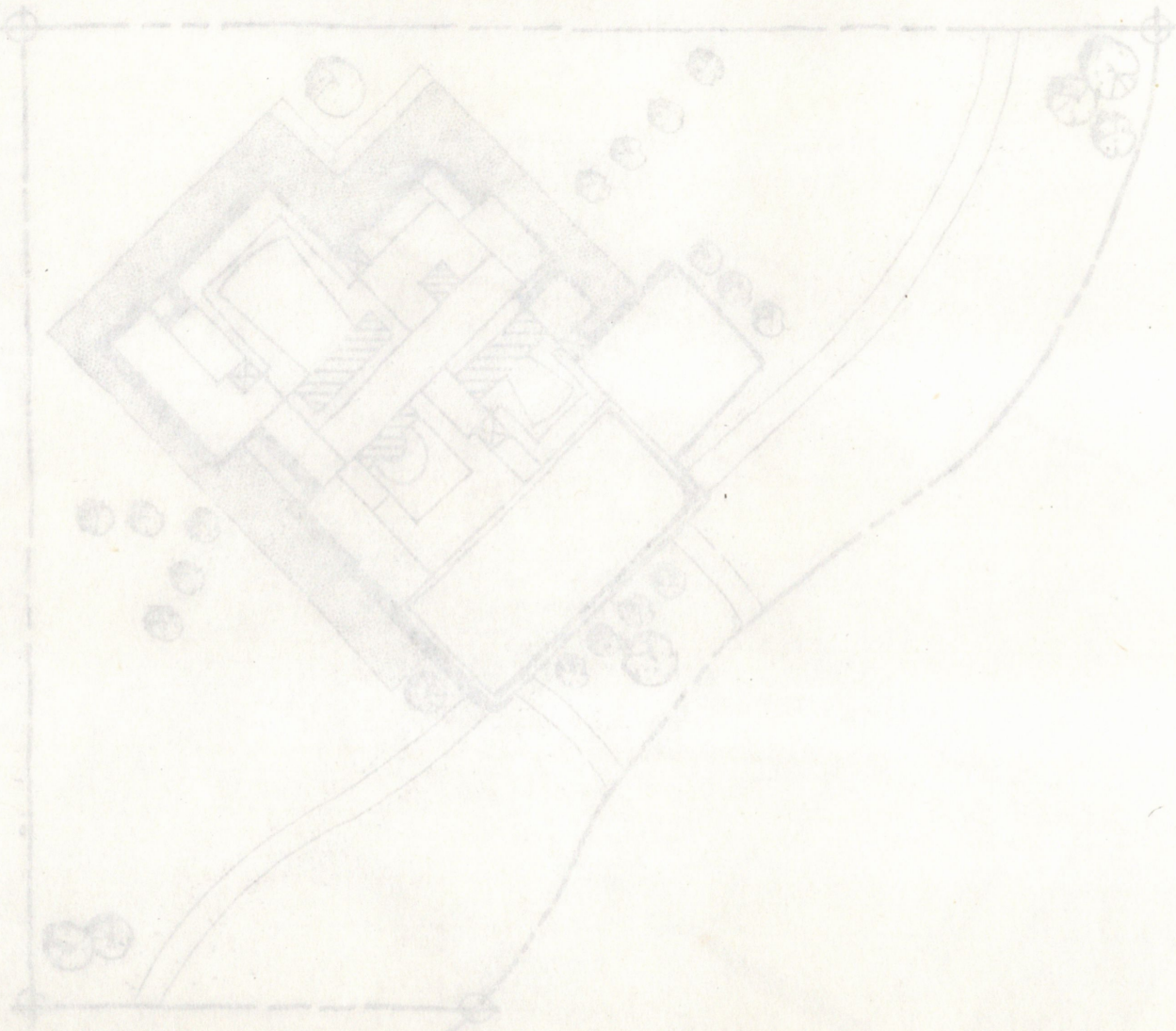
CONCEPTUAL SOLUTION 2

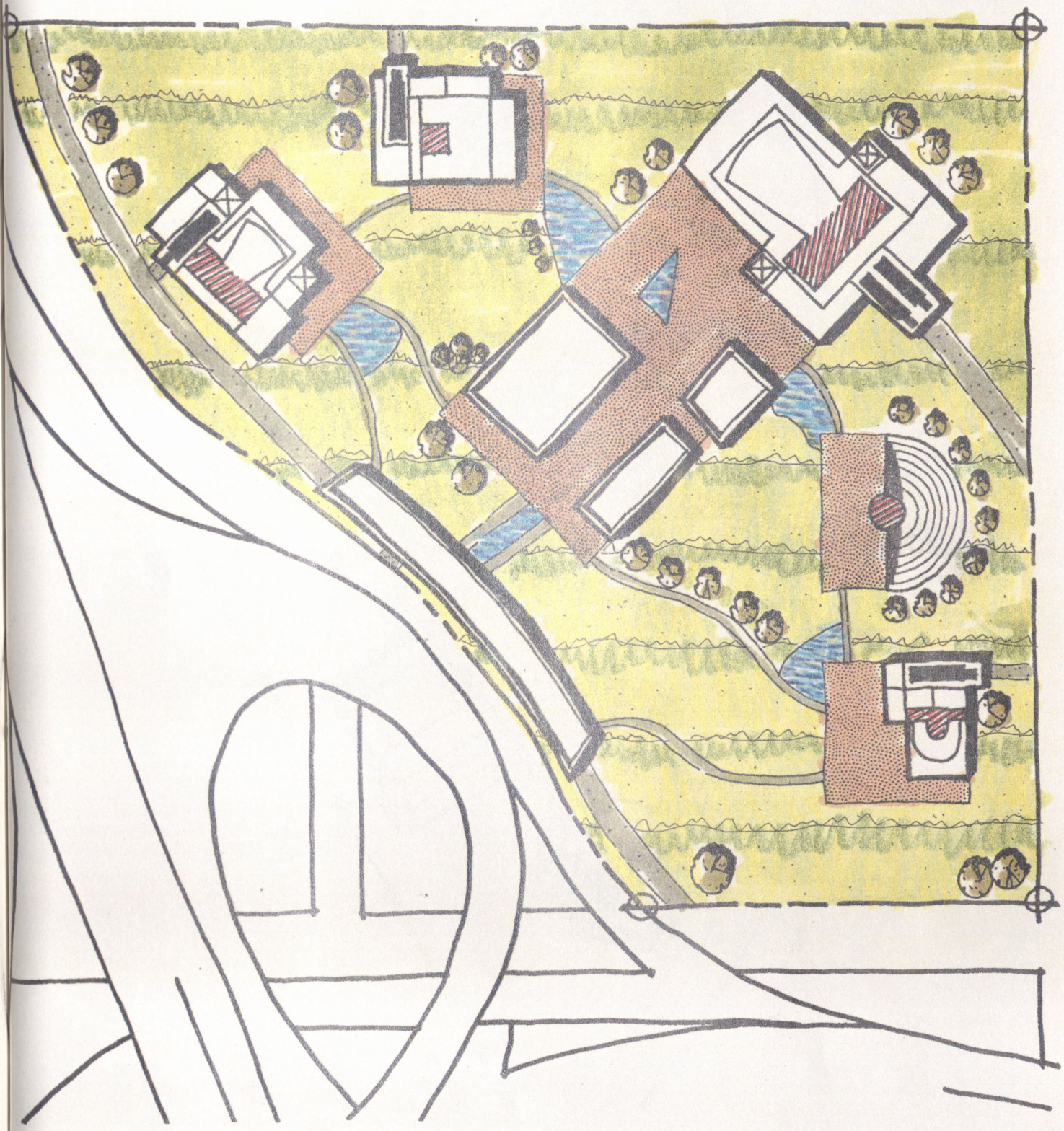
SCALE 1" = 100'

CONCEPTUAL SOLUTION 2



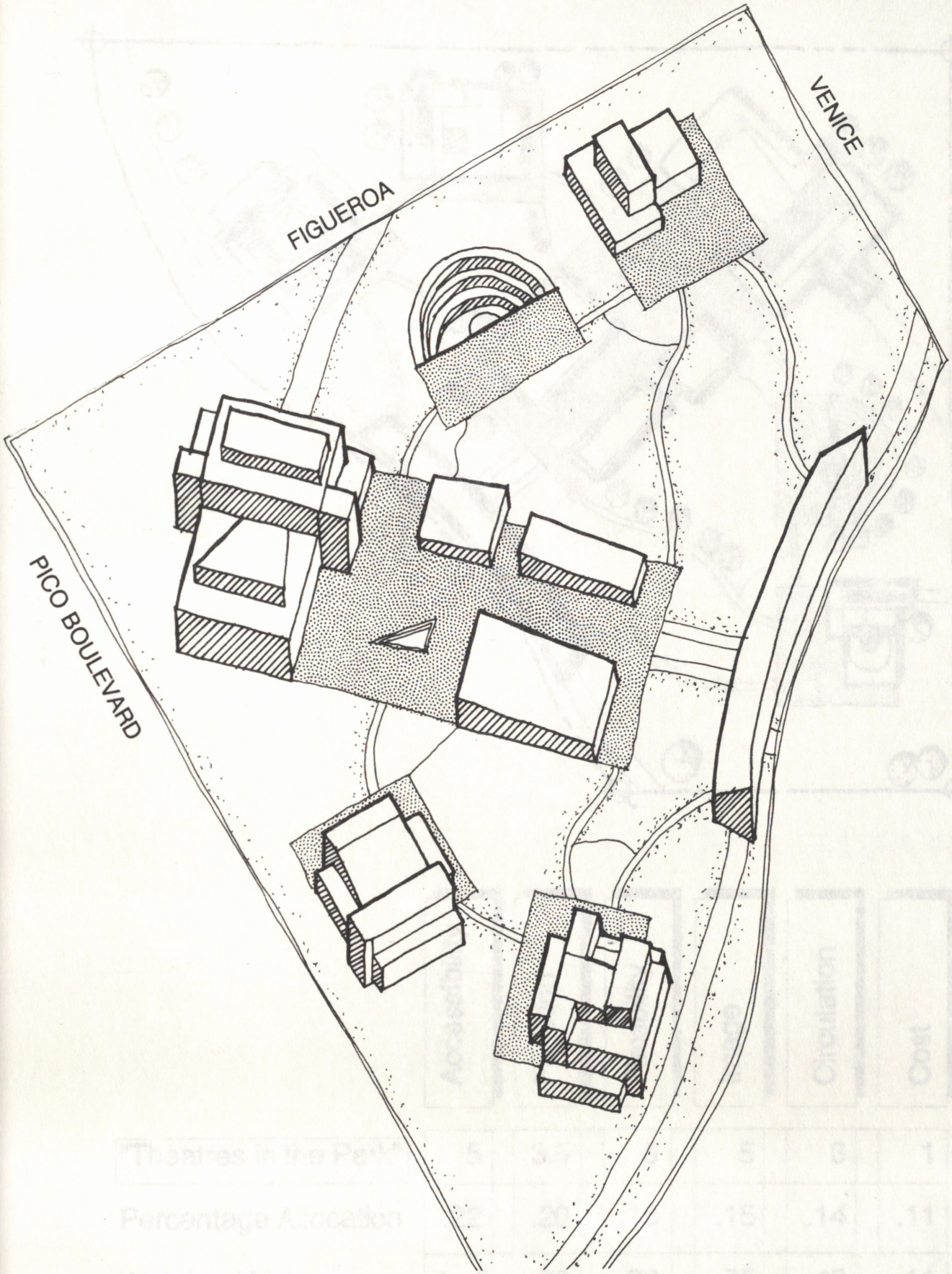
	Accessibility	Function	Flexibility	Image	Circulation	Cost
"Performers Theatre"	4	3.5	3	3	3.5	5
Percentage Allocation	.22	.20	.18	.15	.14	.11
Weighted Value	.88	.70	.54	.45	.49	.55
Total Rating						3.61





CONCEPTUAL SOLUTION 3

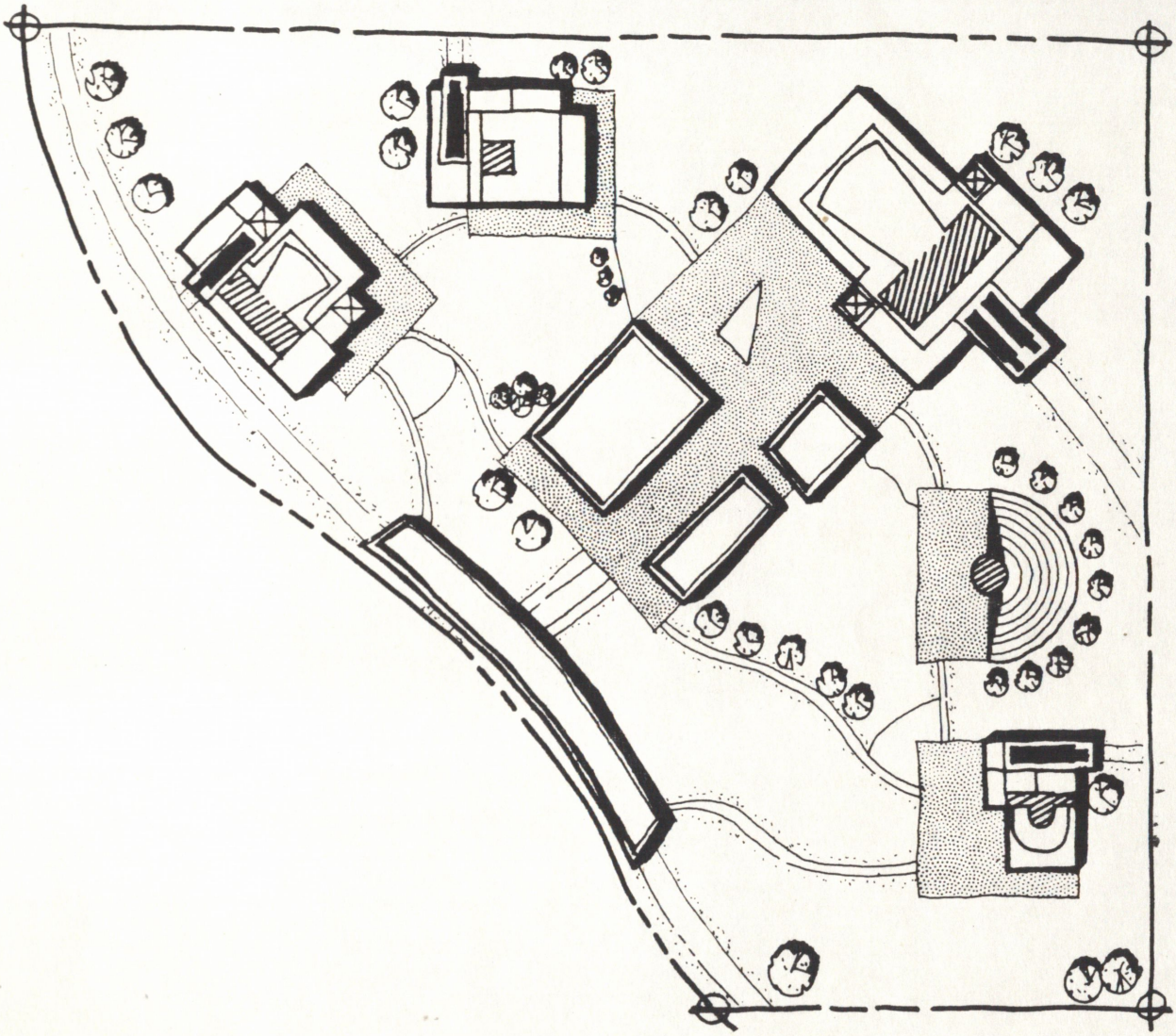
SCALE 1" = 200'



CONCEPTUAL SOLUTION 3

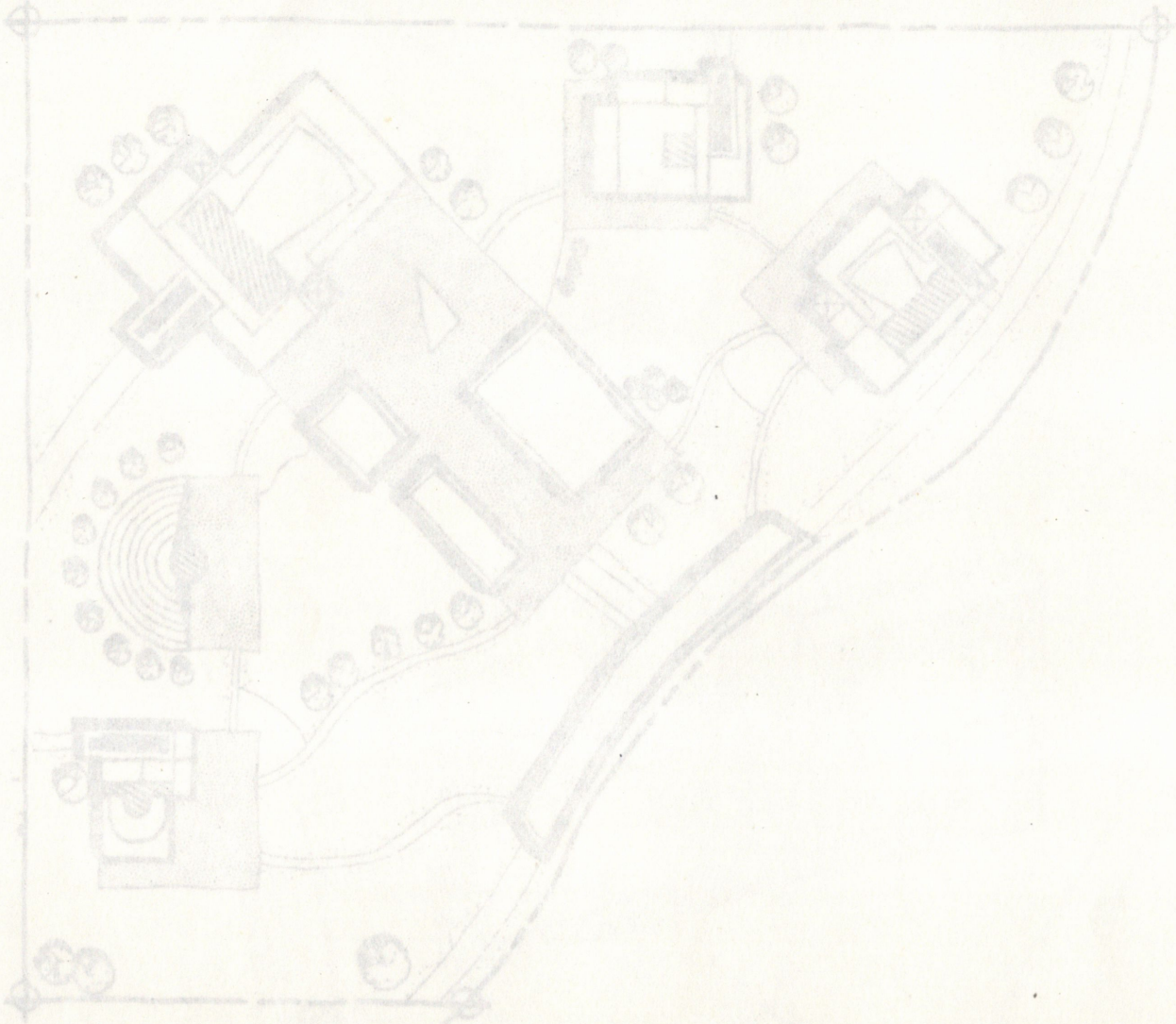
SCALE 1" = 200'

CONCEPTUAL SOLUTION 3



	Accessibility	Function	Flexibility	Image	Circulation	Cost
"Theatres in the Park"	5	3.5	5	5	3	1
Percentage Allocation	.22	.20	.18	.15	.14	.11
Weighted Value	1.10	.70	.90	.75	.42	.11

Total Rating 3.98



FINAL SOLUTION

"The elements are a consciousness of the parts. When you think of it this way, what you are doing is composing and not designing."

- Louis Kahn

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The man who doesn't read good books
has no advantage over the man who can't read them.
- Mark Twain

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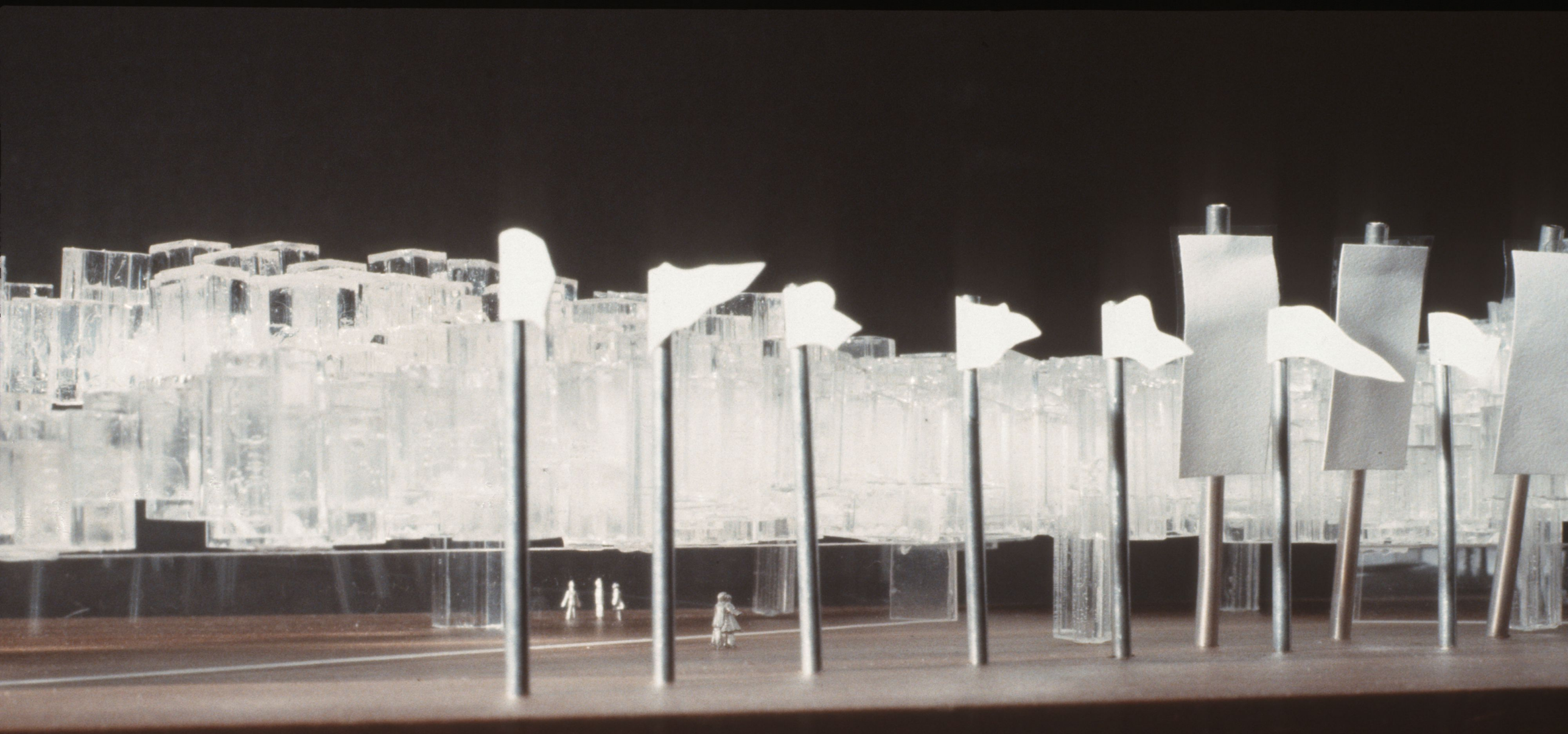


LOS ANGELES CENTER FOR THE PERFORMING ARTS

PASADENA FREEWAY

PICO BOULEVARD

FIGUEROA AVENUE

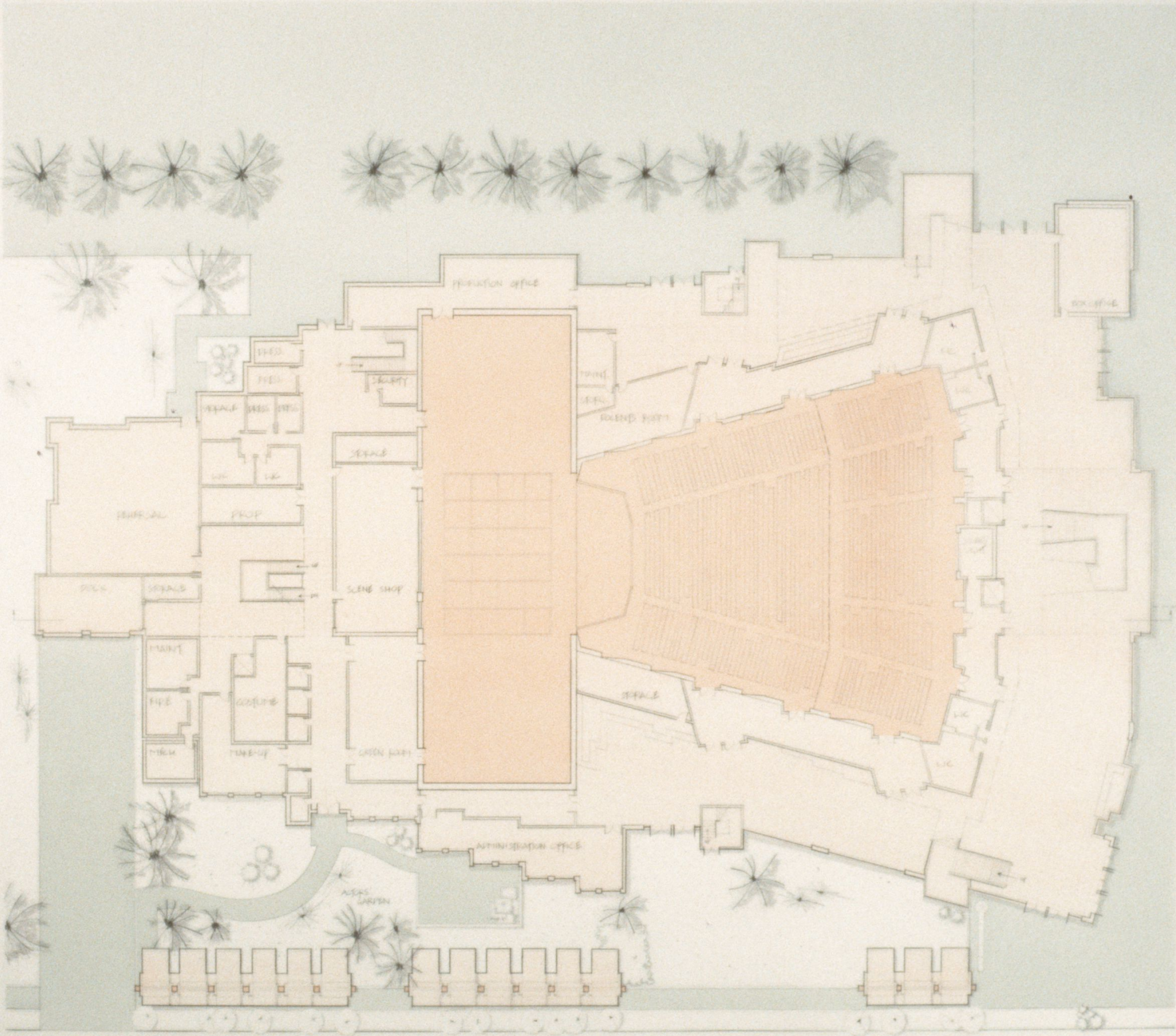
VENICE BOULEVARD

SANTA MONICA FREEWAY

LEGEND
A. PUBLIC AMPHITHEATRE
B. LEONARD BERNSTEIN CONCERT HALL
C. CHILDREN'S THEATRE
L. LIBRARY
P. PARKING BUILDING
R. RESTAURANT
S. SABIN HALL
W. THE WARREN

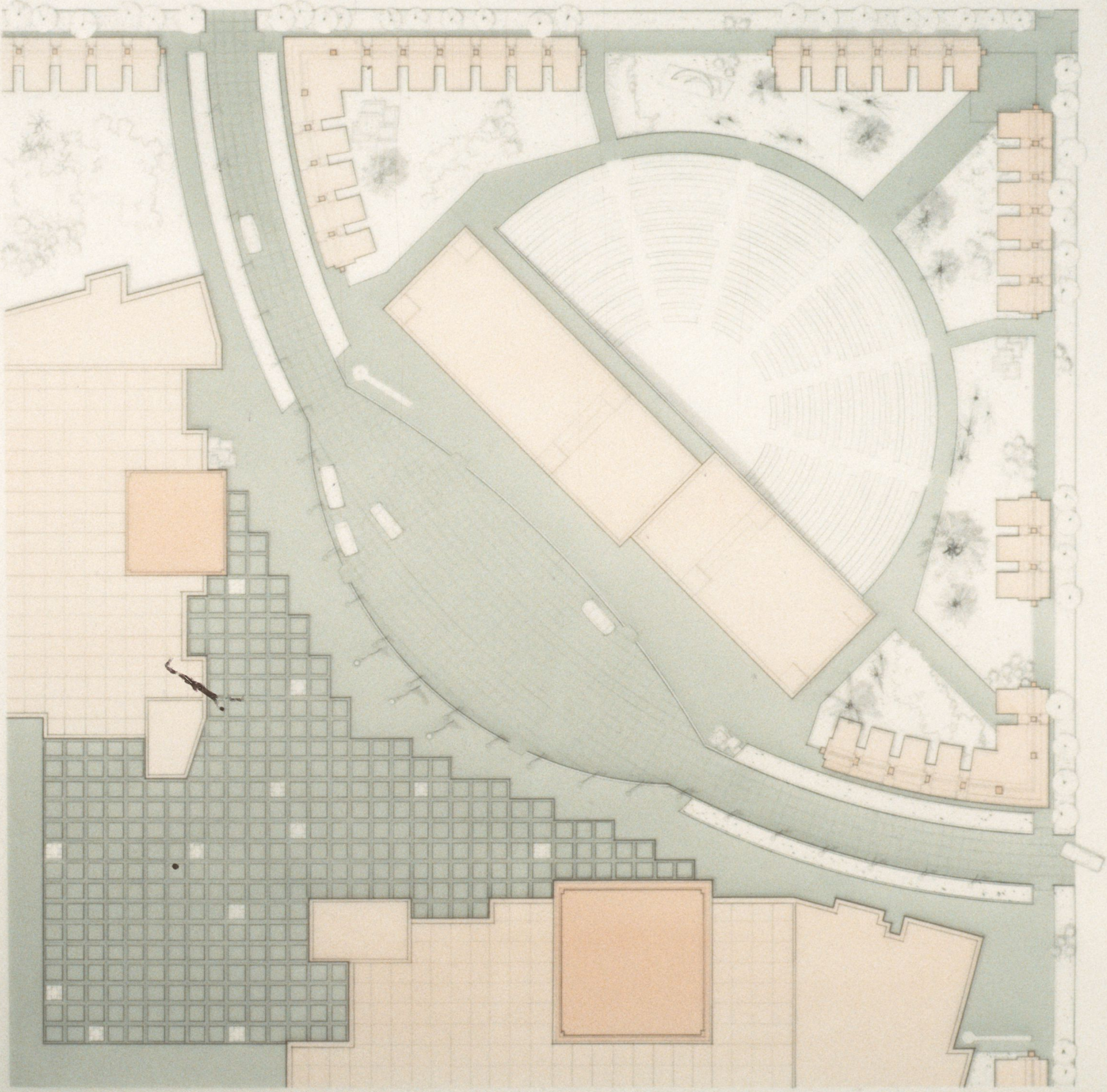
SITE PLAN

SCALE 1" = 100'



ORCHESTRA LEVEL PLAN-SABIN HALL

SCALE 1" = 20'



DETAIL OF FLAG COURT-ROOF PLAN

SCALE 1" = 20'



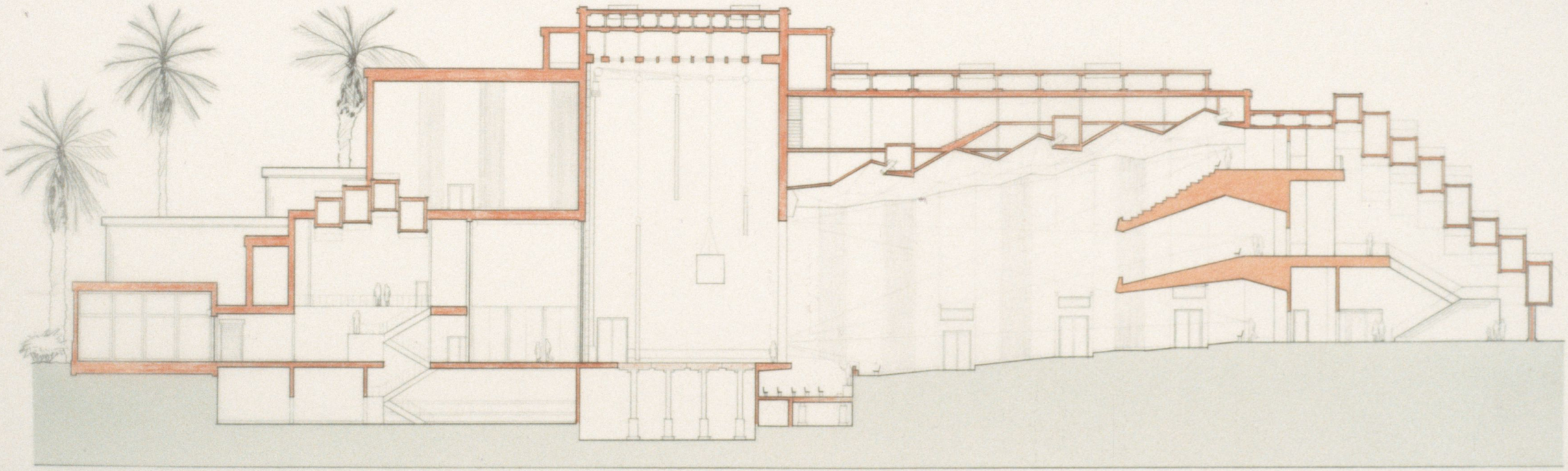
LOGE LEVEL PLAN-SABIN HALL

SCALE 1" = 20'



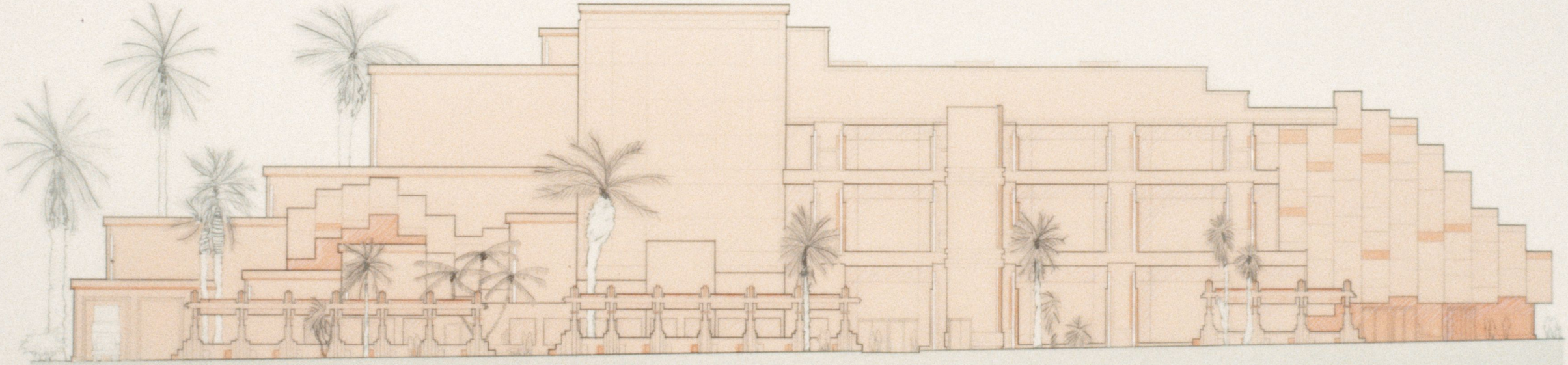
PERGOLA SECTION AND ELEVATION

SCALE 1/4" = 1' 0"



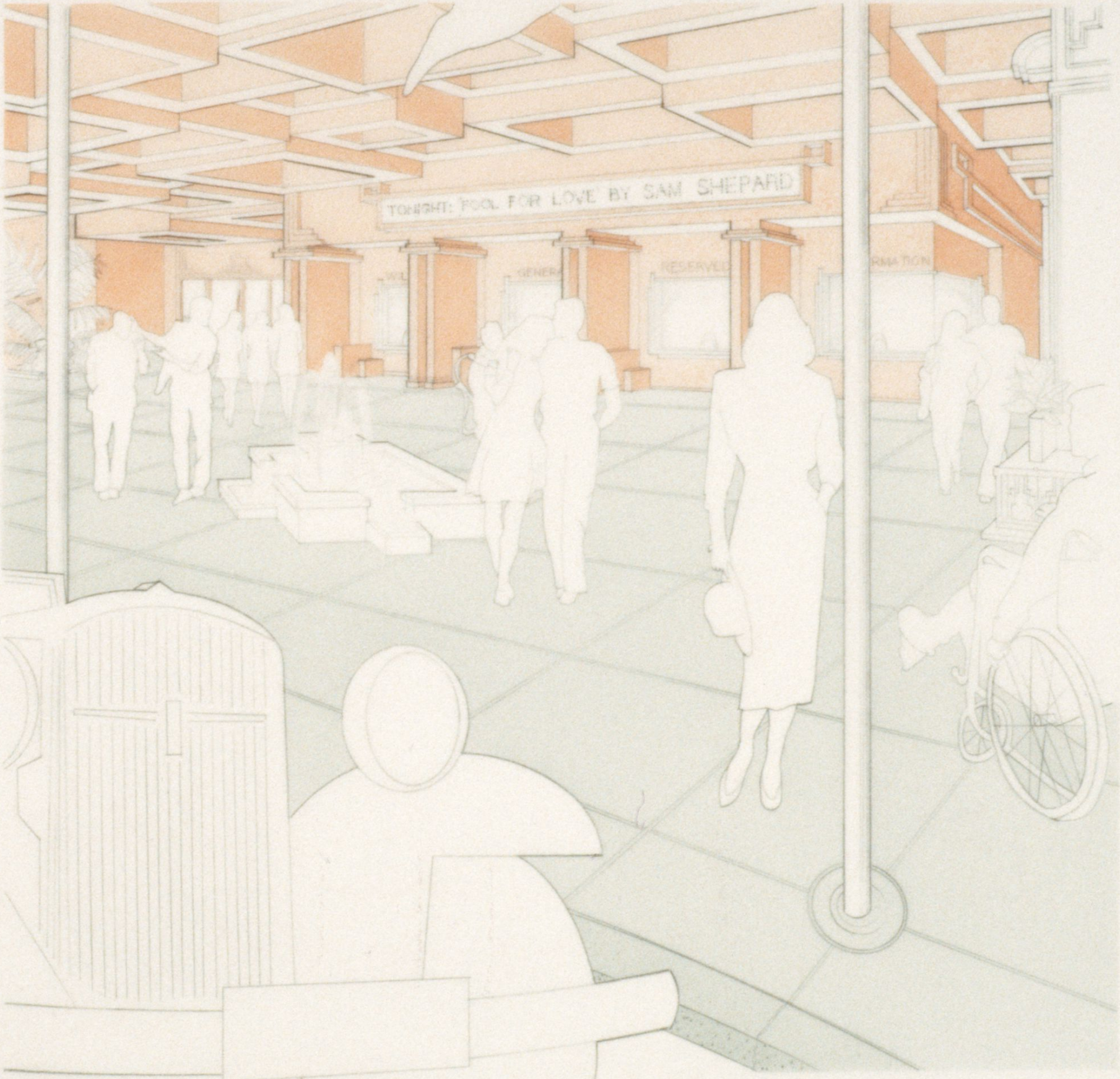
LONGITUDINAL SECTION-SABIN HALL

SCALE 1" = 20'



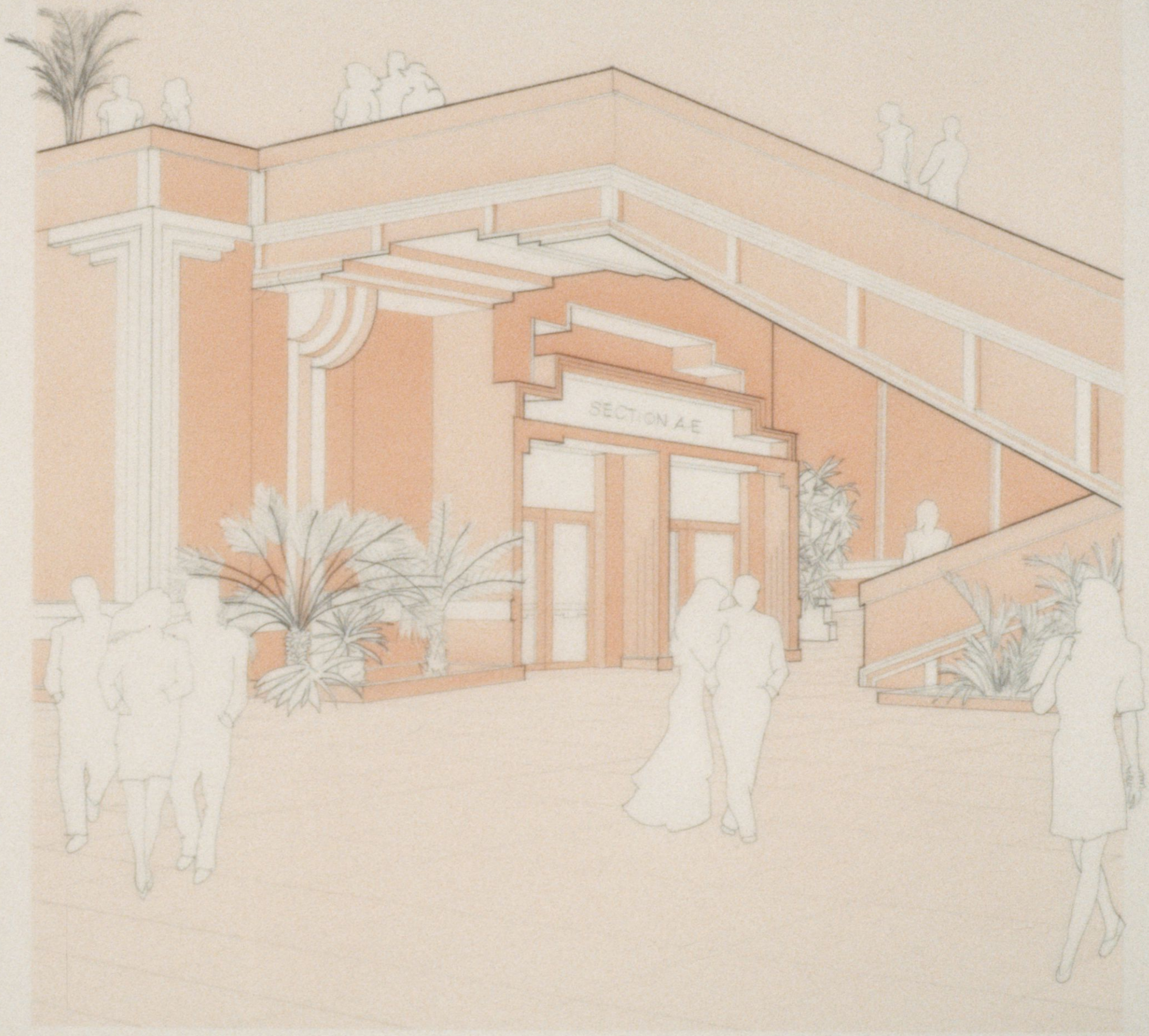
FIGUEROA STREET ELEVATION-SABIN HALL

SCALE 1" = 20'



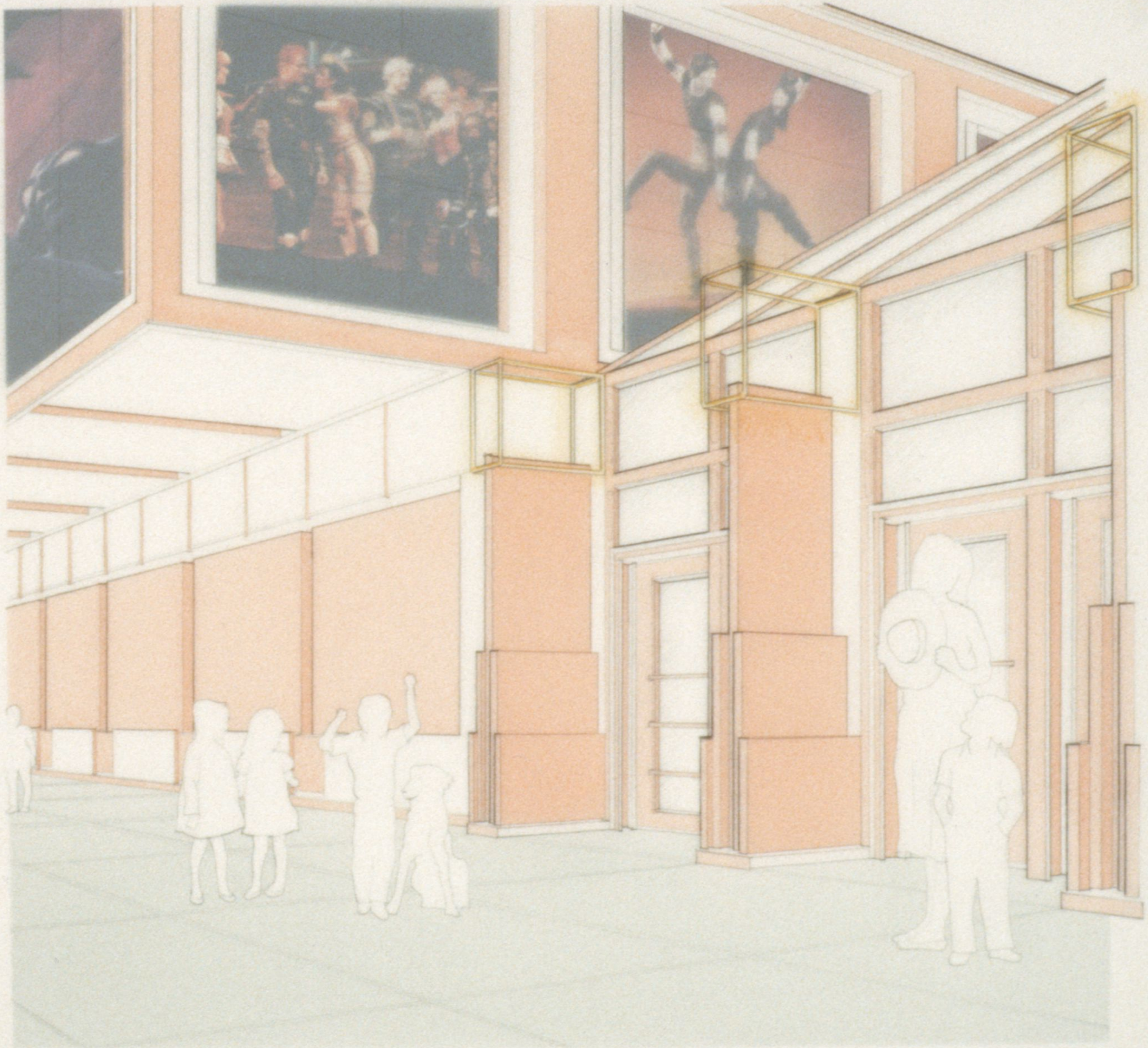
MAIN ENTRY PLAZA

PERSPECTIVE



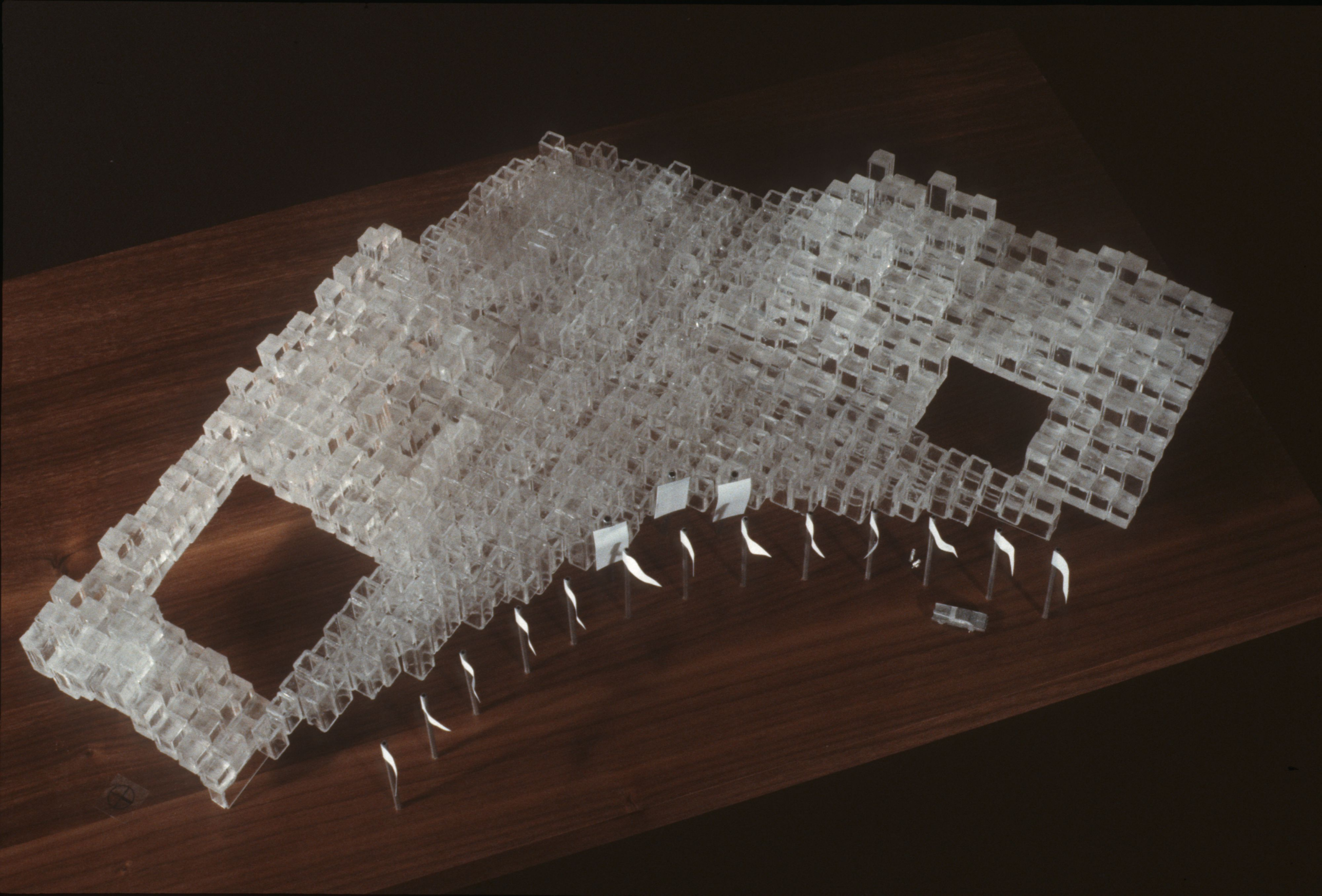
INTERIOR OF MAIN LOBBY-SABIN HALL

PERSPECTIVE



CHILDREN'S THEATRE

PERSPECTIVE





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