

LOUIS I. KAHN

Photograph by Harris Hastings
Processing by Ralph Mills

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The following design sequence was compiled to follow the process of design from its initial stages to its full development. The material is divided into three groups: 1. sketches from Lou Kahn's hand, 2. measured drawings of the site plan at different stages of the design made at the office, 3. photographs of models; (the two early site models are made of white plastesine; the later ones are of chipboard and white paper).

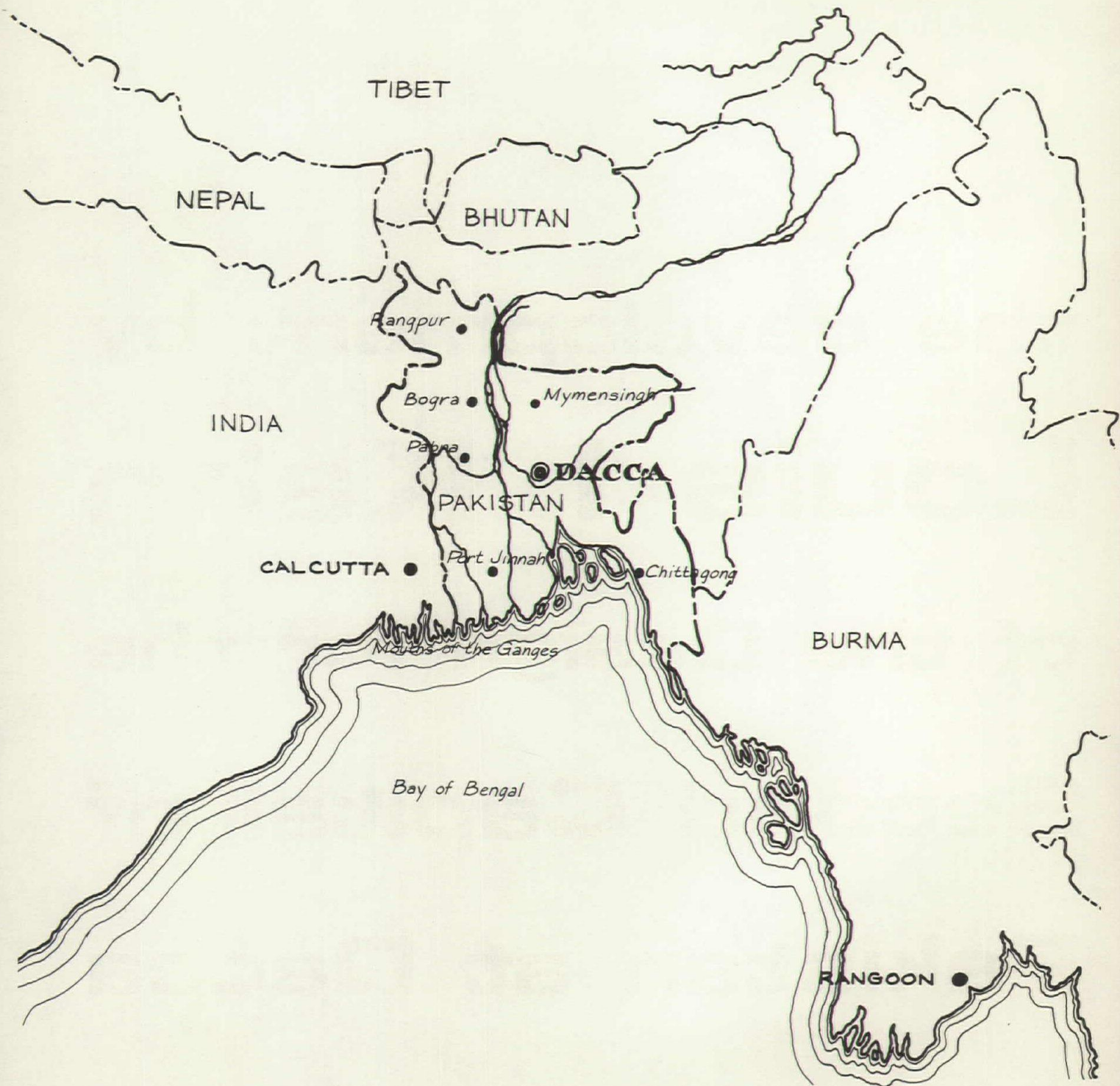
Out of the many sketches made by Lou Kahn in developing the idea for the Second Capital of Pakistan, the most significant ones in terms of contributing to the design sequence were chosen and arranged in chronological order. The series of small sketches including the very first sketch made on the project, are from Lou Kahn's sketchbook in which he makes notations of ideas. Others are much larger, made during discussions with the architects in his office or for the purpose of explaining an idea to be transcribed into a measured drawing.

The design for the Second Capital of Pakistan has not reached its completion; therefore, this material should be regarded as the initial stage of the development. The introduction is based on a speech given at Yale University, and with the permission of Robert Stern, editor of *Perspecta*, was made available for publication. Lou Kahn then has rewritten parts of this speech and has added the first part of the writing for the Student Publication. The captions of the drawings were also supplied by Lou Kahn himself.

The editors express their gratitude to Lou Kahn for his enthusiasm in the project, his care to present a complete picture of the development of the design and efforts in writing the introductory remarks. The editors also acknowledge Carlos Enrique Vallhonrat and Marshall Meyers for their help in acquiring and arranging the material. Eugene Feldman of Falcon Press, Philadelphia has photographed Lou Kahn's sketches and has been an invaluable source of technical advice. Richard Saul Wurman, the faculty advisor to the publication, has been an enthusiastic supporter throughout the project devoting his time and energy. Dorothy Wurman has drafted the map locating the site of the Second Capital of Pakistan at Dacca.

K.S. & R.T.

**the development by
Louis I. Kahn
of the Design for the
Second Capital of
Pakistan at Dacca**



In us

Inspiration to learn

Inspiration to question

Inspiration to live

Inspiration to express

These bring to man their institutions.

The architect is the maker of their spaces.

The mind, the body, the arts bring to light these inspirations.

The mind, brain and psyche, sensor of the universe and of eternity in joy of wonder with question "why anything?"

The body is life none without the psyche. Its beauty, grace and strength should be coveted and honored by the man and by society.

Art is the language of the spirit. Art is the making of a life. To create is the sense realization of the psyche and obedience to the laws of nature.

The institutions are the houses of the inspirations. Schools, libraries, laboratories, gymnasia. The architect considers the inspiration before he can accept the dictates of a space desired. He asks himself what is the nature of one that distinguishes itself from another. When he senses the difference, he is in touch with its form. Form inspires design.

SECOND CAPITAL OF PAKISTAN AT DACCA

When I was asked to design the Second Capital, legislative, of Pakistan in Dacca (the First Capital is in Islamabad and is the executive capital), I was given an extensive program of buildings, the assembly, the supreme court, hostels, schools, a stadium, the diplomatic enclave, the living sector, market, all to be placed on a thousand acres of flat land subject to flood. I kept thinking of how these buildings may be grouped and what would cause them to take their place on the land. On the night of the third day, I fell out of bed with the idea which is still the prevailing idea of the plan. This came simply from the realization that assembly is of a transcendent nature. Men came to assemble to touch the spirit of commonness, and I thought that this must be expressible. Observing the way of religion in the living of the Pakistani, I thought that a mosque woven into the space fabric of the assembly would have such effect. I feared the presumption to assume this right, that is to know it to fit symbolically their way of life. But this assumption took possession as an anchor. Also the program required the design of a hotel for ministers, their secretaries, and the members of the assembly. But this requirement became in my mind a corollary to the assembly and I thought immediately that they should be transformed from a hotel to studies in their garden on a lake. The supreme court in my mind was the test of the acts of legislation against the philosophic nature of man. The three became inseparable in the thinking of the transcendent nature of assembly.

I couldn't wait until morning in my anxiety to relate these thoughts to Kafiluddin Ahmad in charge of this project. In the morning I was there at 9 o'clock sharp and told him about the symbolic importance of the mosque; I got no immediate response, no reaction. But he got on the phone and talked to several ministers. After he had spoken for some while, he turned to me

and said "Professor Kahn, I think you have something there." I felt enormous confidence that the plan could have form. "But," he said, "you will have a problem with the Chief Justice of the Supreme Court because he doesn't want the court next to the assembly."

We saw the Chief Justice the next day, and we were greeted with the usual tea and biscuits. He said: "I know why you're here—the grapevine is very well developed in Pakistan. You're barking up the wrong tree, because I will not be a part of this assembly group. I will go to the provincial capital site near the provincial high court where the lawyers are, and I think I will feel much more at home there." I turned to him and said, "Mr. Chief Justice, is this your decision alone or is it also the decision of the judges who will follow you? Let me explain to you what I intend to compose." And I made my first sketch on paper of the assembly with the mosque on the lake. I added the hostels framing this lake. I told him how I felt about the transcendent meaning of assembly. After a moment's thought he took the pencil out of my hand and placed a mark representing the supreme court in a position where I would have placed it myself, on the other side of the mosque, and he said: "The mosque is sufficient insulation from the men of the assembly."

I was very happy that the motivations of religious thought were communicable. It was not belief, not pattern, but the essence from which an institution could emerge, which changed his mind.

The relationship of the assembly, mosque, court and hostels in their interplay psychologically is what expresses a nature. The Institution of Assembly could lose its strength if the sympathetic parts were dispersed. The inspirations of each would be left incompletely expressed.

awing In the first sketch of the mosque I indicated four minarets. The meaning of the mosque with the assembly was then intuitively necessary and expressed in borrowed terms. Now the question of the nature 'Mosque' related to 'Assembly' has questioned the minarets and at one time in design the mosque was a pyramid, the peak of which a minaret. Now it graces as a detail the main entrance, but the question of its form still remains.

awings
t, 35 Because this is delta country, buildings are placed on mounds to protect them from flood. The ground for the mounds comes from the digging of lakes and ponds. I employed the shape of the lake too as a discipline of location and boundary. The triangular lake was meant to encompass the hostels and the assembly and to act as a dimensional control.

awing The assembly, hostels, and supreme court belong to the Citadel of the Assembly and their interrelated nature suggest a completeness causing other buildings to take their distance. Then because of the intellectual entity of the related buildings of the assembly, its meaning caused me to realize that the acts of assembly lead to the establishment of the institutions of man. That made me realize that the buildings of the program other than those related to the assembly belong to the Citadel of the Institutions which I placed on axis and facing the Citadel of the Assembly.

It occurred to me in thinking about the meaning of institutions that the inspiration to live remains meekly unexpressed in the institutions of man. It is a building I hope to sense the form of, which could lead to its design. It would be a place of baths and place of exercise and meeting. It is the place where the athlete is honored and a man strives for physical perfection. The idea of such an institution is inspired by the Roman bath. I have in mind an environment of spaces far reaching considering the resources of today. The responsibility of a country to its people in

regard to their physical well being is certainly as important as the culture of the mind and the regulation of commerce. This institution is expressed roughly as a building harboring a stadium as well as the rooms of meeting, bath, exercise and their gardens, and flanked by a school of science and a school of art. Also composed with these buildings is a block of satellite institutions and commercial services. This block is the anchor of the dwelling places which is being recomposed out of an old village with its mounds and depressions already established. I spoke to Mr. Steen Eiler Rasmussen about the deliberate separation of the two citadels and he has inspired me to look into this decision and sense whether the two can be brought together in a greater tie rather than the meaning of looking across at each other. I felt that their being separate was good, living on different planes of inspiration. But Mr. Rasmussen knows the beginnings of towns in their essence so beautifully that I feel this plan needs a thorough review before I can feel confident about the belief which is in back of it.

What I'm trying to do is to establish a belief out of a philosophy I can turn over to Pakistan so that whatever they do is always answerable to it. I feel as though this plan which was made weeks after I saw the program has strength but does it have all the ingredients? If only one is lacking it will disintegrate. This is my problem. Mr. Rasmussen described it to me with little sketches conveying the life and the beauty of the bazaar; which through its decided dimension, expresses so finally the self-containment of an inspired way of life: it becomes the making of a world within the world. In the same way, in this thousand acre reservation, one should feel the character of this entity.

In the plan of the assembly I have introduced Drawings
a light giving element to the interior of the plan. 17 thru 22
Consider if you see a series of columns you can say that the choice of columns is a choice in light. The columns as solids frame the spaces of

light. Now think of it just in reverse and think that the columns are hollow and much bigger and that their walls can themselves give light, then the voids are rooms, and the column is the maker of light and can take on complex shapes and be the supporter of spaces and give light to spaces.

What I am working on is to develop the element to such an extent that it becomes a poetic entity which has its beauty outside of its place in composition as well as when it is a part of it. In this way it becomes analogous to the solid column I mentioned above. The problem of the element of composition appears again in the making of the anti-glare porches for the hostels. The element must recognize that the light be on the inside of the porch as well as the outside. If you have light (not necessarily sunlight), on the interior, the contrast between the solids and the opening is not great, and therefore, you do not feel the glare. The staggering of porches as the building rises offers the chance to get light into the porch, but a sliver of light is needed to give the presence of light in the interior. The sun is unwelcome. So far I have not solved the problem. I am stating it, but I have not solved it. The various explorations I have made of possible openings, some reminiscent of the past, are not really concrete forms although I think some of these are much more so than others.

Since the first program given to me, addenda have arrived which changed the proportions of the accommodations on either side of the lake. Study given to the breeze and the sun has re-oriented buildings on the lake causing new groupings though the direction of the original lines are retained. The esplanade has grown into an entrance garden replacing some of the lake. Many of the sketches are intended to answer the order of geometry which would become a dimensioning system. The transformation from its rule to a freer play will be a constant course of study of the building and the site.

Louis I. Kahn
May 1964

1. The lake and the citadel of the assembly
crayon in sketchbook, actual size

Drawing
16

Drawings
29, 30, 35

5250
9500

5250 = 9600

$\frac{3}{4}x = 9600$

$9600 \times \frac{5250}{9500} = 5250 \times 1.01$
 $10000 \times \frac{17000}{10000} = 17000$
 $10000 \times \frac{10000}{10000} = 10000$

3600×1.0000
 10000

$\frac{10000}{x} =$

$\frac{2}{x} =$

$\frac{100}{3500}$
 $\frac{100}{9000}$

$\frac{1}{x} = 2$

$\frac{1}{x} \times 10000 = \frac{10000}{x}$
 $\frac{1}{x} \times 5000 = \frac{5000}{x}$

$\frac{1}{x} =$

$\frac{100}{50} = 2$
 $\frac{100}{50} = 2$

$\frac{100}{50} = 2$

$\frac{100}{50} = 2$

$\frac{100}{50} = 2$

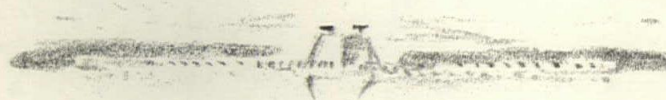
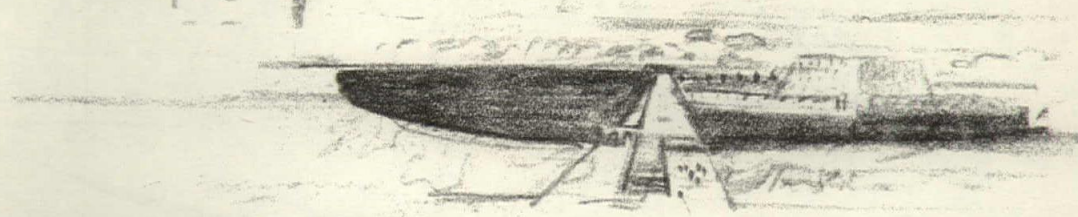
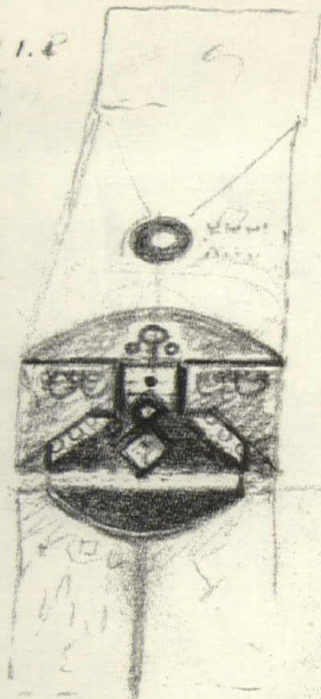
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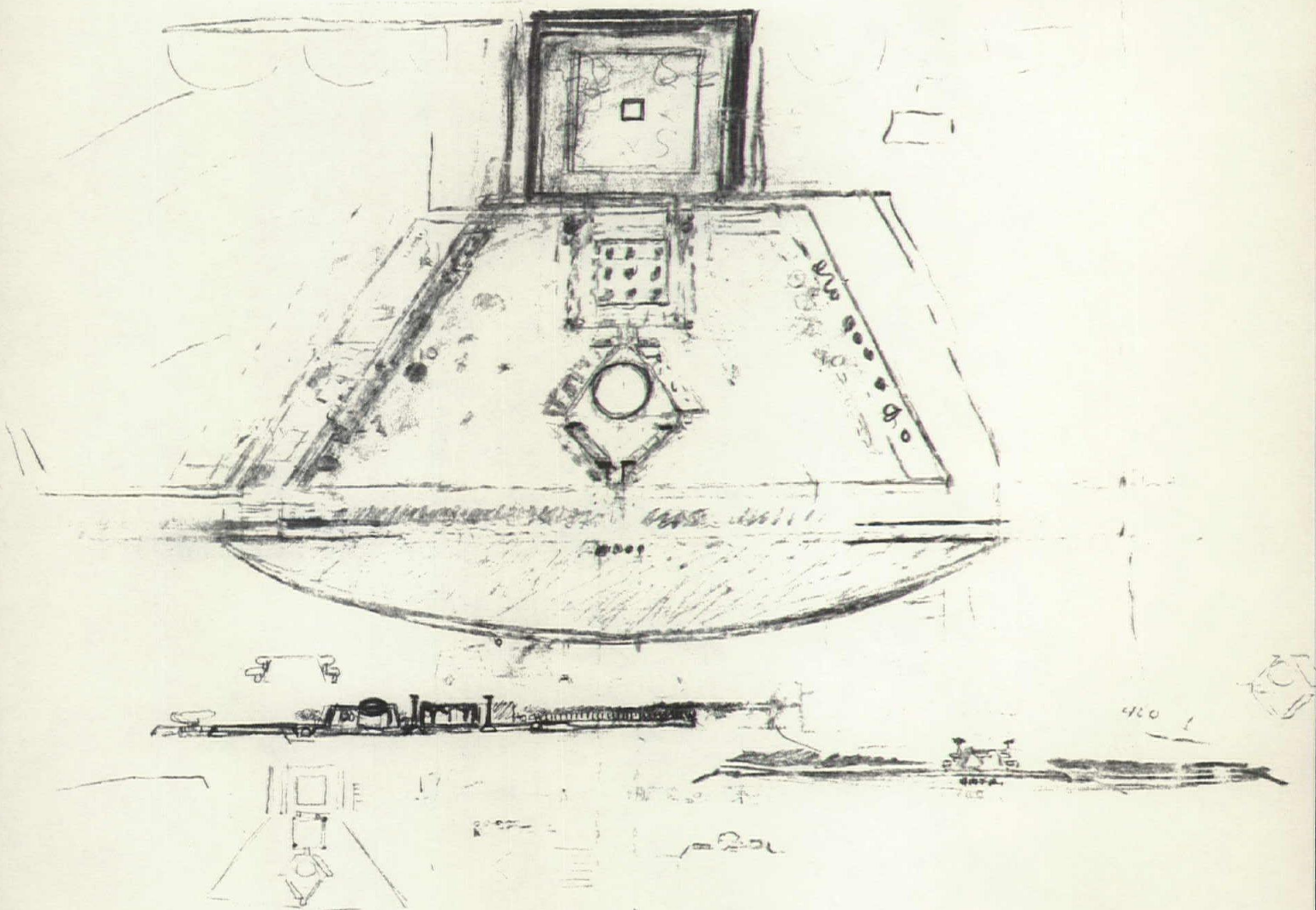
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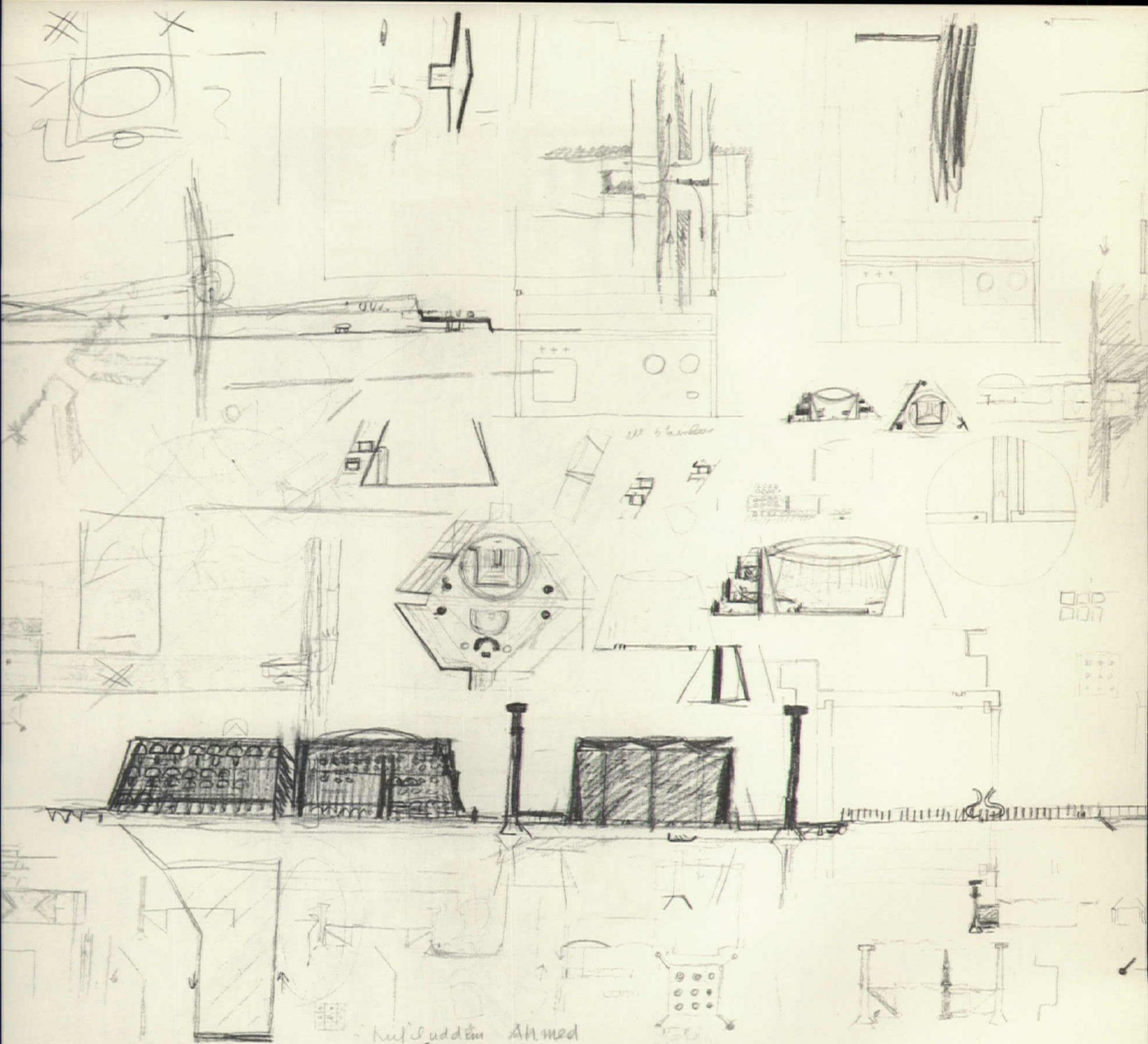
Dacca - 2300
of Pakistan,
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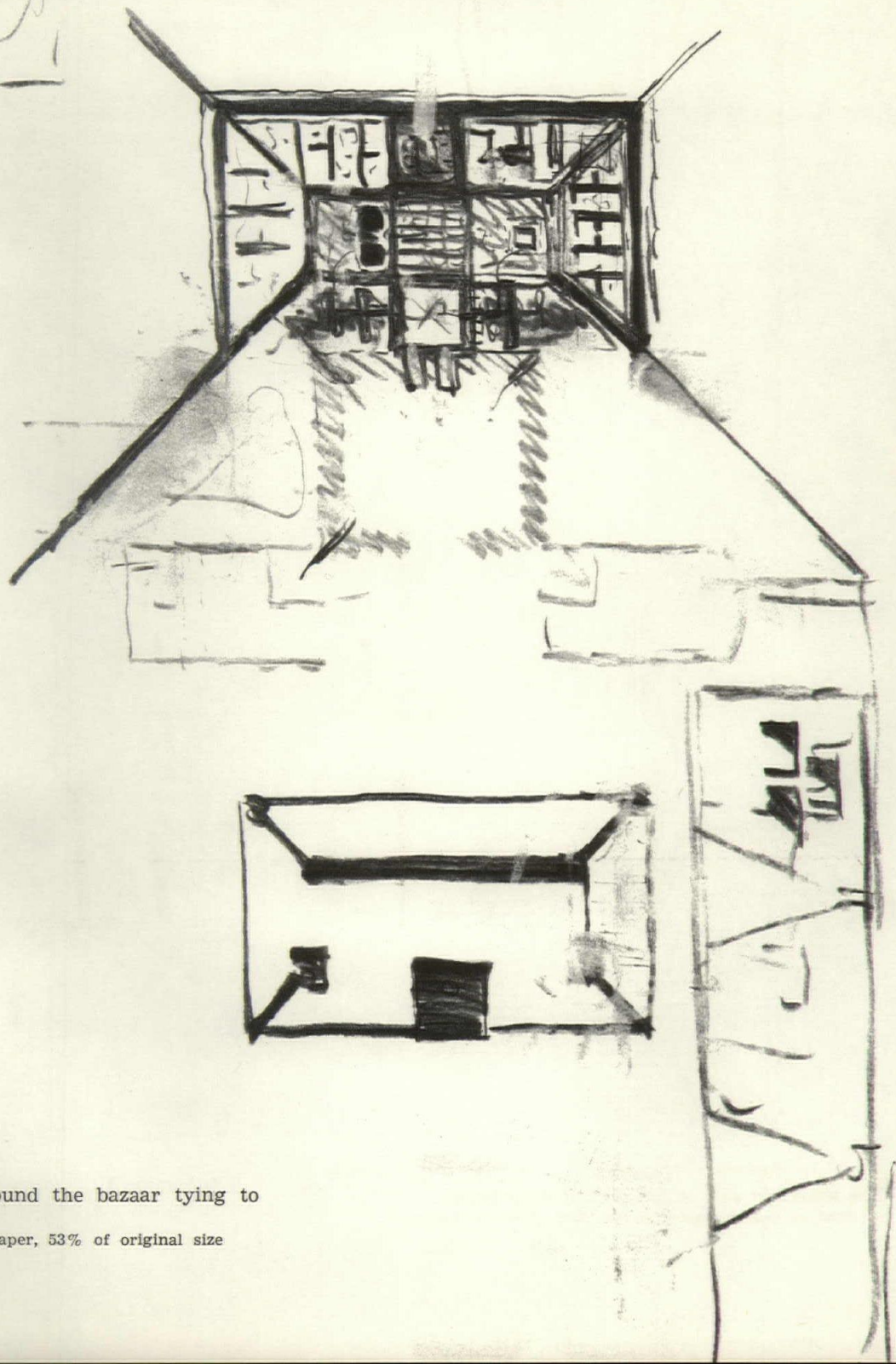
2. The assembly, hostels, supreme court and its garden on the lake
crayon on yellow tracing paper, 38% of original size



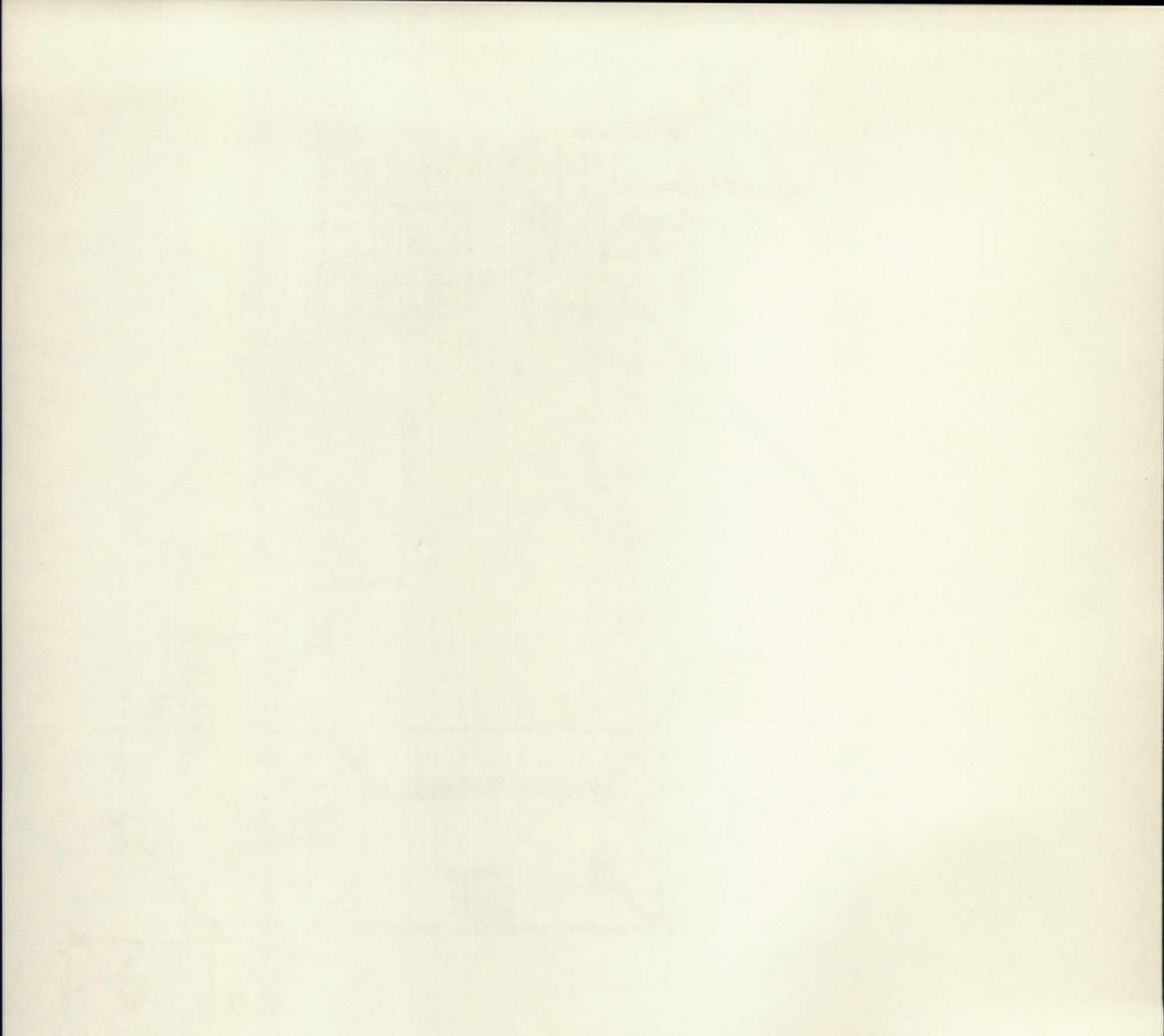
3. Study of distance between the two citadels
crayon on yellow tracing paper, 36% of original size



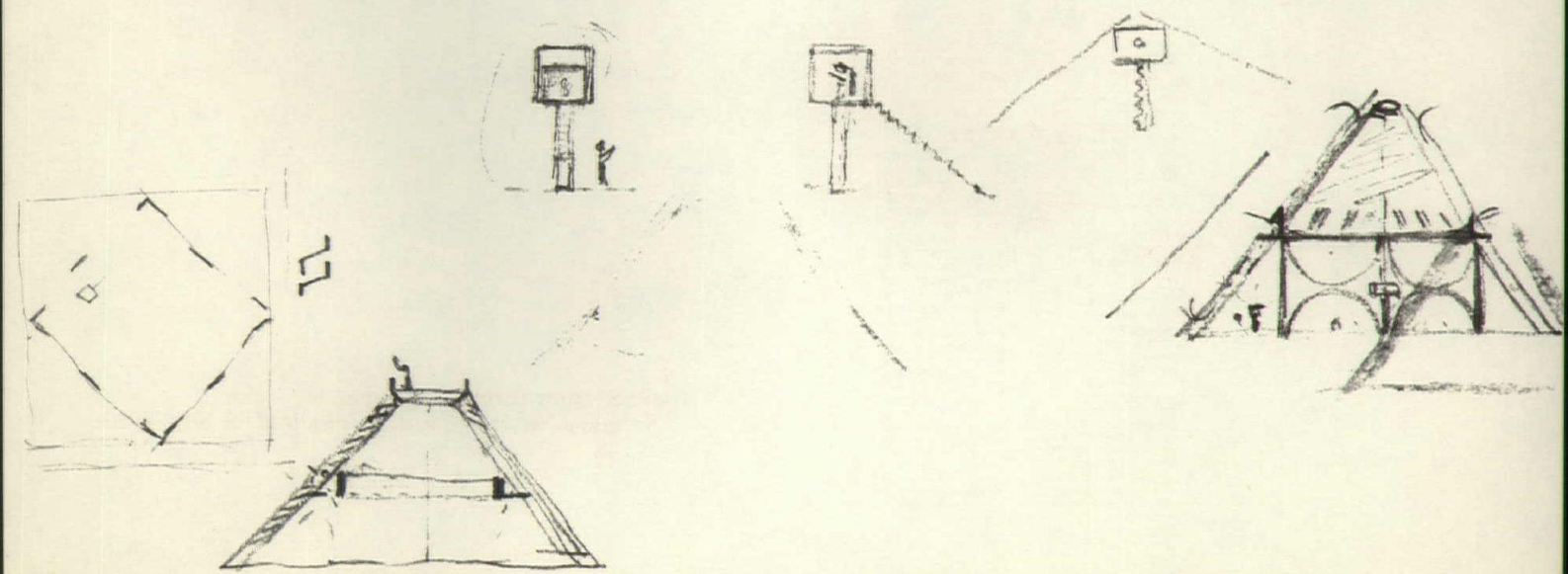
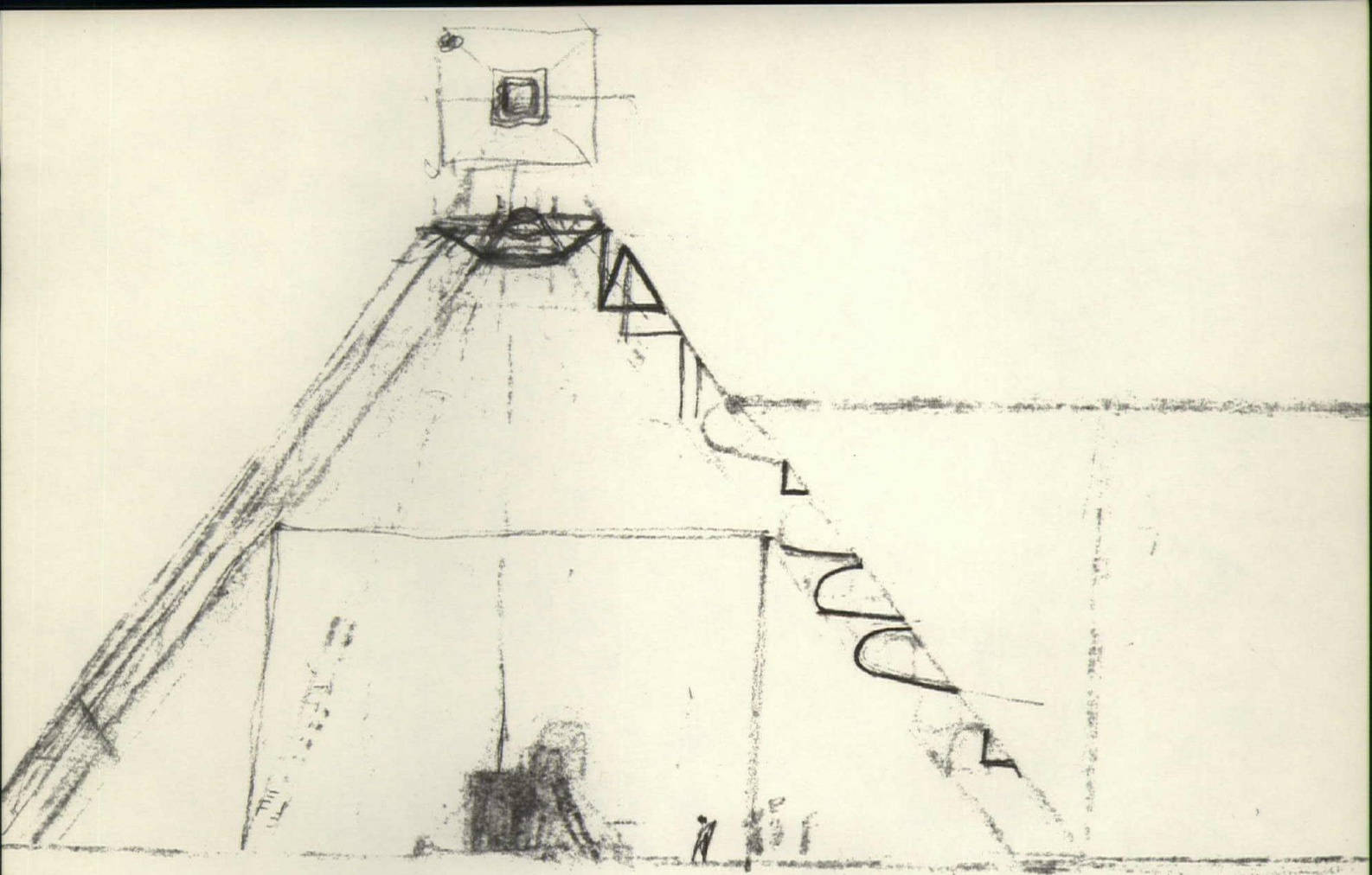
4. The assembly and impression of its mosque
charcoal on yellow tracing paper, 36% of original size



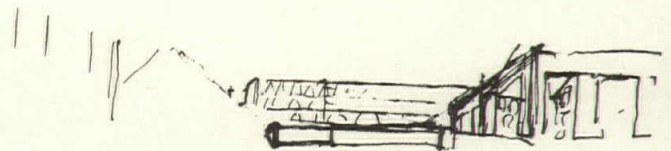
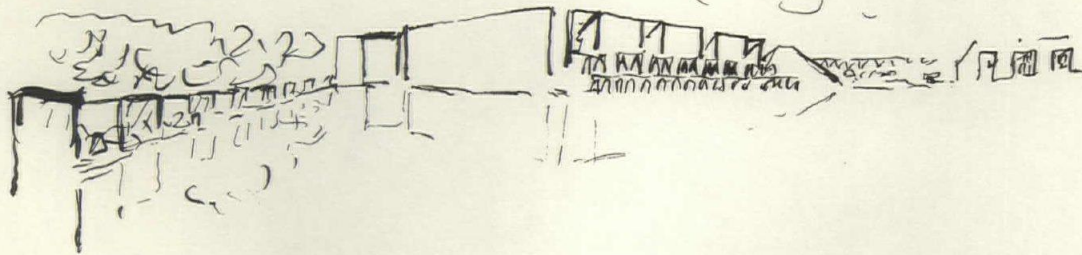
5. Satellite institutions around the bazaar tying to
the major institutions
charcoal on yellow tracing paper, 53% of original size

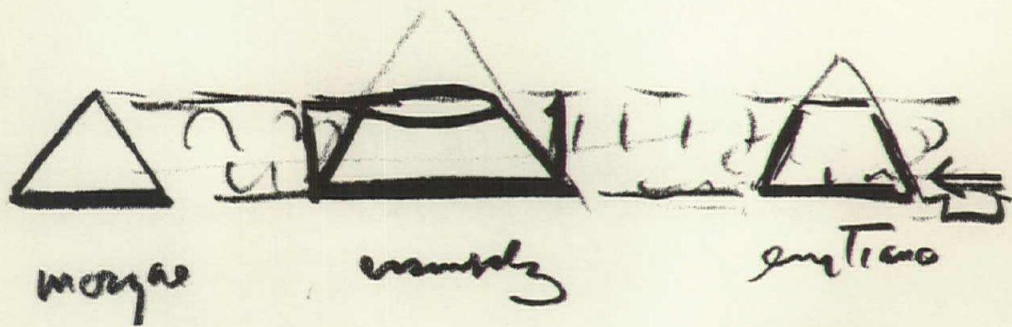
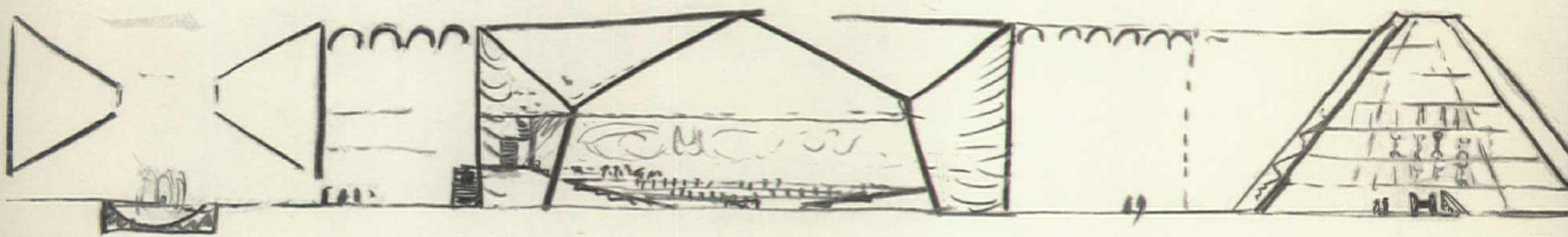


6. Section through mosque for light
crayon on yellow tracing paper, 75% of original size

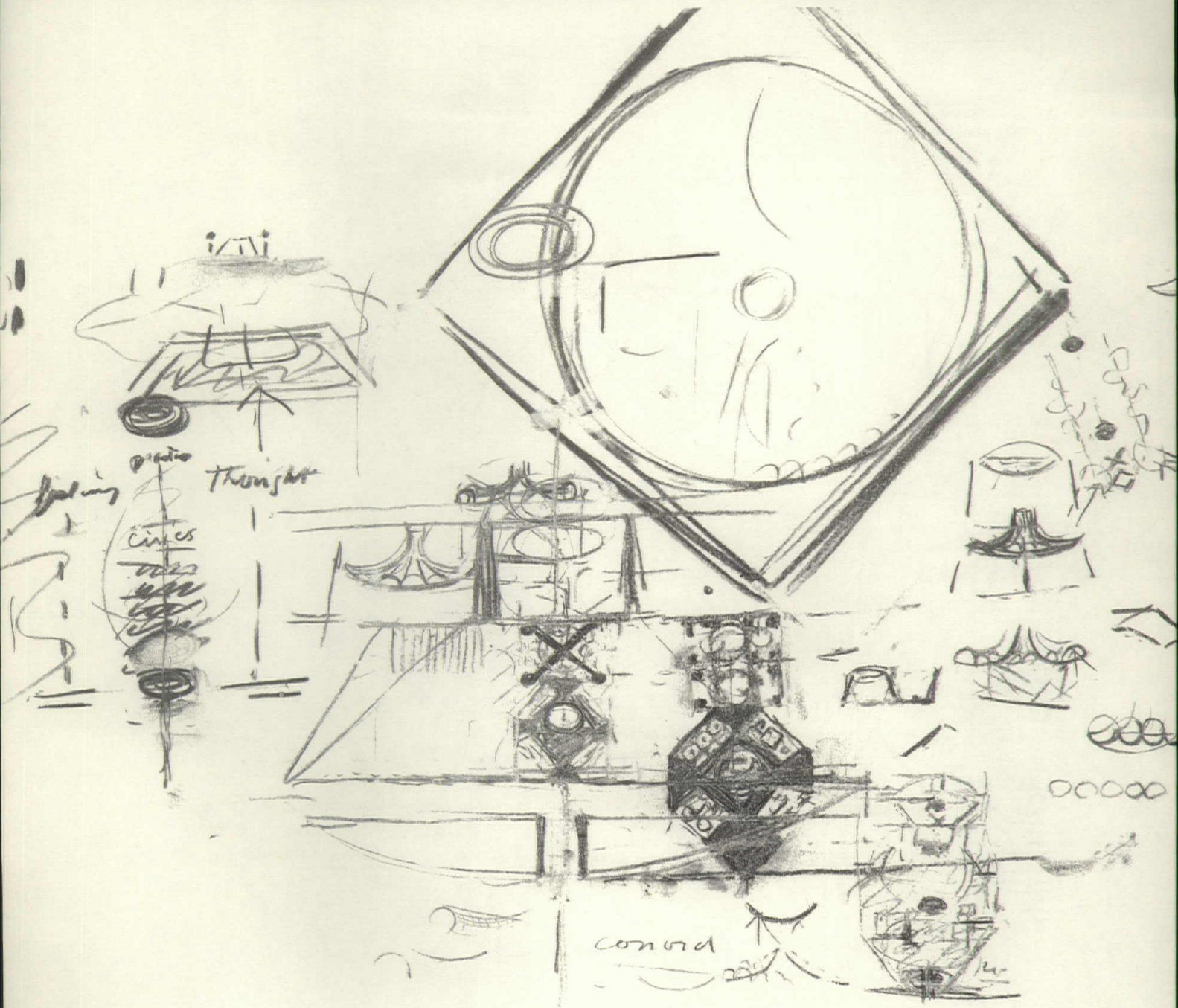


7. Assembly and mosque
ink on white paper, actual size



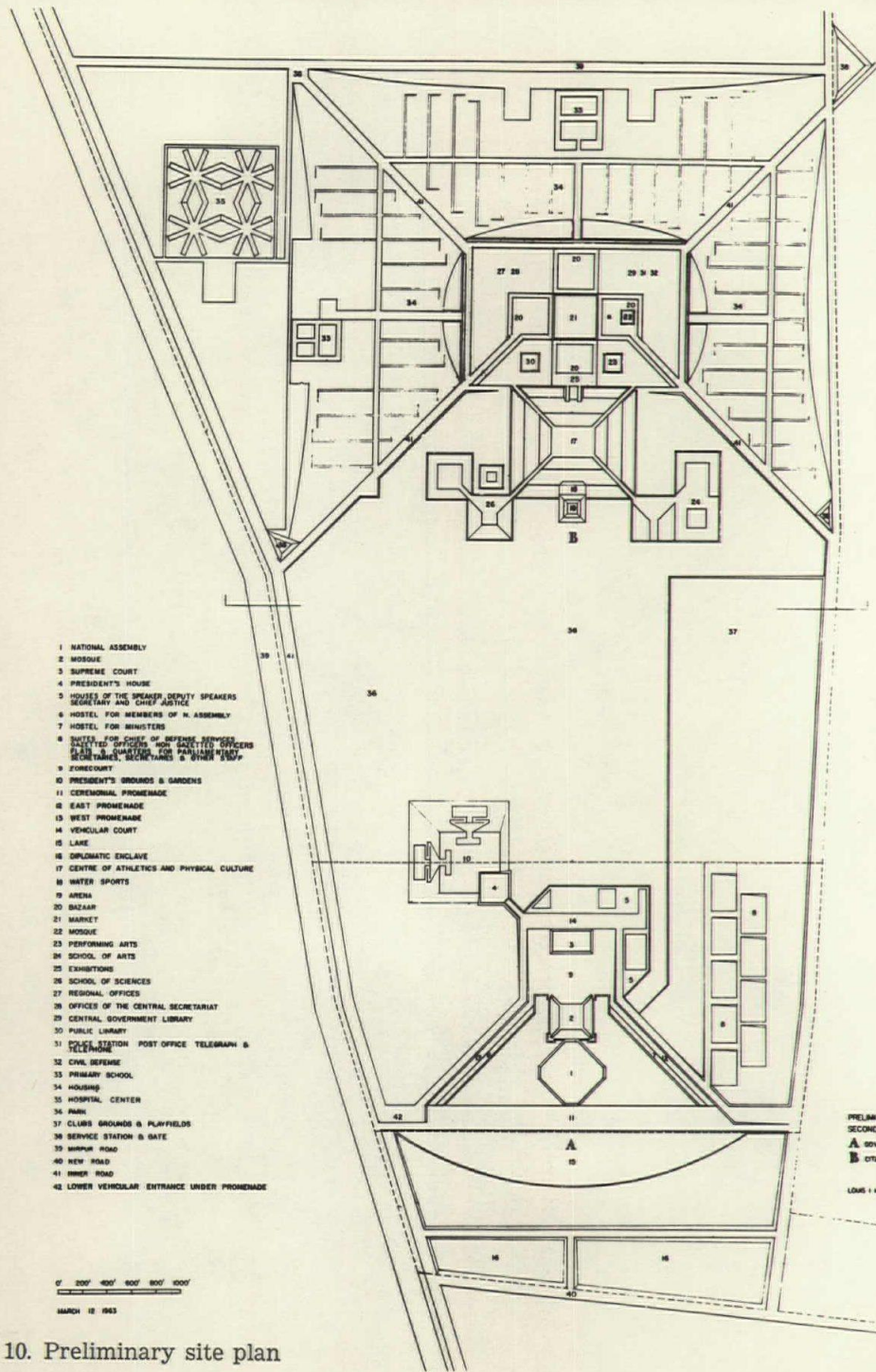


8. Sections through mosque, assembly and entrance
 crayon on yellow tracing paper, (top) 23% of original size
 (bottom) actual size



9. Site and building studies

charcoal on yellow tracing paper, 38% of original size



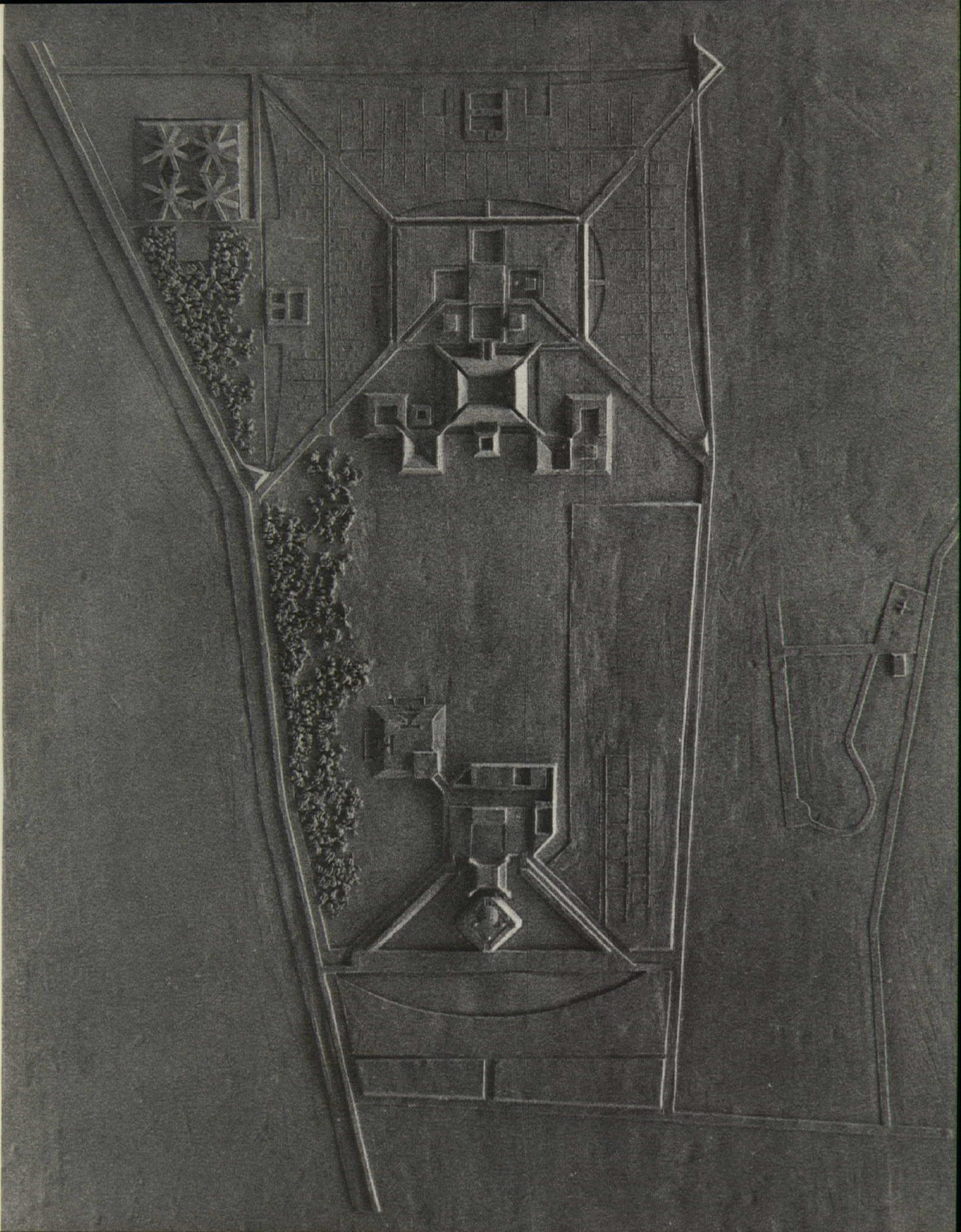
10. Preliminary site plan



PRELIMINARY PROPOSAL TOWARDS A MASTER
 SECOND CAPITAL OF PAKISTAN IN DACCA
 A GOVERNMENT CITADEL
 B CITADEL OF THE INSTITUTIONS

LOUIS I KAHN ARCHITECT

11. Preliminary site model



A

- 1 NATIONAL ASSEMBLY
- 2 HOSTELS FOR MHA'S MINISTERS & SECRETARIES
- 3 HOUSES FOR SPEAKER DEPUTY SPEAKER & SECRETARY
- 4 HOUSES TYPES B, C, D, E, F, G, H
- 5 CEREMONIAL PROMENADE
- 6 ACCESS TO PROMENADE & LOWER VEHICULAR ENTRANCE
- 7 LAKE
- 8 FORECOURT
- 9 SUPREME COURT
- 10 FEDERAL SECRETARIAT
- 11 CENTRAL GOVERNMENT LIBRARY
- 12 VEHICULAR & PEDESTRIAN COURT
- 13 ACCESS STREET

B

- 14 HOSPITAL CENTER
- 15 CENTER OF ATHLETICS & PHYSICAL CULTURE
- 16 WATER SPORTS
- 17 ARENA
- 18 SCHOOL OF SCIENCES
- 19 SCHOOL OF ARTS
- 20 MOSQUE
- 21 PERFORMING ARTS
- 22 PUBLIC LIBRARY
- 23 EXHIBITIONS
- 24 PUBLIC SQUARE
- 25 OPEN MARKETS
- 26 MARKET
- 27 REGIONAL OFFICES, POLICE STATION, P.T.T. & CIVIL DEFENSE
- 28 SERVICE BUILDINGS

- 29 PARK
- 30 HOUSING
- 31 HIRPUR ROAD
- 32 INNER ROAD
- 33 NEW ROAD

0 200 400 600 800 1000

MAY 3 1963

SCHEME 2

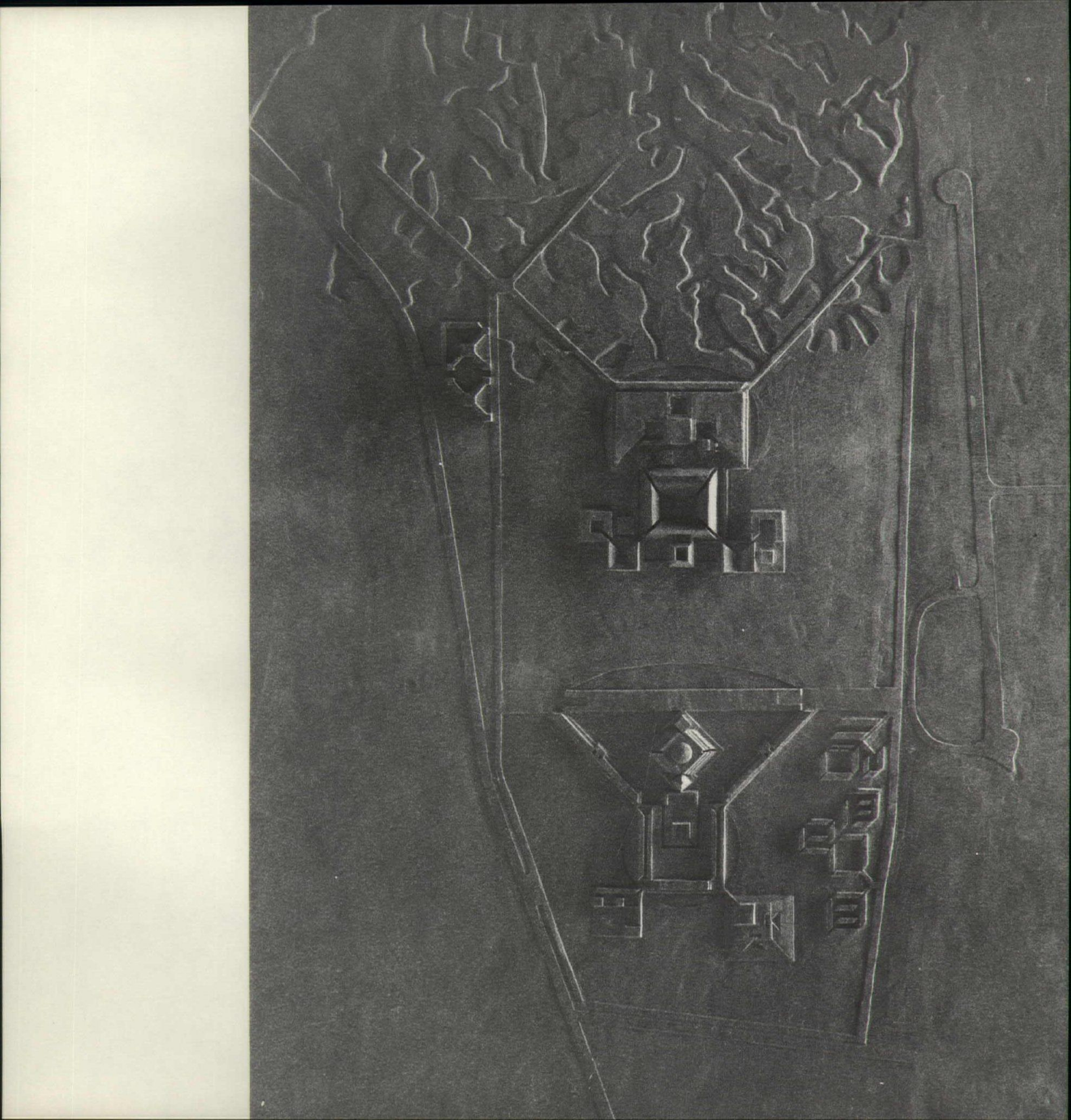
PRELIMINARY PROPOSAL TOWARDS A MASTER PLAN
SECOND CAPITAL OF PAKISTAN IN DACCA

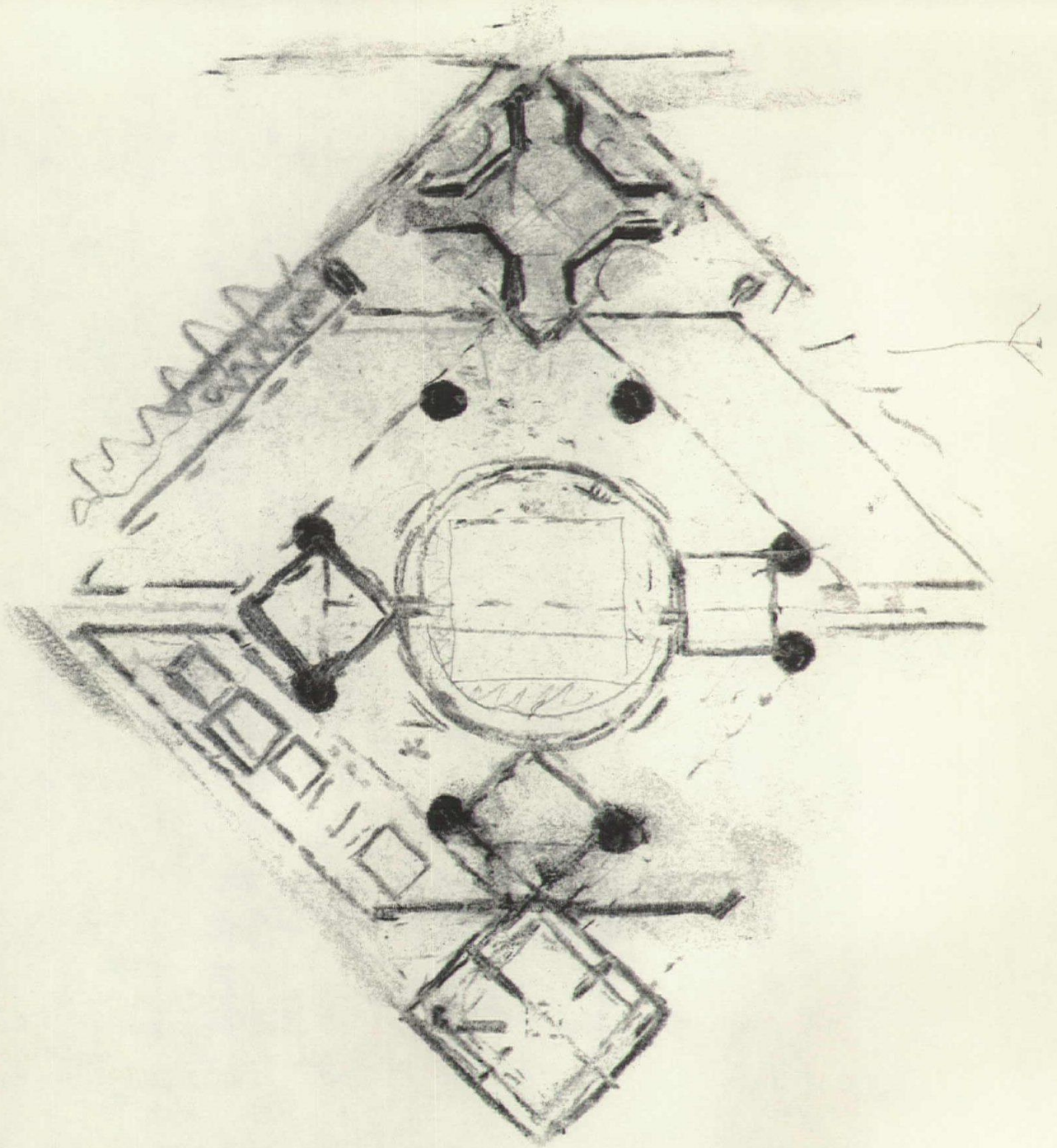
- ▲ CITADEL OF THE ASSEMBLY
■ CITADEL OF THE INSTITUTIONS

LOUIS I KAHN ARCHITECT

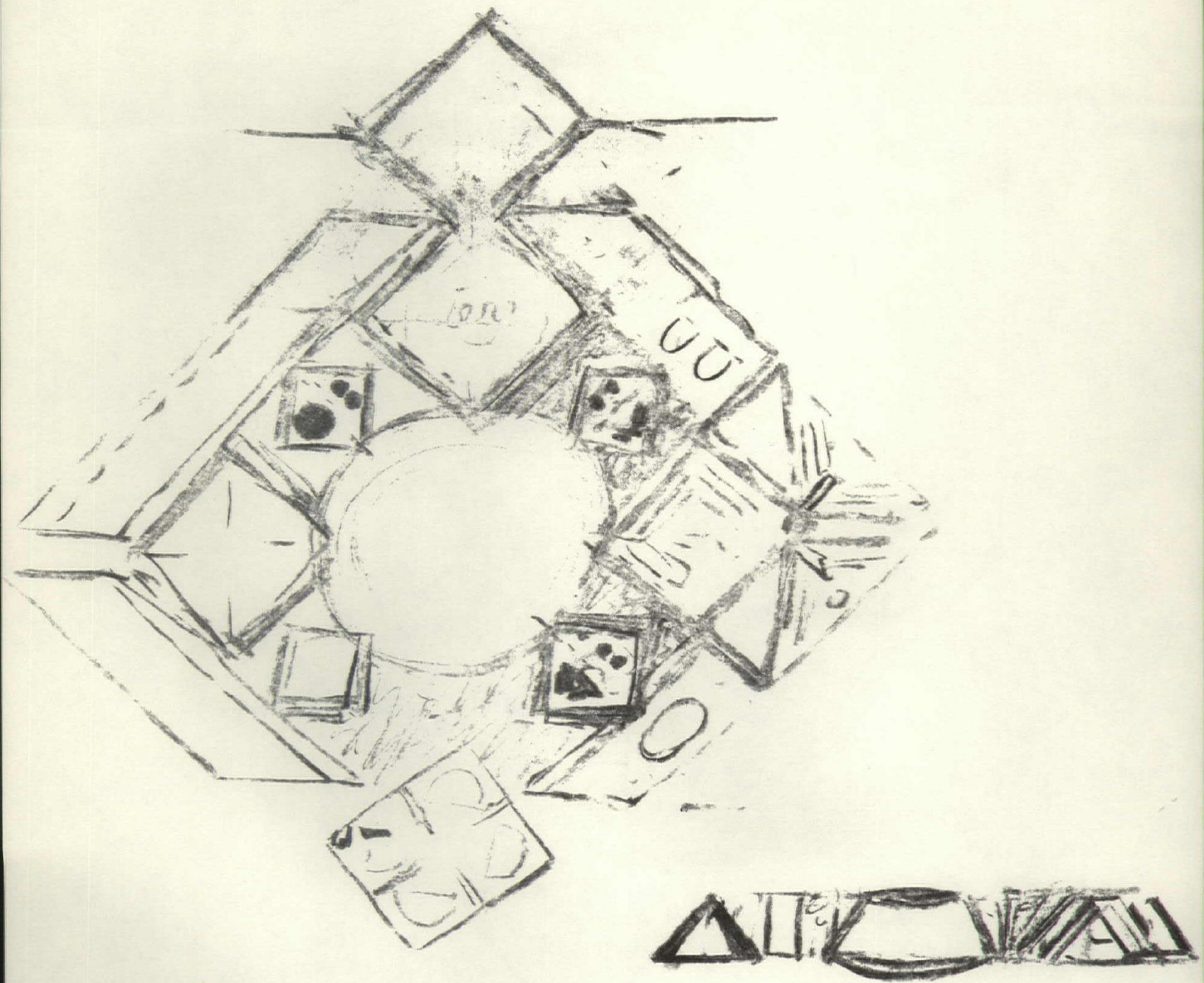
12. Preliminary site plan (second stage)

13. Preliminary site model (second stage)





14. Structure and service studies of assembly
charcoal on yellow tracing paper, 80% of original size

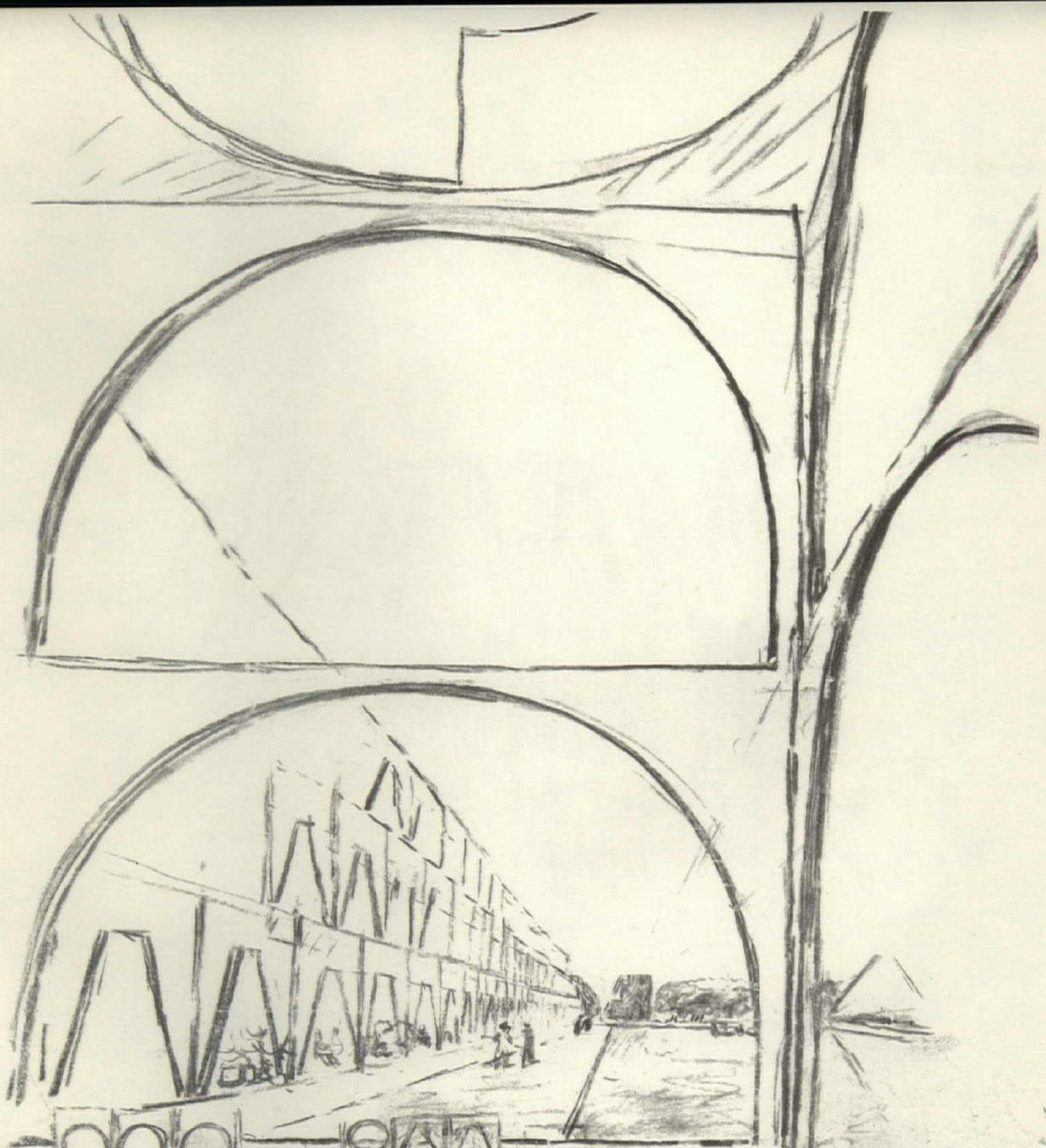


15. Structure and service studies of assembly
charcoal on yellow tracing paper, 61% of original size

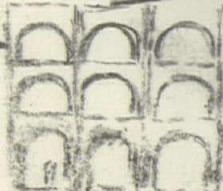
16. Study for the hostels

crayon on yellow tracing paper, 47% of original size

Glare is greatest when walls against the light are dark
Glare greatly modified as walls against the light receive light themselves
The light is reflected off wall to light the wall against light, thereby modifying glare. This idea is intended for the hostels and for the offices of the assembly building.

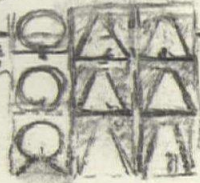


View of the Hostel walls



Alternate design for mass openings of the Hostels.

Walk over bridge over



The enclosed garden of the Dining and Living Center of the Hostels

Inside →



glass is greater, when walls against the light are dark

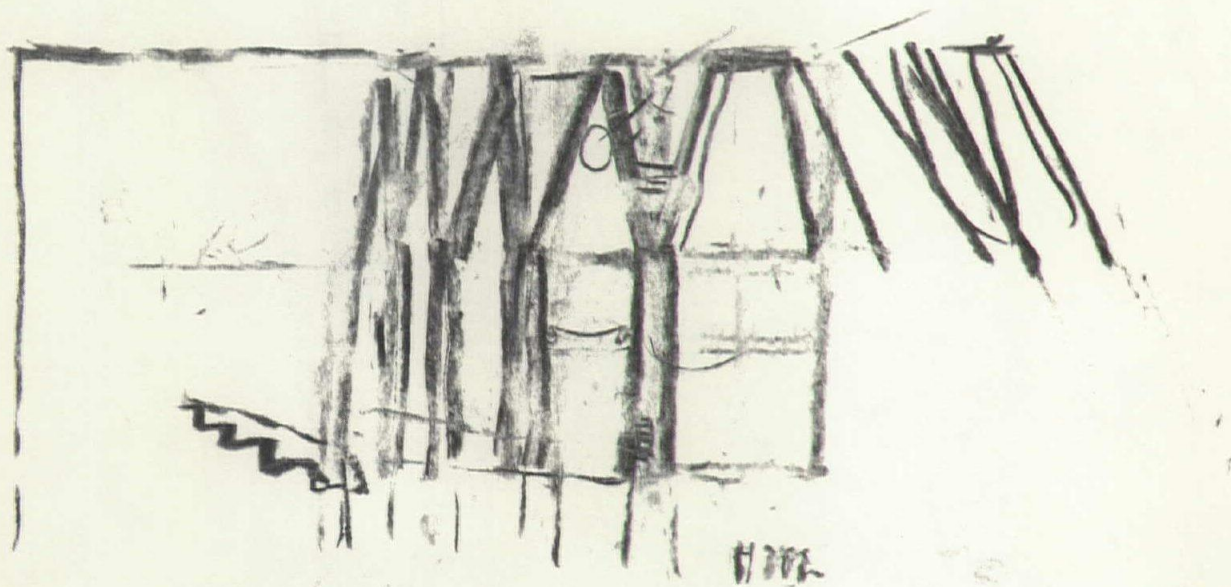


glass quantity modified as walls acquire the light because light then reflects

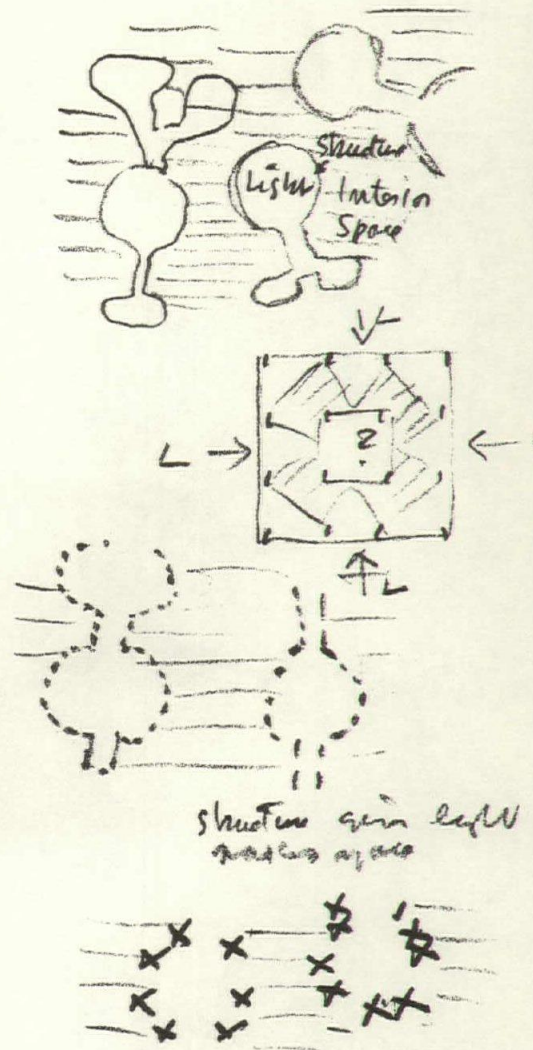


↙ The light is reflected off mass to light the mass against light. Hence by utilizing glass. This idea is intended for the hostels and for the office of the assembly building wing.



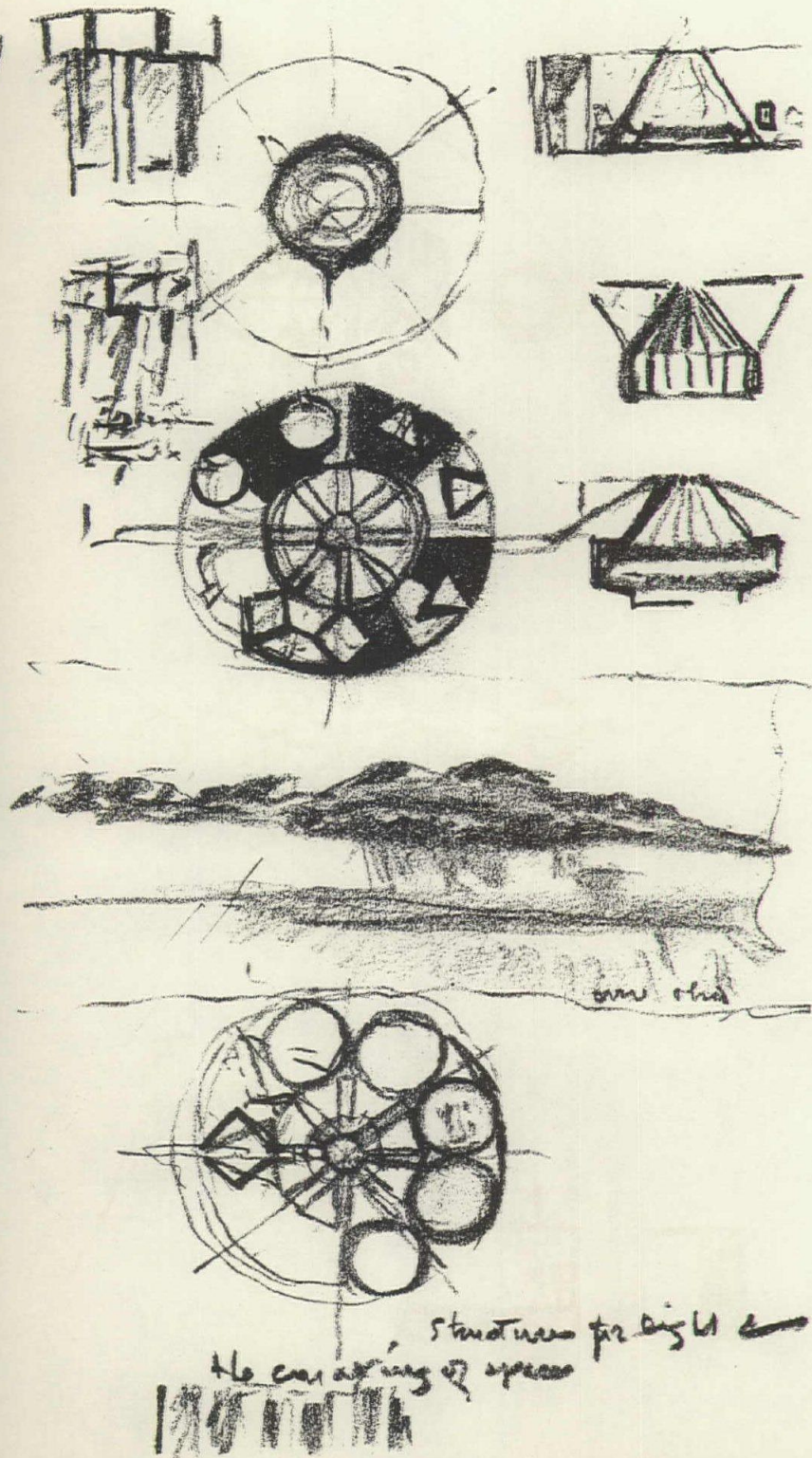


17. Spirit of the light-giving elements
charcoal on yellow tracing paper, 61% of original size



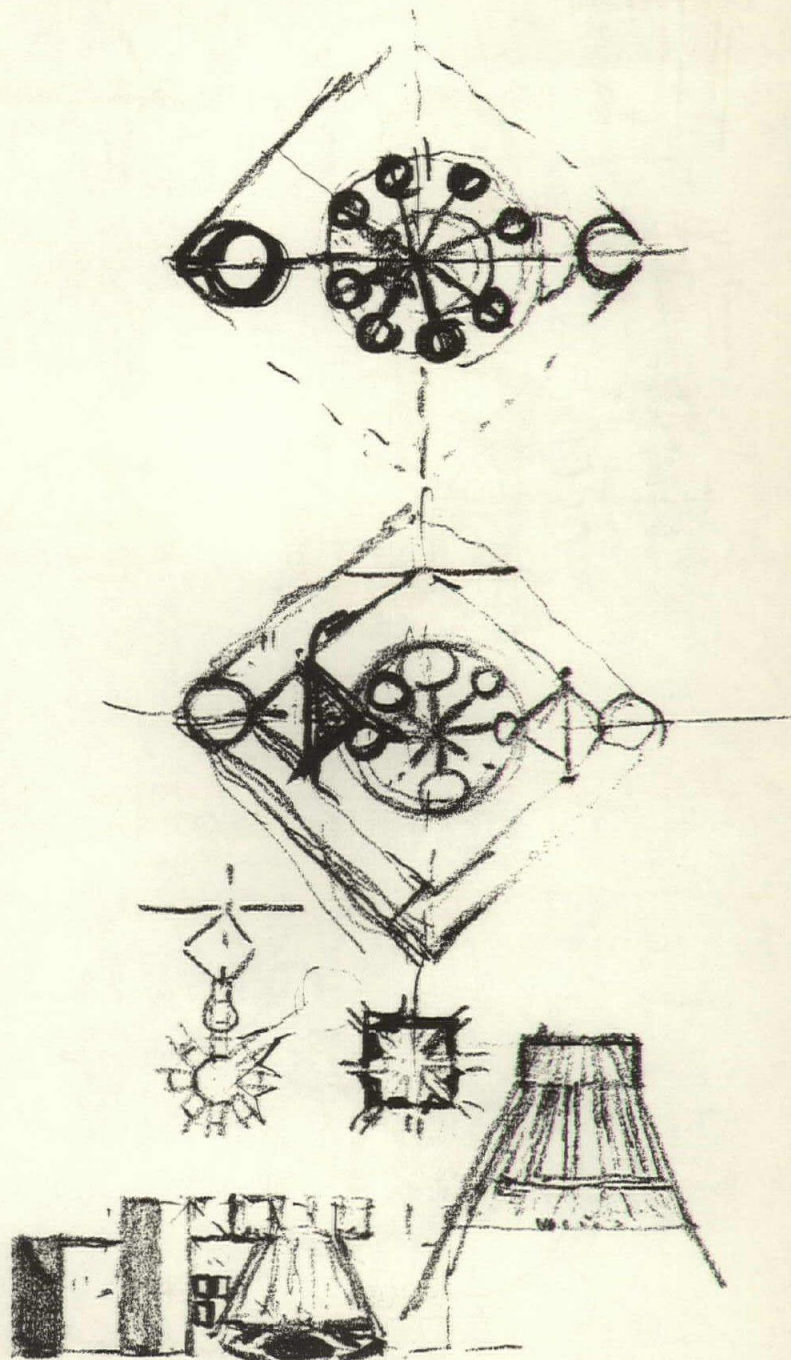
18. Improvisations on the light element
crayon in sketchbook, 121% of original size

structure gives light makes space

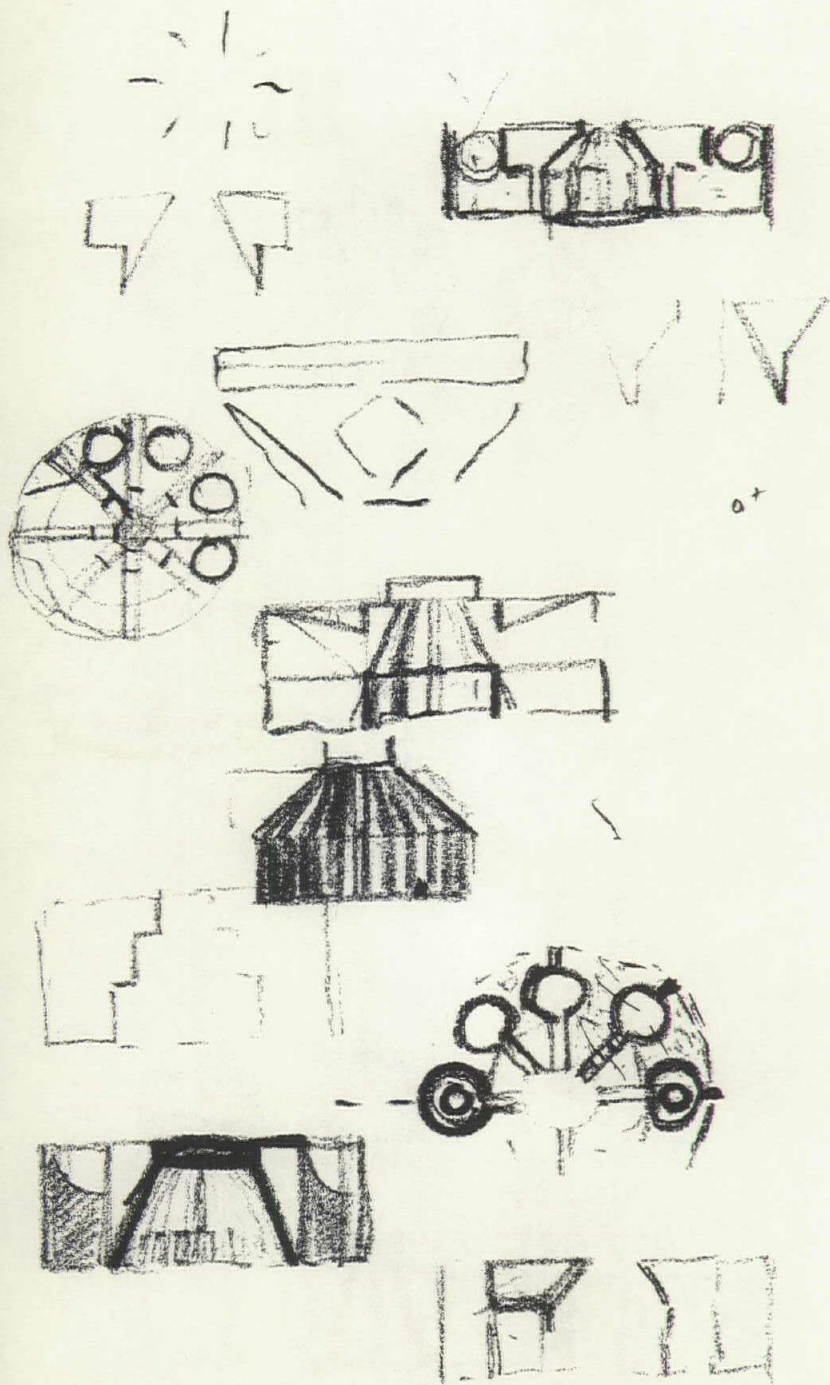


19. Studies of light elements and assembly structure
 crayon in sketchbook, 121% of original size

structures for light and the making of spaces

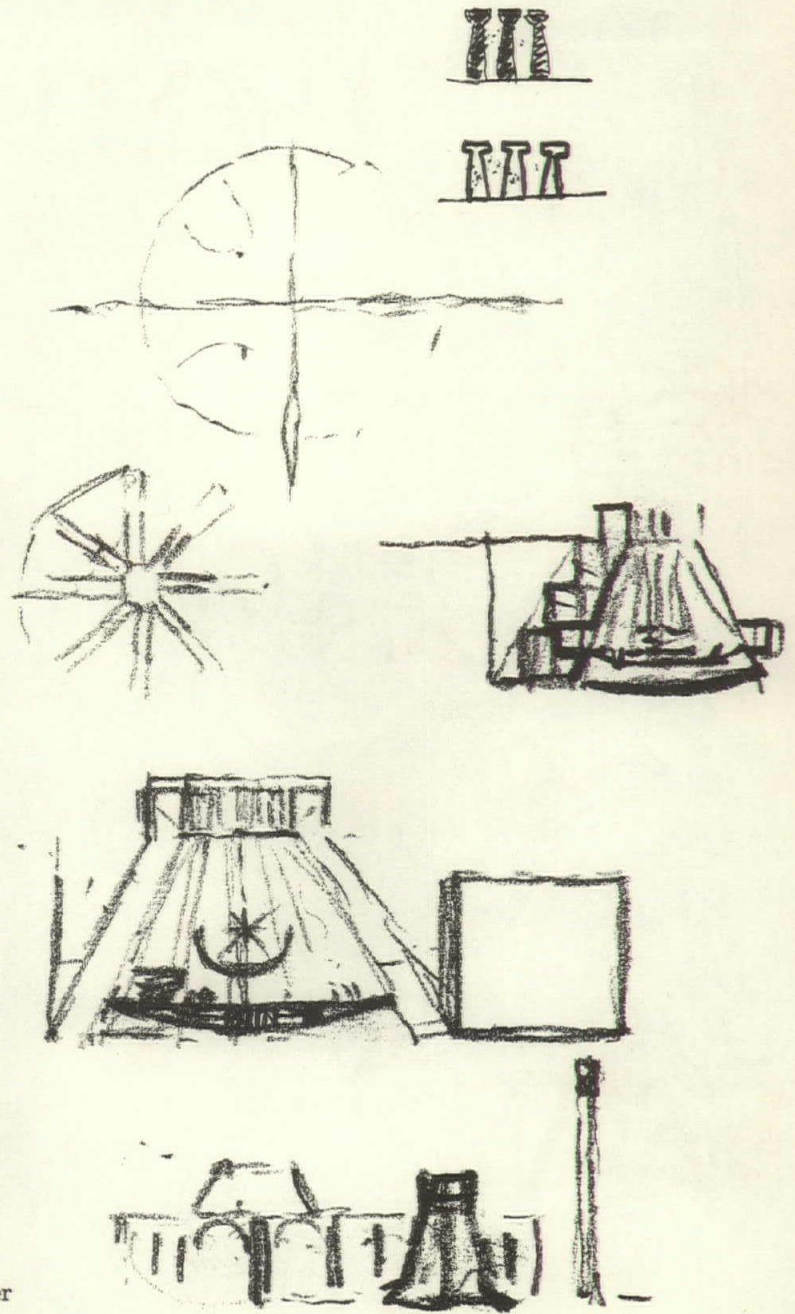


20. Studies of light elements and assembly structure
crayon in sketchbook, 121% of original size

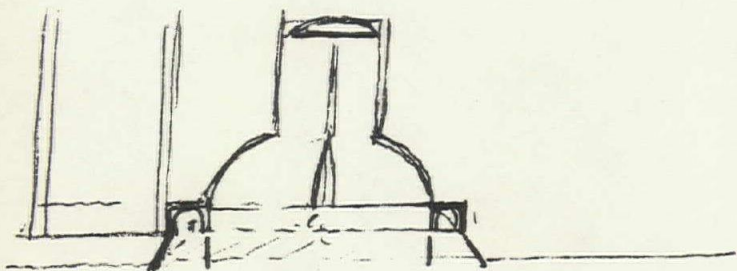


21. Study of assembly and light well
crayon in sketchbook, 121% of original size

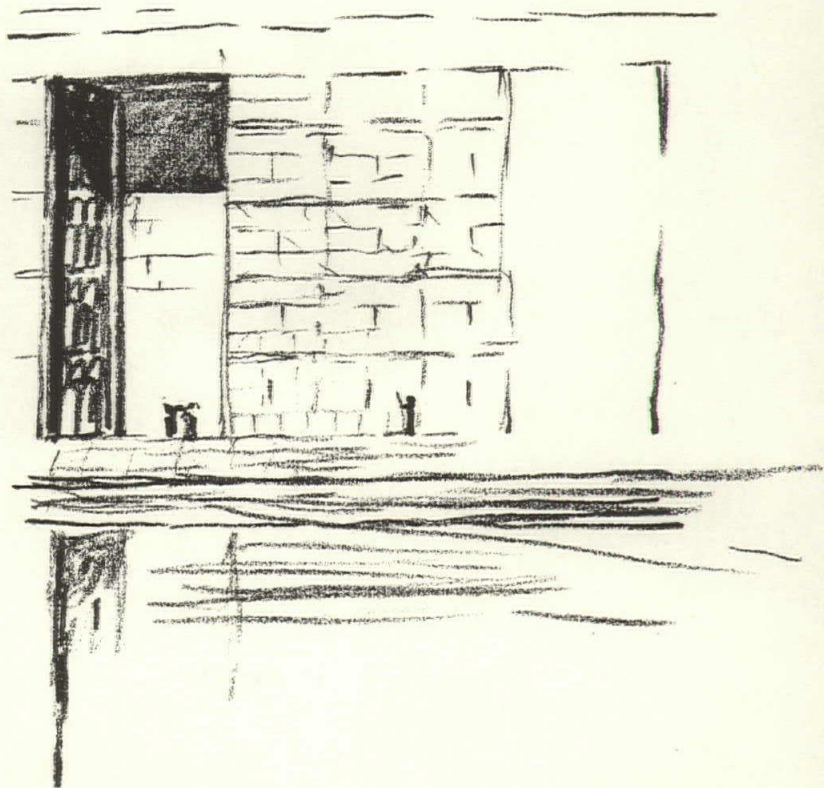
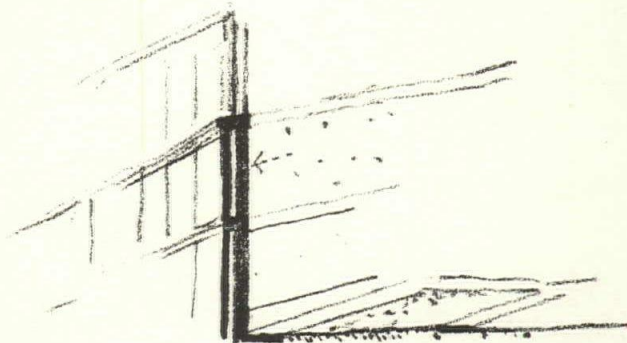
Nov 165



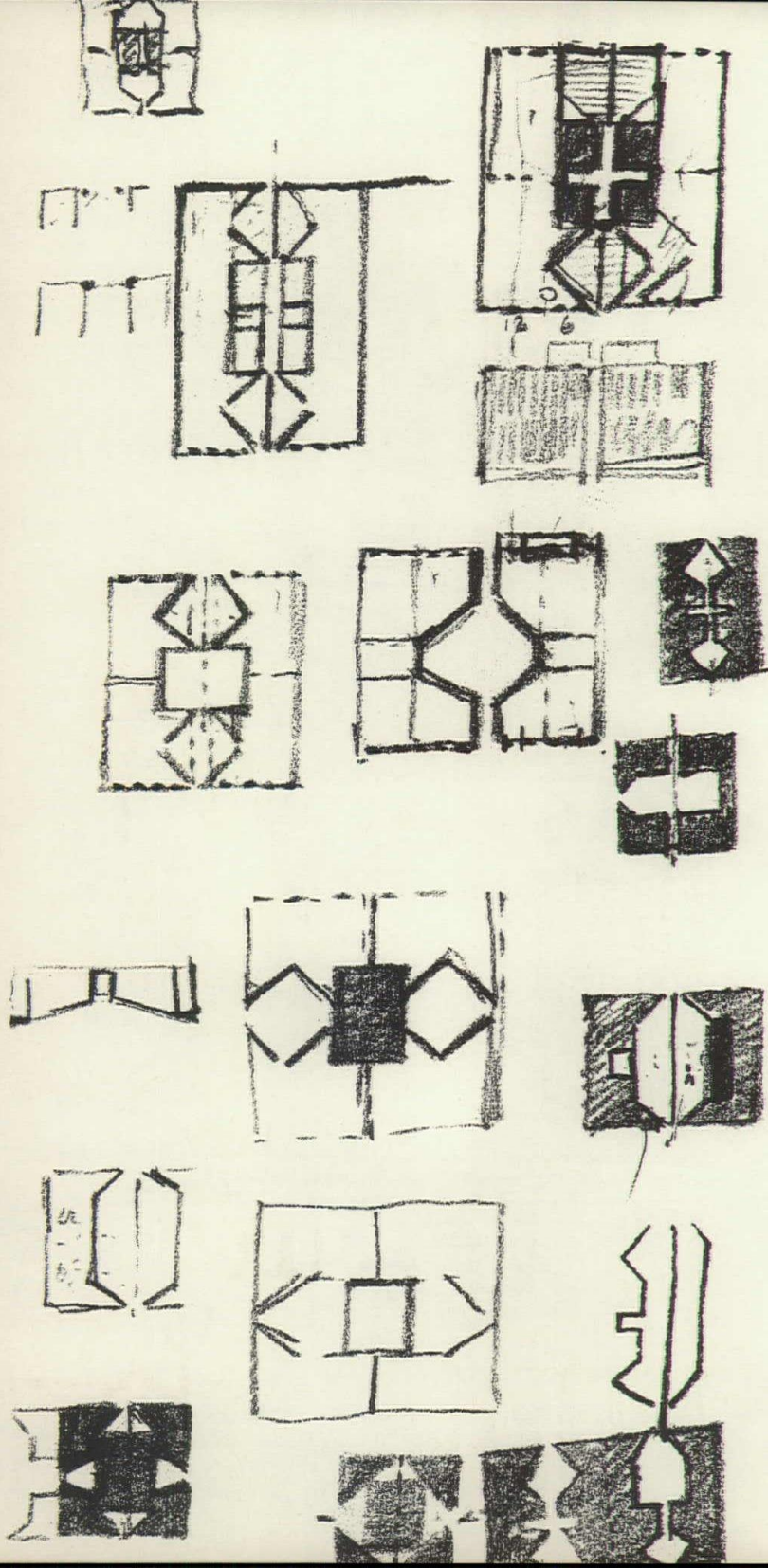
22. Explanation of column and light element and other studies
crayon in sketchbook, 121% of original size



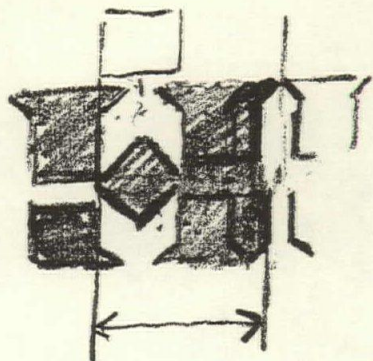
23. Studies of mosque and walls of assembly
crayon in sketchbook, 121% of original size



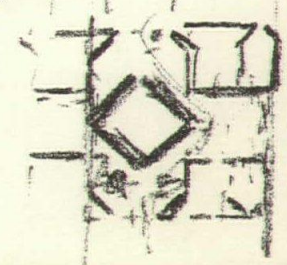
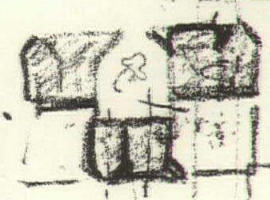
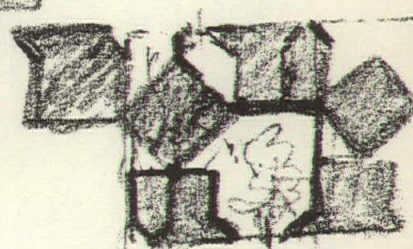
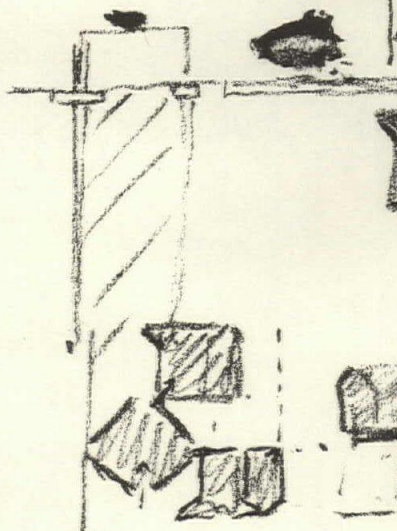
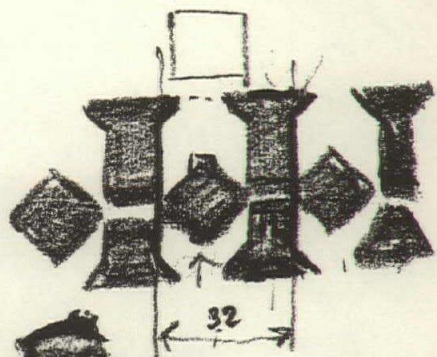
24. Walls of assembly
crayon in sketchbook, 121% of original size



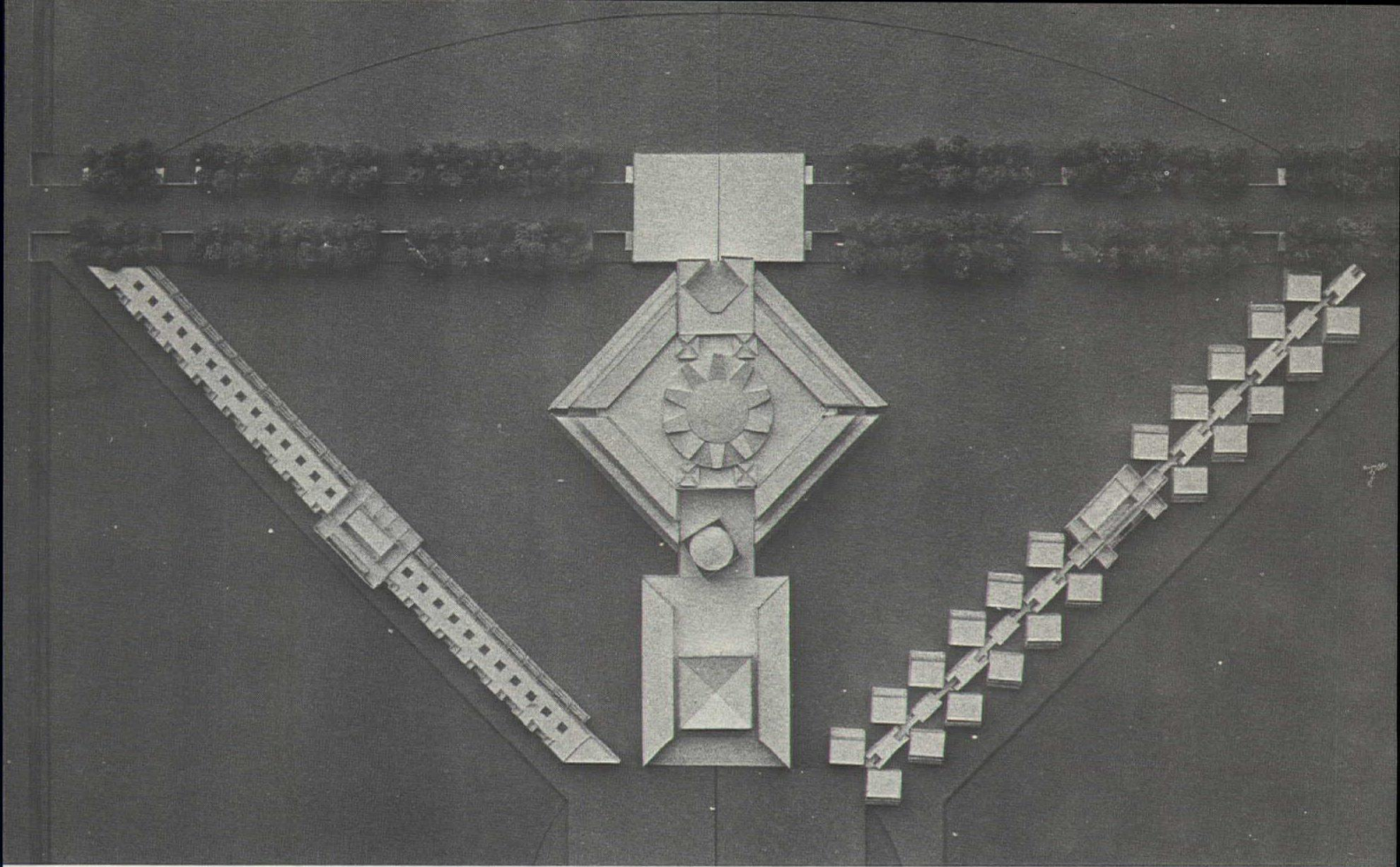
25. Houses and courts—studies
crayon in sketchbook, 121% of original size



127



26. Houses and courts—studies
crayon in sketchbook, 121% of original size



27. Citadel of the assembly, preliminary model

- 1 NATIONAL ASSEMBLY
- 2 HOSTELS FOR MNAS
- 3 HOSTELS FOR MINISTERS
- 4 HOSTELS FOR SECRETARIES
- 5 HOUSES FOR SPEAKER DEPUTY SPEAKER & SECRETARY
- 6 HOUSES TYPES B,C,D,E,F,G,H
- 7 CEREMONIAL PROMENADE
- 8 LAKE
- 9 FORECOURT
- 10 SUPREME COURT
- 11 CENTRAL LIBRARY
- 12 CENTRAL GOVERNMENT SECRETARIAT

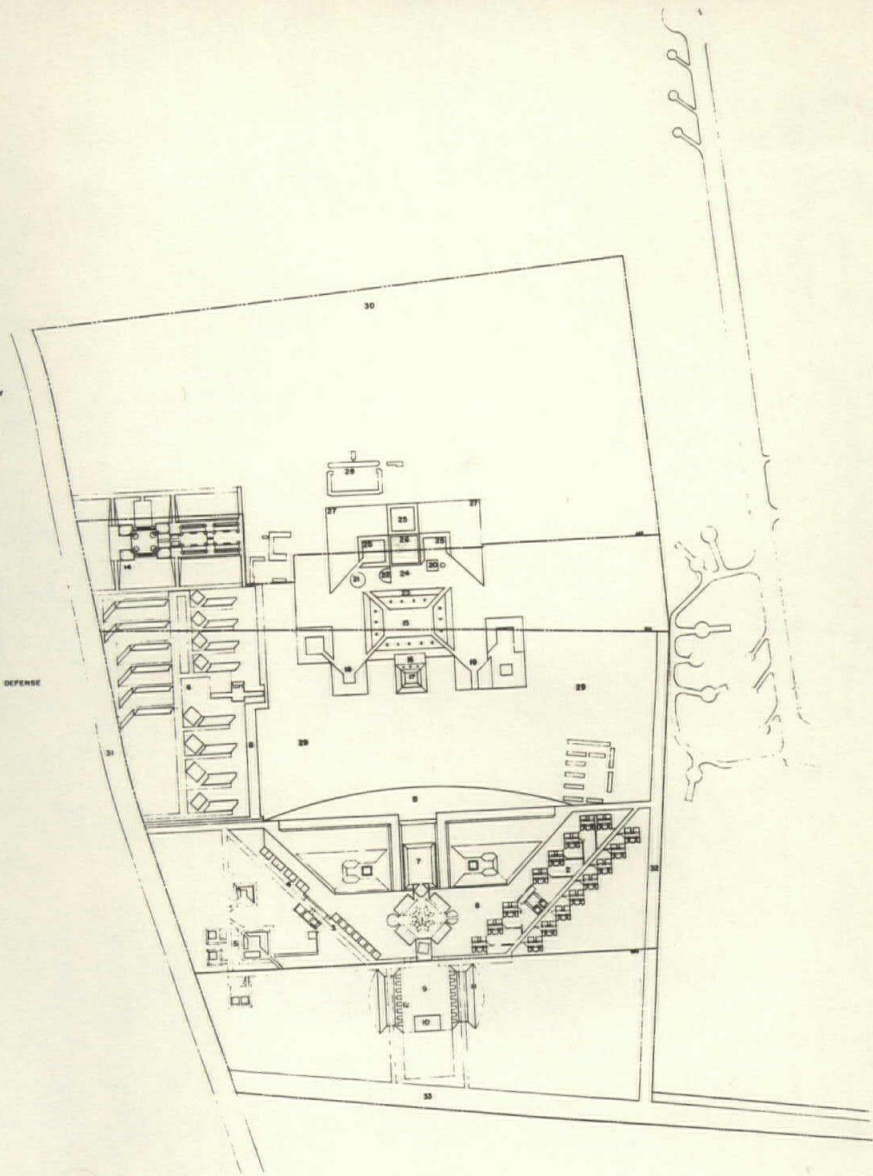
- 14 HOSPITAL CENTER
- 15 CENTER OF ATHLETICS & PHYSICAL CULTURE
- 16 WATER SPORTS
- 17 ARENA
- 18 SCHOOL OF SCIENCES
- 19 SCHOOL OF ARTS
- 20 MOSQUE
- 21 PERFORMING ARTS
- 22 PUBLIC LIBRARY
- 23 EXHIBITIONS
- 24 PUBLIC SQUARE
- 25 OPEN MARKETS
- 26 MARKET
- 27 REGIONAL OFFICES, POLICE STATION, PTT & CIVIL DEFENSE
- 28 EXISTING BUILDINGS
- 29 PARK
- 30 FUTURE DEVELOPMENT OF THE RESERVATION
- 31 INNER ROAD
- 32 NEW ROAD

0 200 400 600 800 1000

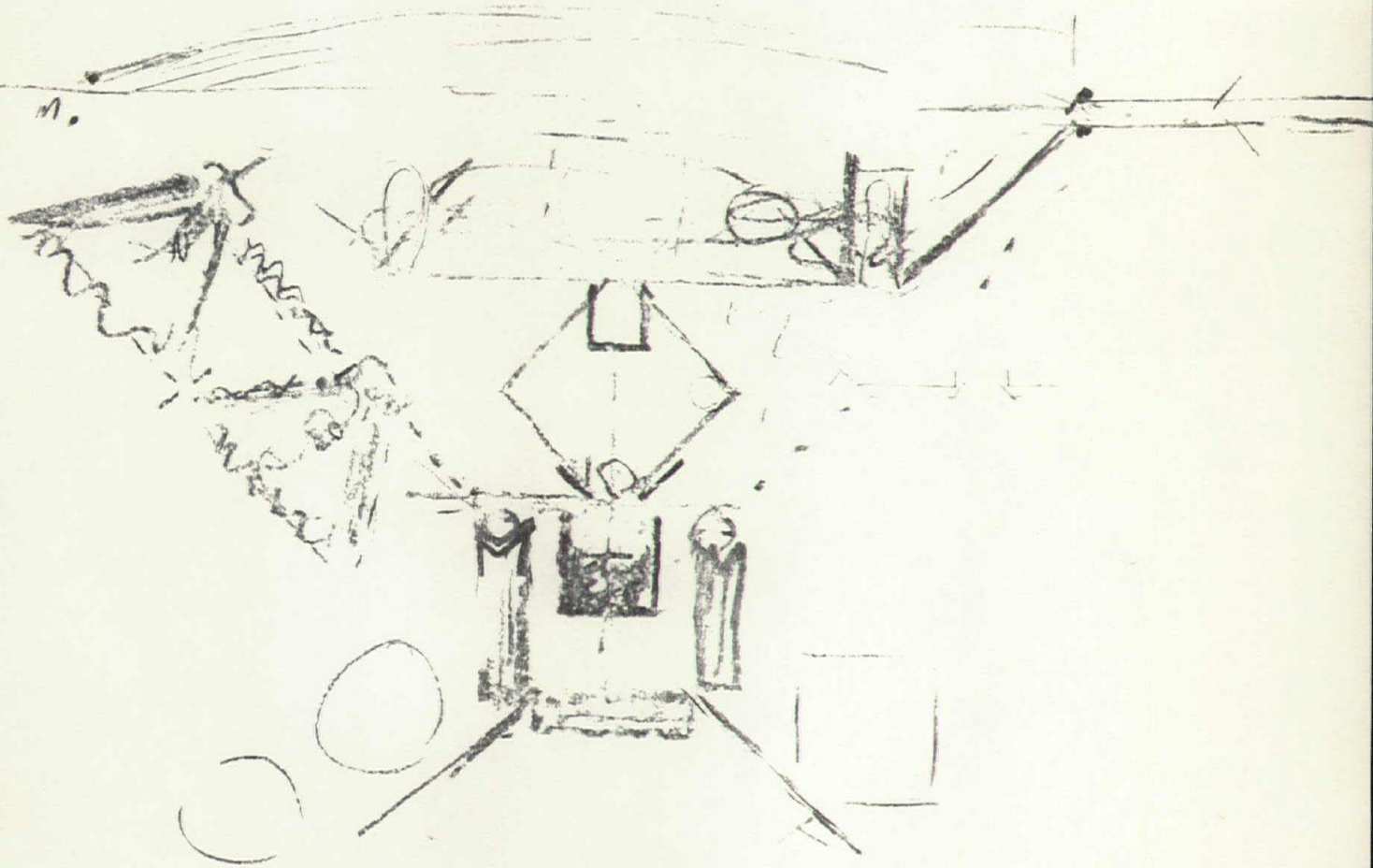
DECEMBER 21 1963

PRELIMINARY PROPOSAL TOWARDS A MASTER PLAN
SECOND CAPITAL OF PAKISTAN IN DACCIA

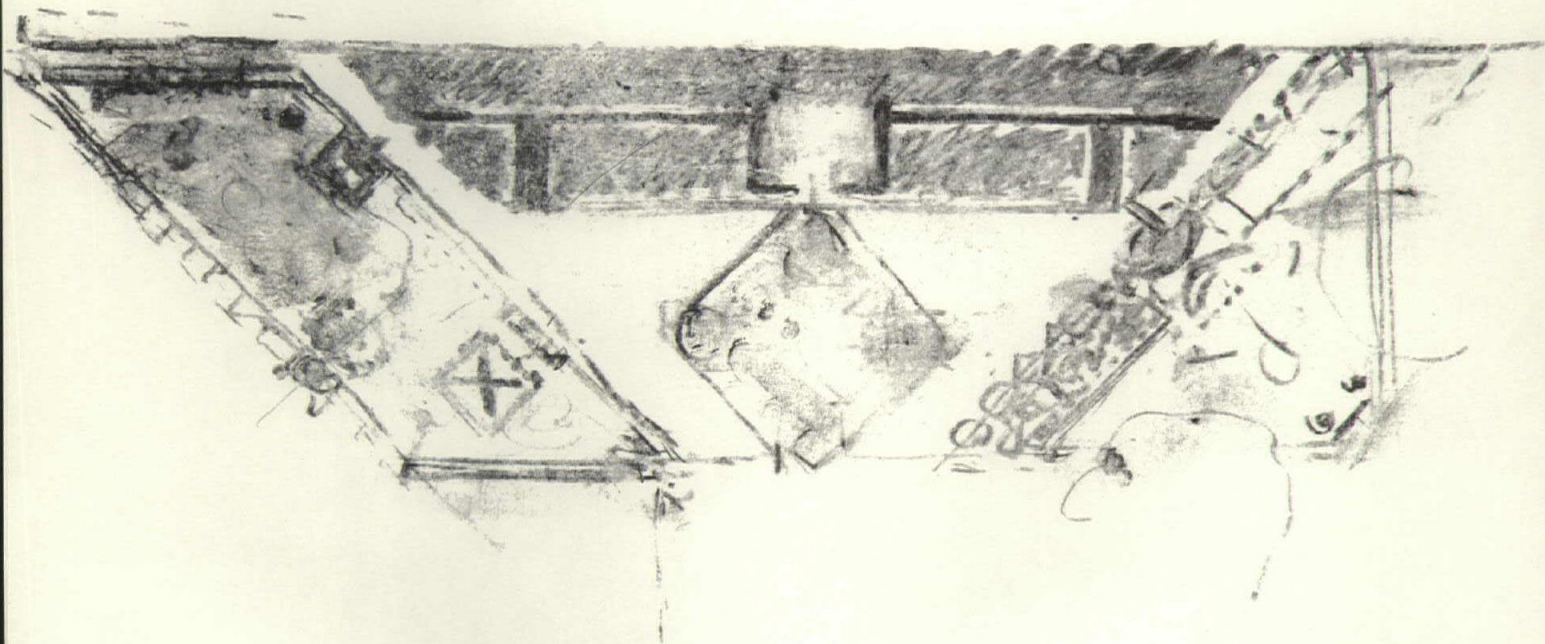
LOUIS I. KAHN ARCHITECT



28. Preliminary site plan

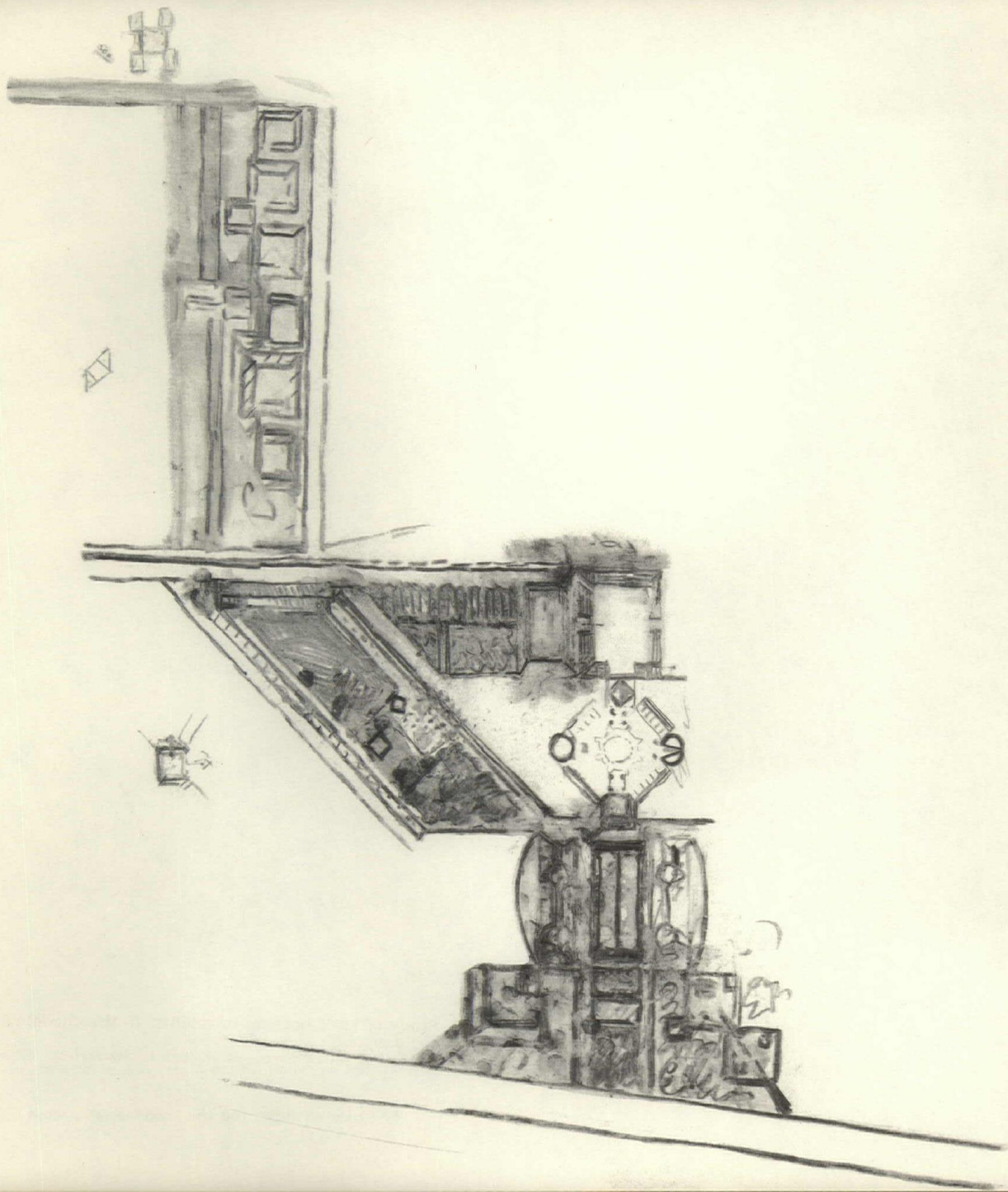


29. Transformation of esplanade into garden and asymmetry of buildings on sides of lake
charcoal on yellow tracing paper, 47.5% of original size



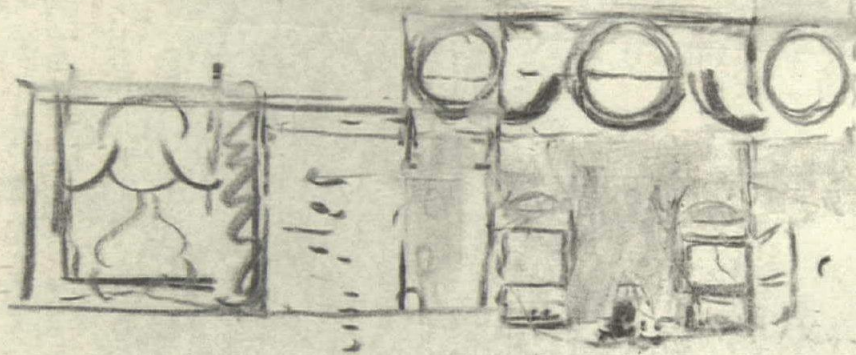
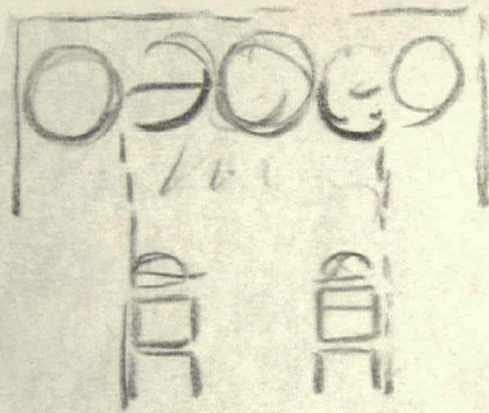
30. Transformation of esplanade into garden and asymmetry of buildings on side of lake
charcoal on yellow tracing paper, 47% of original size

31. Study of staff housing in relation to the citadel of
the assembly
charcoal on yellow tracing paper, 36% of original size



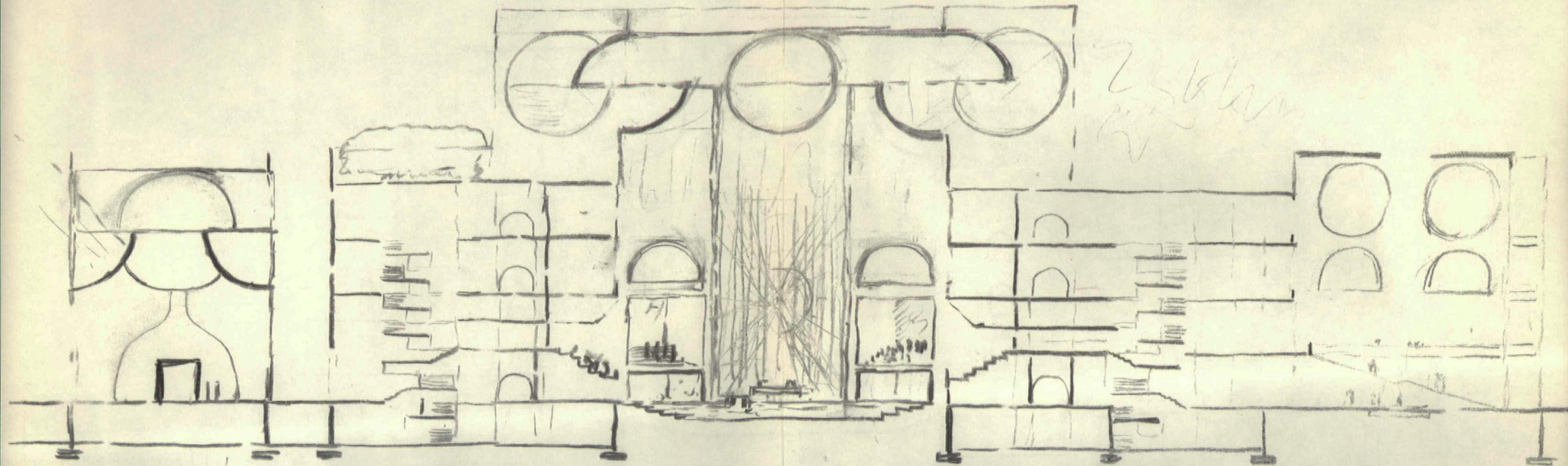
32. Light studies
charcoal on yellow tracing paper, 64% of original size

The play of light and the wonder of section



The play of light and the
wonder of sections

33. Section through assembly spaces
charcoal on yellow tracing paper, 49% of original size



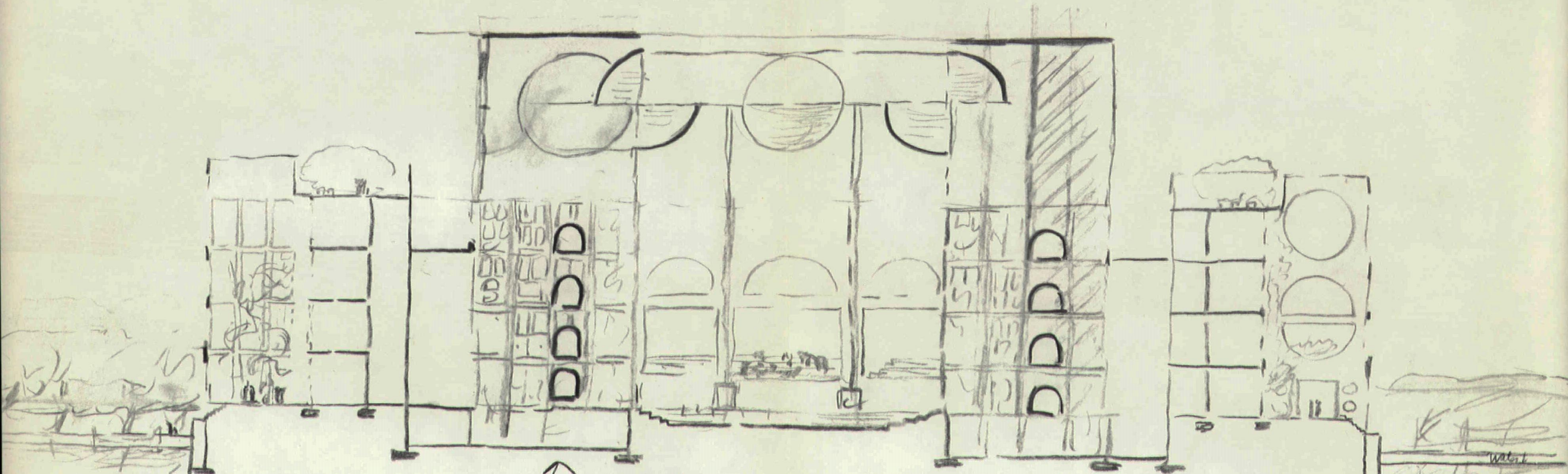
Entrance Mosque

Assembly

Section from Assembly Group

Garden Entrance

Light that comes in the corner of
 a friend openings circular in glass
 walls/walls to go them are square



↑
light court element Assembly

LCET ↑

Section thru Assembly Space
protecting walls of
Halls

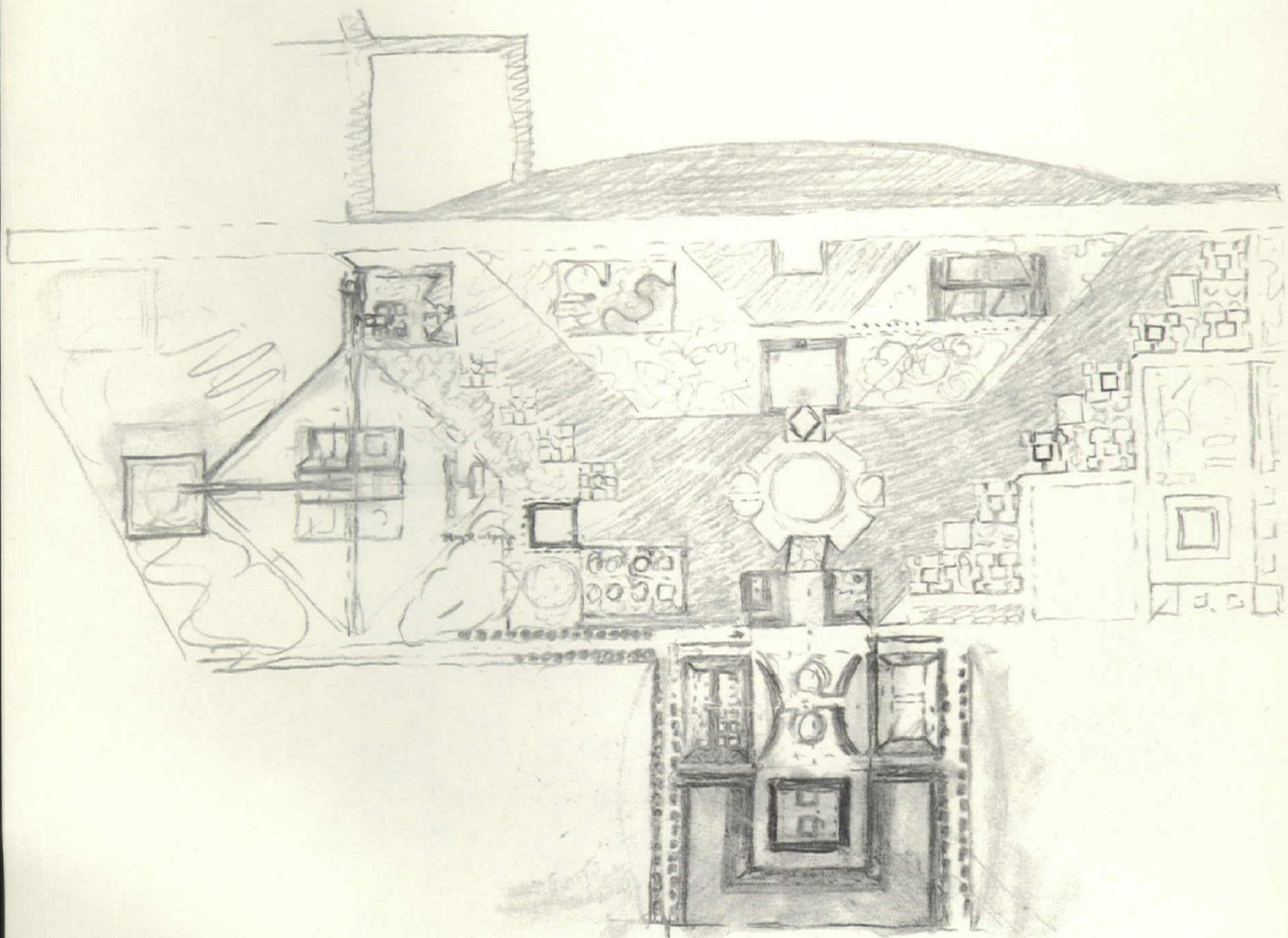
Water
K.A.

34. Section through assembly group
charcoal on yellow tracing paper, 51% of original size

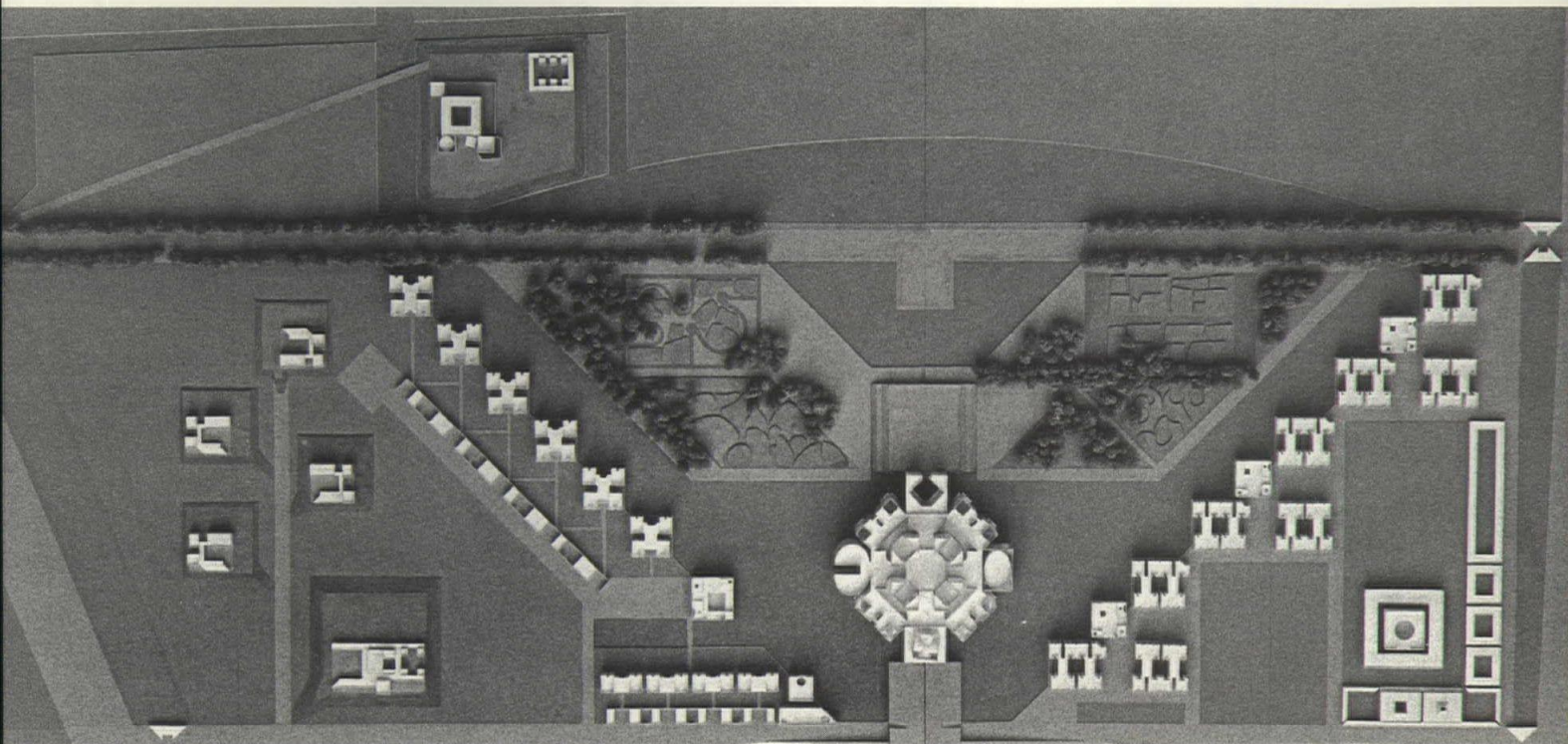
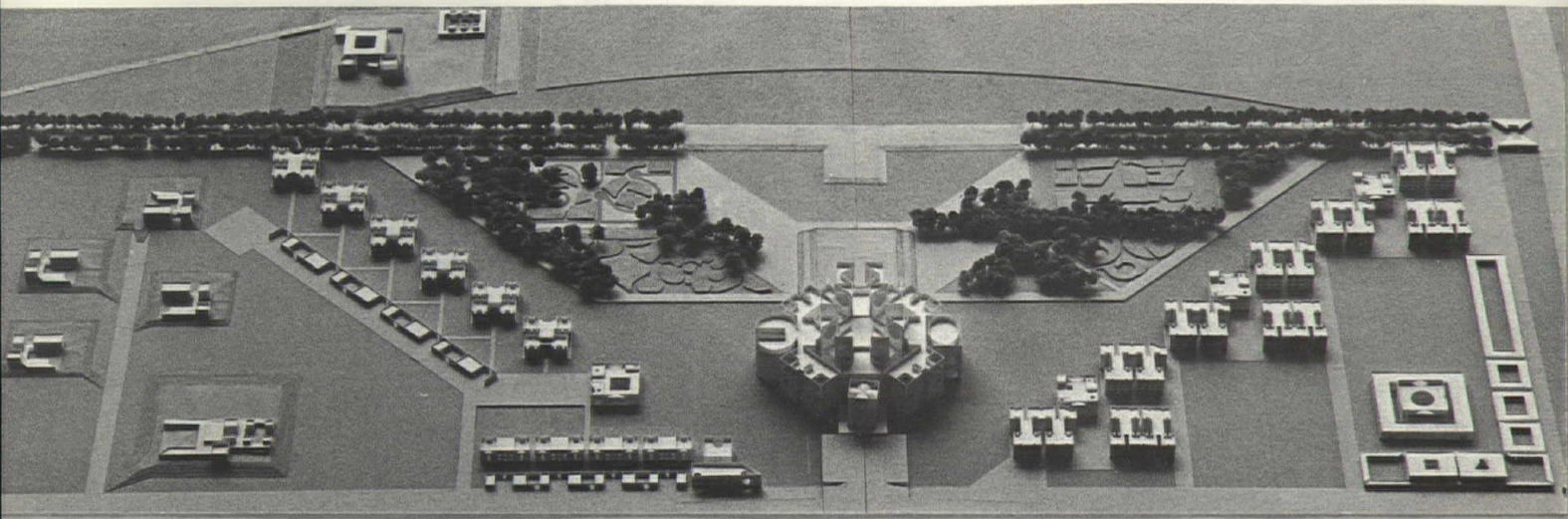
Light that turns the corner as a friend Openings circular in glare walls / walls to go thru are square

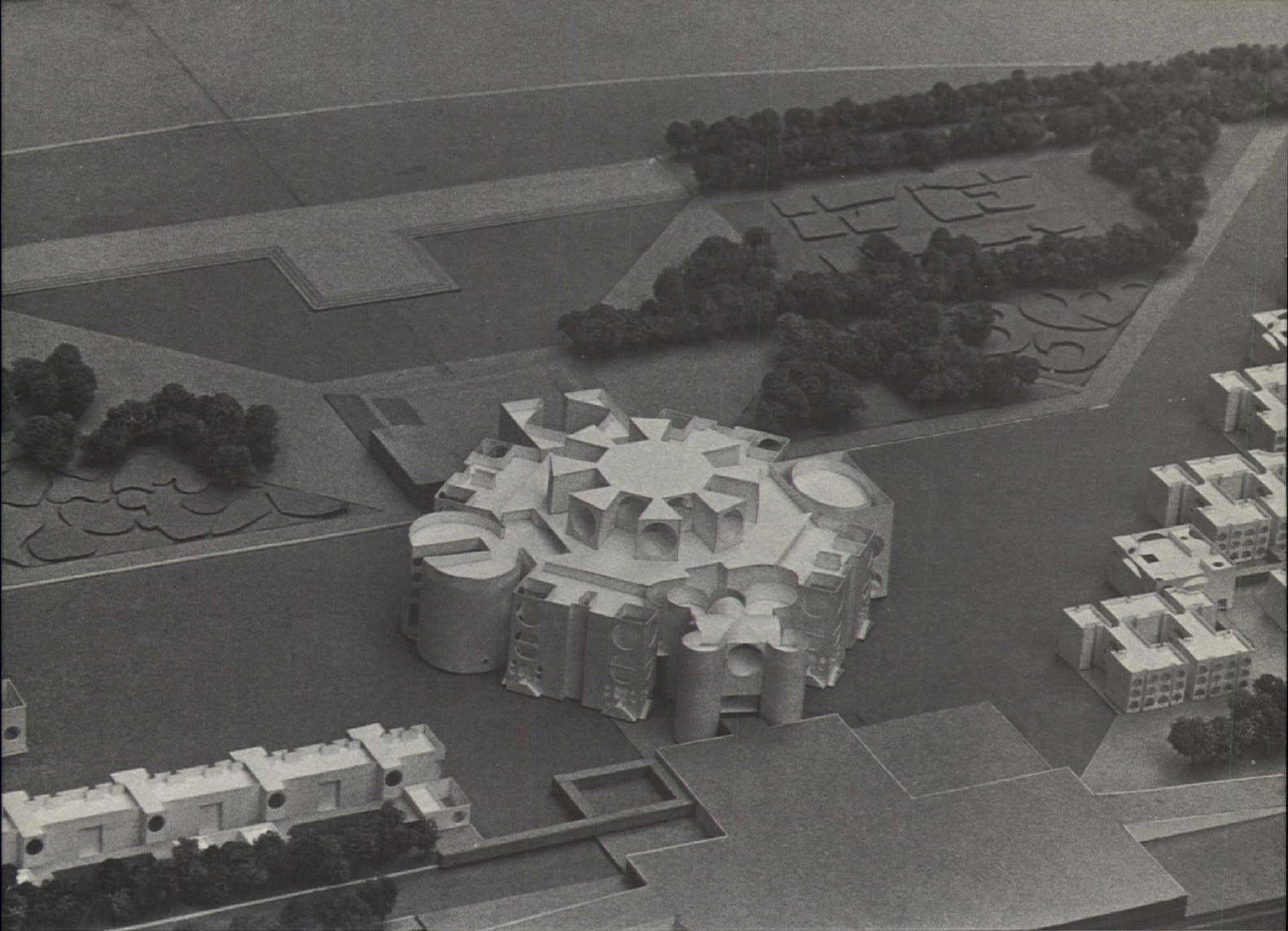
35. Site plan, Citadel of the Assembly
charcoal on yellow tracing paper, 39% of original size

I hope that the gardens and the lakes are one. The mosque graces the entrance turning its body west. The supreme court is free of other buildings. There is no end.



1. Look at the gardens and the walls are up.
The mosque across the entrance, forming its
body with the square court in front of
other buildings. There is no path.

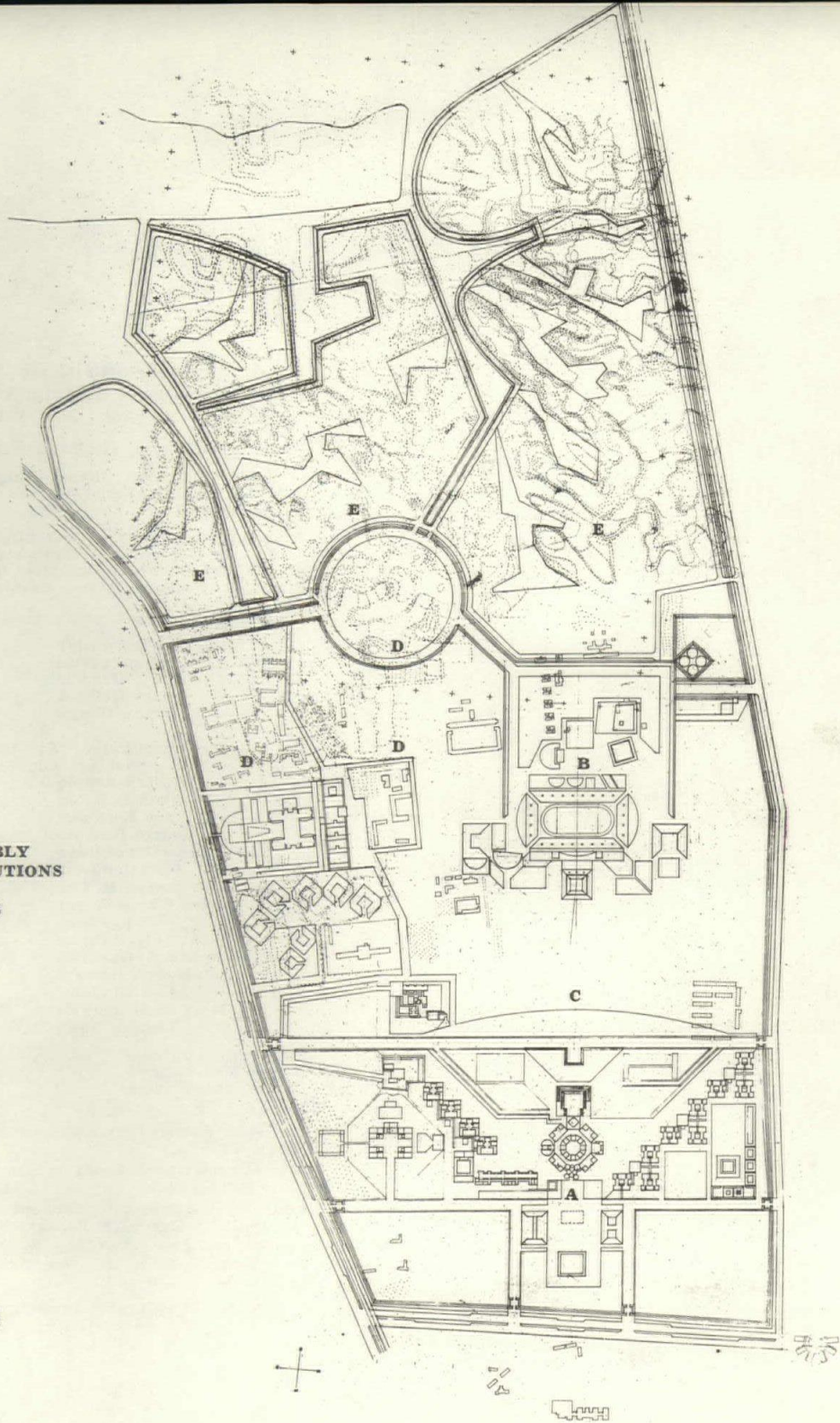




37. Model, the Assembly, July 1964

- A. CITADEL OF THE ASSEMBLY
B. CITADEL OF THE INSTITUTIONS
C. PUBLIC PARK
D. INSTITUTIONAL ESTATES
E. RESIDENTIAL ESTATES

38. Site Plan, August 1964



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