

**DESIGN THESIS** submitted to the faculty of Virginia  
Polytechnic Institute and State University in partial fulfill-  
ment of the requirements for the degree of

**MASTER IN ARCHITECTURE**

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May 1996  
Washington Alexandria Architecture Consortium  
Alexandria, Virginia

**STRUCTURE IN ARCHITECTURE**  
A CENTER FOR THE STUDY OF WORLD RELIGIONS  
AND MYTHOLOGIES

Melissa R. Blish

## ACKNOWLEDGEMENTS

I would like to thank my family and friends for their help and support during my graduate studies, especially my parents for their extraordinary patience and understanding.

I would also like to thank my committee for their exceptional guidance during this project.

Spec

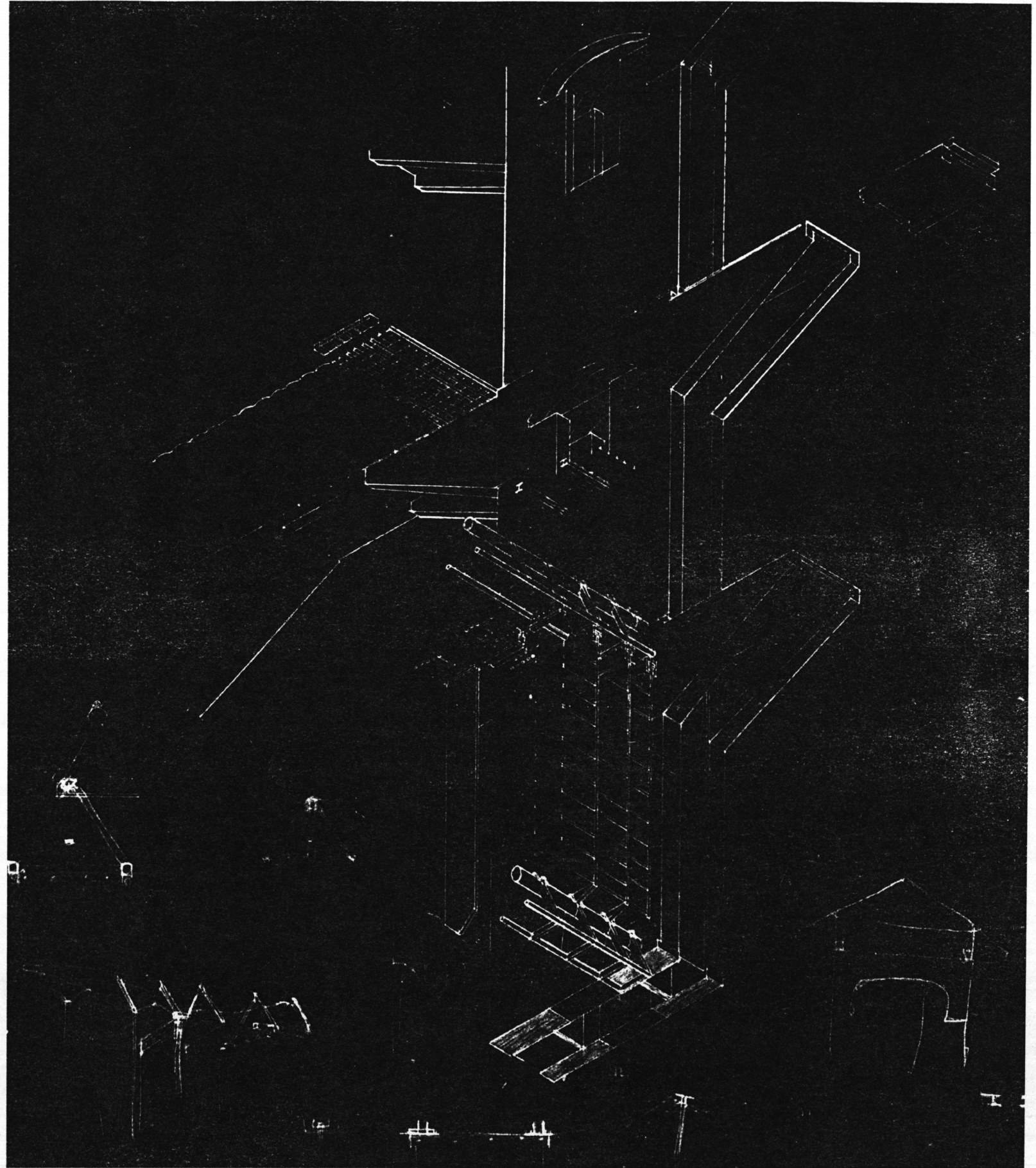
**"STRUCTURE IS ARCHITECTURE."** <sup>1</sup>

Felix Candela  
Calatrava

Throughout the history of building, structure has played a primary role in giving form to architecture. From the lintels of Greek temples, to the arches and domes of the Romans, to the flying buttresses of Gothic cathedrals, structure was a major determinant of the form of architecture. Within the last century, however, architecture has moved away from structure as a primary form giver. In some cases this movement is by choice; e.g., an architect designing buildings as pure form, and in others the movement is by force; e.g. building codes prohibiting exposed structural steel. I believe, however, that structure should play a vital role in architecture, because structure engages one physically, mentally, sensually and spiritually with the essence of the building as a whole. Structure creates a building physically: it gives a building support and links all aspects of the building together.

One gains understanding of architecture through the experience of its elements — site, structure, and space — both individually and collectively. Site forms the basis from which the building parti originates. A structure then evolves from the concept and analysis of site, and creates space. Experiential, topographic, and urbanistic concerns are essential to the development of a structure that grounds itself both physically and metaphysically in the site. A building grows from its site and creates a diverse series of spatial experiences, formed by a unifying language, in the manifestation of structure and materiality. An individual comprehends the building as a whole through the experience of its spaces as formed by the structure. As mediator between earth and man, structure intensifies the awareness of site and space.

LIFE	BODY	EARTH
RELIGION	MIND	STRUCTURE
ENLIGHTENMENT	SOUL	LIGHT



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## THE MYTH OF SISYPHUS

Sisyphus, a wealthy Corinthian, defied the gods and death, but spends eternity engaged in a futile struggle. He now repeatedly rolls a rock up a hill, knowing all the while that it will roll again to the bottom of the hill once he reaches the summit. The tragedy of the myth is found in Sisyphus' knowledge of his fate; however, the continued striving toward the summit with his relentless burden demonstrates the hope and innate optimism of human beings as they strive to find meaning in life.

Zeus spied the beautiful Aegina, daughter of the river god Asopus, and carried her off through the streets of Corinth. Aegina's father asked the Corinthian townspeople about the incident, but no one would speak to him for fear of Zeus' wrath. The clever Sisyphus, however, saw this as a golden opportunity and seized it.

One of Corinth's primary problems at that time was that no water source existed within the city walls. Lack of potable water inside the walls presented an obstacle to defense of the city, and the Corinthians were tired of hauling water into the town. Sisyphus therefore approached the river god Asopus, and offered information on Aegina's abduction: if Asopus would cause a spring to bubble up within Corinth's walls, Sisyphus would tell Asopus what Zeus had done. Asopus agreed, Sisyphus talked, and a spring of sweet fresh water bubbled out of the ground in the city.

With this knowledge, Asopus confronted Zeus, demanding his daughter's return. Zeus, the king of the gods, was furious. He knew which Corinthian had betrayed him, and spoke to his brother, Hades. The lord of the dead, Hades dispatched Death to collect Sisyphus. When Death arrived in the world of the living, however, she became lighthearted upon being in the world above ground. Accustomed to encountering dread in those she met, Death was perplexed when Sisyphus jovially invited her to join him for food and drink. Her guard down, she relaxed and joked with Sisyphus, who then offered to show her a pair of handcuffs of his own making. In a playful mood, Death failed to see the ruse and donned the handcuffs. As time passed, the jest faded, and it soon became apparent that Death had become Sisyphus' prisoner.

With Death's predicament, the entire character of the universe changed. While Death remained captive, nothing died — neither plant nor animal nor human — and the world became overpopulated. The gods, therefore, began to complain. Death was one of the few certain controls that the gods had over mortal humans. Hades received no new subjects, but most outraged of all was Ares. The usually unpopular god of war, Ares, who complained bitterly that, without Death, there simply was no point to war, for soldiers slain on the battlefield would leap up to fight again.

Meanwhile, humans rejoiced on earth. They quickly noticed that no one died, and believing that they all would live forever, they went on a spree. There was, however, one very miserable side effect. Those who were very ill did not die, but remained very ill — Death did not arrive to relieve the miseries. Watching this, Zeus grew angrier still and dispatched Ares to free Death and seize Sisyphus. Ares did so, taking the soul of Sisyphus down to Hades.

Sisyphus had not yet exhausted his store of tricks. Having instructed his wife not to bury his corpse when the gods plucked out his soul, Sisyphus complained on his arrival in the realm of the dead that he could not possibly be allowed to remain there. Because his corpse was not properly buried, nor were the proper rites performed, Hades granted Sisyphus three days in which to set things in order. At the end of the reprieve, however, it was clear that Sisyphus did not intend to return to the land of the dead. Sisyphus again succeeded in deceiving the gods, but his victory, and his respite, were temporary. Sending Hermes, the messenger of the gods and the usual guide of the dead to the Underworld, Zeus intended to see everything done properly. Hermes seized Sisyphus's soul, buried his body with all the necessary rituals, and took the soul to the Underworld.

Having mocked the gods and bound Death, Sisyphus now received his tragic sentence. Sisyphus must spend eternity rolling a great rock up a steep hill, only to see it roll back down the hill to whence Sisyphus again must return, perpetually to repeat the futile ascent.<sup>2</sup>

The French existentialist writer, Albert Camus, therefore saw the meaning of human existence in this myth: the meaning is the futile striving to find meaning. In the following excerpt from "The Myth of Sisyphus," Albert Camus explained his interpretation.

You have already grasped that Sisyphus is the absurd hero. He is, as much through his passions as through his torture. His scorn of the gods, his hatred of death, and his passion for life won him that unspeakable penalty in which the whole being is exerted toward accomplishing nothing. This is the price that must be paid for the passions of this earth. Nothing is told about Sisyphus in the underworld. Myths are made for the imagination to breathe life into them. As for this myth, one sees merely the whole effort of a body straining to raise the huge stone, to roll it and push it up a slope a hundred times over; one sees the face screwed up, the cheek tight against the stone, the shoulder bracing the clay-covered mass, the foot wedging it, the fresh start with arms outstretched, the wholly human security of two earthclotted hands. At the very end of his long effort measured by skyless space and time without depth, the purpose is achieved. Then Sisyphus watches the stone rush down in a few moments toward that lower world whence he will have to push it up again toward the summit. He goes back down to the plain.

It is during that return, that pause, that Sisyphus interests me. A face that toils so close to stones is already stone itself! I see that man going back down with a heavy, yet measured, step toward the torment of which he will never know end. That hour, like a breathing space which returns as surely as his suffering, that is the hour of consciousness. At each of those moments when he leaves the heights and gradually sinks toward the lairs of the gods, he is superior to his fate. He is stronger than his rock.

If this myth is tragic, that is because the hero is conscious. Where would his torture be, indeed, if at every step the hope of succeeding upheld him? But, it is tragic only at the rare moments when it becomes conscious. Sisyphus, proletarian of the gods, powerless and rebellious, knows the whole extent of his wretched condition; it is what he thinks of during the descent. The lucidity that was to constitute his torture at the same time crowns his victory. There is no fate that cannot be surmounted by scorn.

...Again I fancy Sisyphus returning towards his rock, and the sorrow was in the beginning. When the images of earth cling too tightly to memory, when the call of happiness becomes too insistent, it happens that melancholy rises in man's heart; this is the rock's victory, this is the rock itself. The boundless grief is too heavy to bear. These are our nights of Gethsemane. But crushing truths perish from being acknowledged. Thus, Oedipus at the outset obeys fate without knowing it. But from the moment he knows, his tragedy begins. Yet at the same moment, blind and desperate, he realized that the only bond linking him to the world is the cool hand of a girl (Antigone, Oedipus's daughter and sister). Then a tremendous remark rings out: "Despite many ordeals, my advanced age and the nobility of my soul make me conclude that all is well."

...At that subtle moment when man glances backward over his life, Sisyphus returning toward his rock, in that slight pivoting he contemplates that series of unrelated actions which becomes his fate, created by him, combined under his memory's eye and soon sealed by his death. Thus convinced of the wholly human origin of all that is human, a blind man eager to see who knows that the night has no end, he is still on the go. The rock is still rolling.

I leave Sisyphus at the foot of the mountain! One always finds one's burden again. But Sisyphus teaches the higher fidelity that negates the gods and raises rocks. He too concludes that all is well. This universe henceforth without a master seems to him neither sterile nor futile. Each atom of that stone, each mineral flake of that night-filled mountain, in itself forms a world. The struggle itself toward the heights is enough to fill a man's heart. One must imagine Sisyphus happy.<sup>3</sup>

## PROJECT

A center for the study of world religions and mythologies, this project provides an educational center, a place for learning about religions and myths from around the world. This center provides a place to understand the essence of man's "struggle toward the heights" as well as the history of that labor, its impact on society. Although education is the primary function of the project, worship is supported and encouraged with various areas available for meditation. These meditation areas support both private reflection and congregation. The primary functional areas of the complex consist of:

- a gallery
- an amphitheater
- a lecture hall
- a library

These very different building types are tied together through a common language of structure that expresses our understanding of man's place between earth and light, and our "struggle towards the heights".

I chose the site, located at the bridge over Rock Creek Park on Massachusetts Avenue in Washington D.C., for its relationship to the city and for its dramatic sense of place. The capital city of a country founded, in part, by people seeking freedom from religious persecution, Washington D.C. provided a highly appropriate for this project. Additionally, people of diverse religious backgrounds and national origins inhabit the District of Columbia, making it a multicultural city. Further, known as Embassy Row, Massachusetts Avenue houses a large number of embassies. To support this highly multinational area, religious buildings of various denominations blanket Massachusetts Avenue. Finally, the juncture of Massachusetts Avenue with Rock Creek forms a significant boundary within the city.

*"Man takes a positive hand in nature whenever he puts a building on the earth beneath the sun. If he has birthright at all, it must consist in this: that he, too, is no less a feature of the landscape than the rocks, trees, bears, or bees of that nature to which he owes his being."*<sup>4</sup>

Frank Lloyd Wright

The buildings and urban planning become less urban and more suburban at this point. Beginning with the highly wooded Rock Creek Park, larger expanses of green areas begin to emerge. Because the creek flows more than one hundred feet lower than the level of Massachusetts Ave, the dense woods and steep slope leading to the creek create a world separate from the city of Washington, D.C. Therefore, the site exists as an edge between the city and the suburbs, but removes itself from both. As an oasis and place of refuge, the site is both grand and subtle, awesome and profane as it cascades down to Rock Creek.

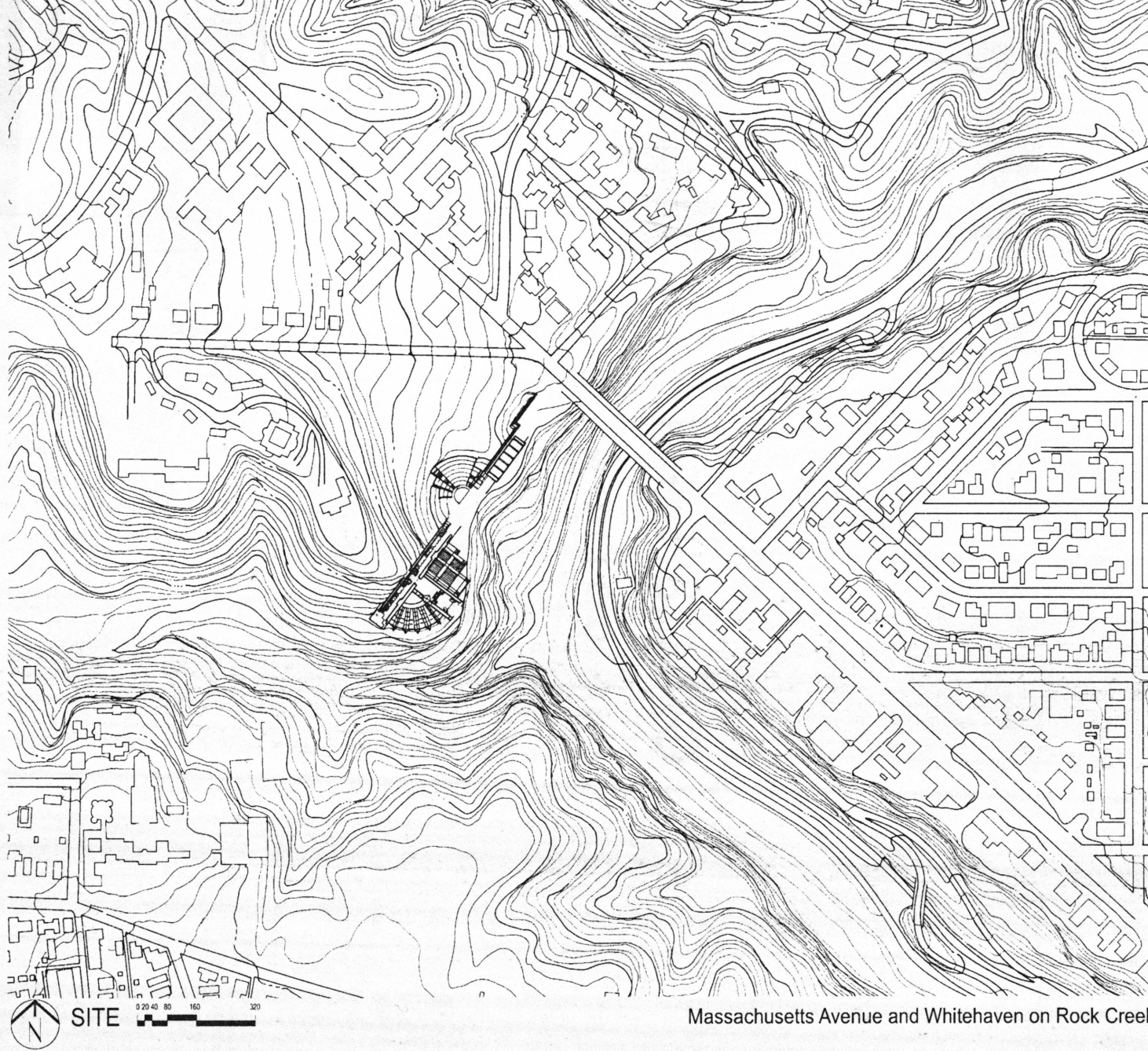
Because dense woods and steep slopes cover the area, it is important to retain the nature of that drama within the building. The two most distinct qualities of the site are the contrast between the solidity of the rocks, tree trunks, and undergrowth within which one exists; and the light speckling of the canopy above. Beneath this canopy lies the discontinuous forest floor; a broken terrain with occasional rock outcrops and small cliffs, with a mixture of ground cover plants and low shrubs. The more or less continuous tree cover alternates between dark enclosure and sudden, light-filled release. The project explores this dramatic place and structures one's experience of the site.

At the beginning of the project, I wanted to create an experience of place in a building that heightened the experience of the site, for the "site of a building is more than a mere ingredient in its conception, it is a physical and metaphysical foundation..."<sup>5</sup> The challenges created by this site exist in its steep slope and dense woods. I worked with both challenges rather than turn the site into something it was not, i.e., a clear plateau.

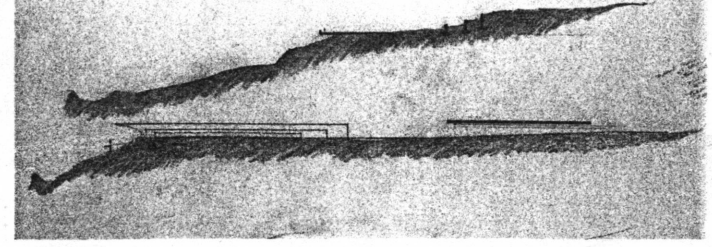


*"We may define the ideal outcome of architecture as being that a building should serve as an instrument which mediates all the positive influences affecting man.... a building cannot carry out this task unless it is itself as finely nuanced as the surroundings in which it stands."*<sup>6</sup>

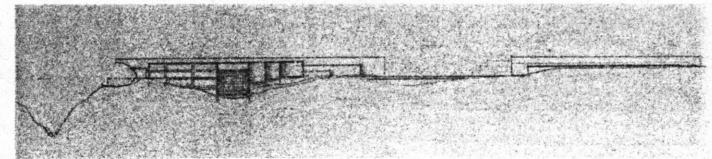
Alvar Aalto



Massachusetts Avenue and Whitehaven on Rock Creek



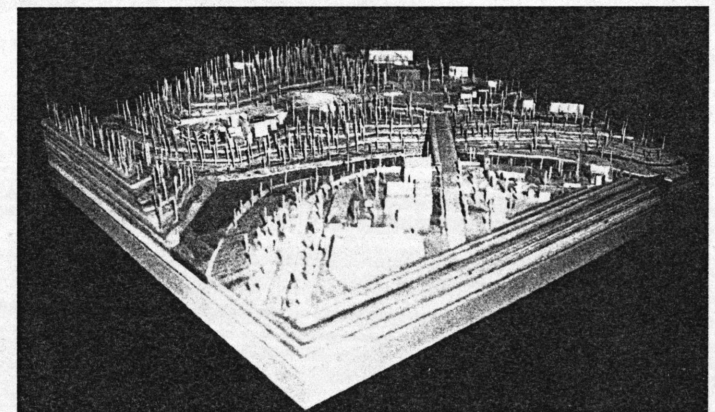
Site section study



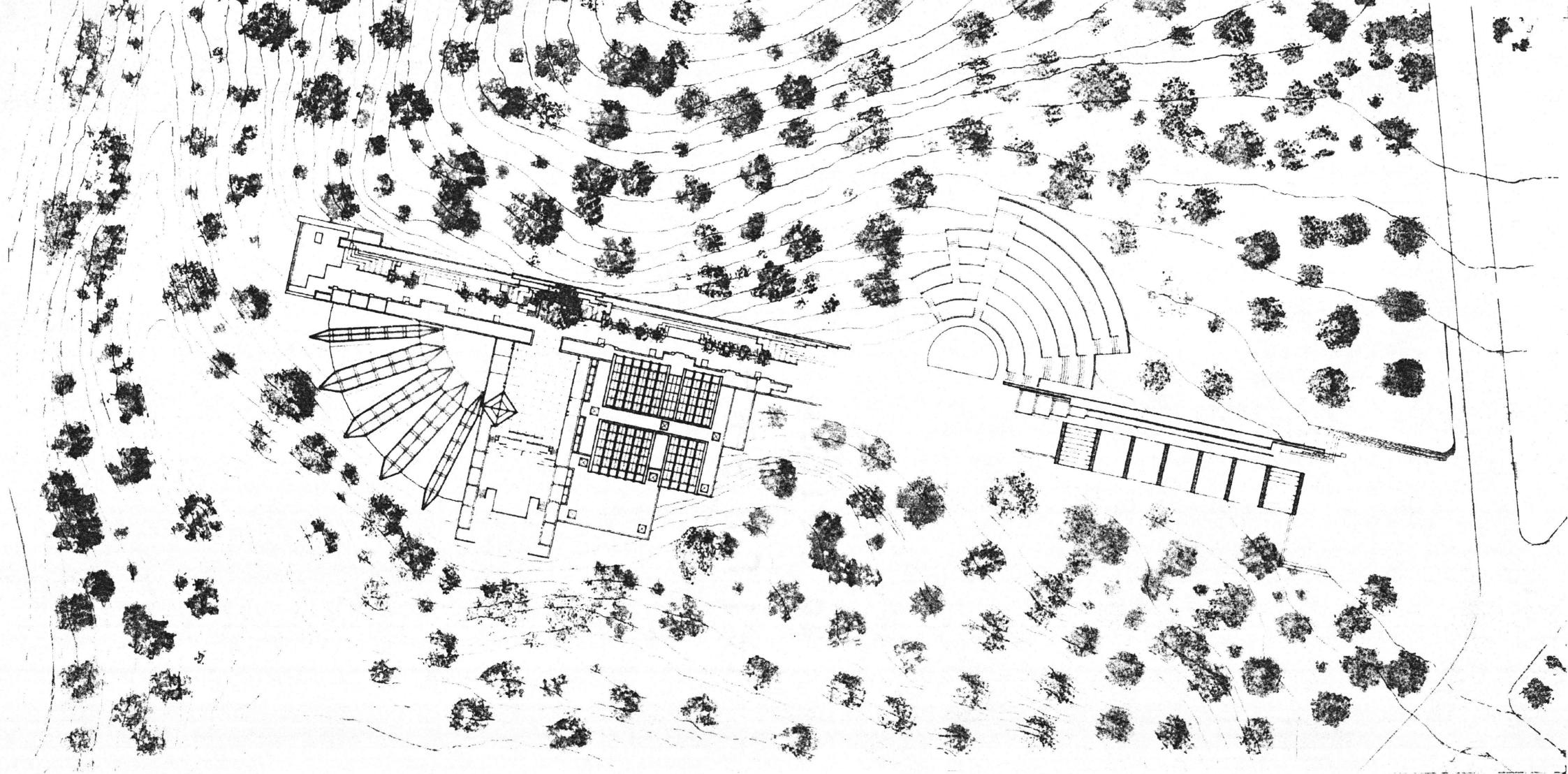
Site elevation study


*"After all, nature is a symbol of freedom. Sometimes nature actually gives rise to and maintains the idea of freedom. If we base our technical plans primarily on nature we have a chance to ensure that the course of development is once again in a direction in which our every day work and all its forms will increase freedom rather than decrease it."*

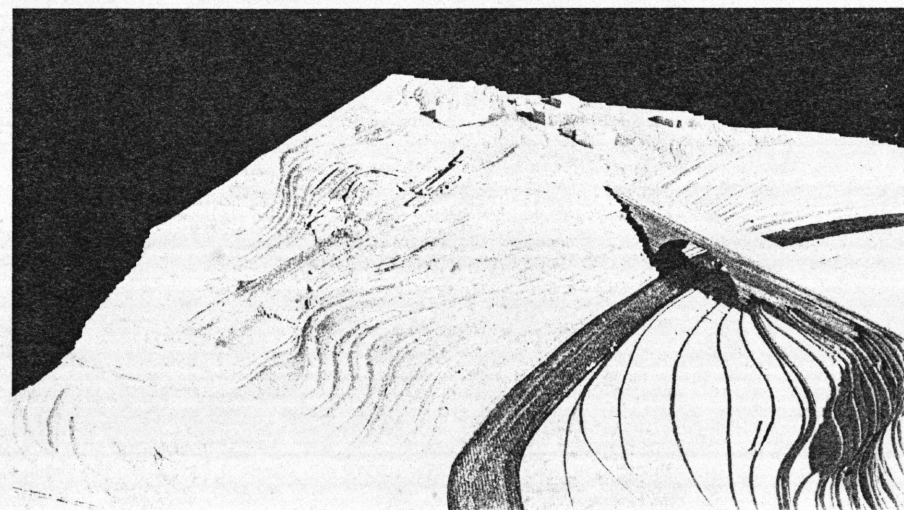
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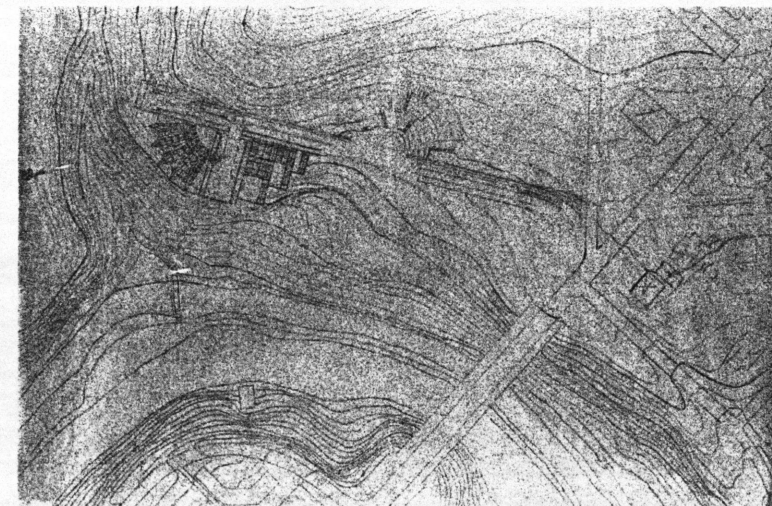
Final site model



 SITE PLAN / ROOF PLAN

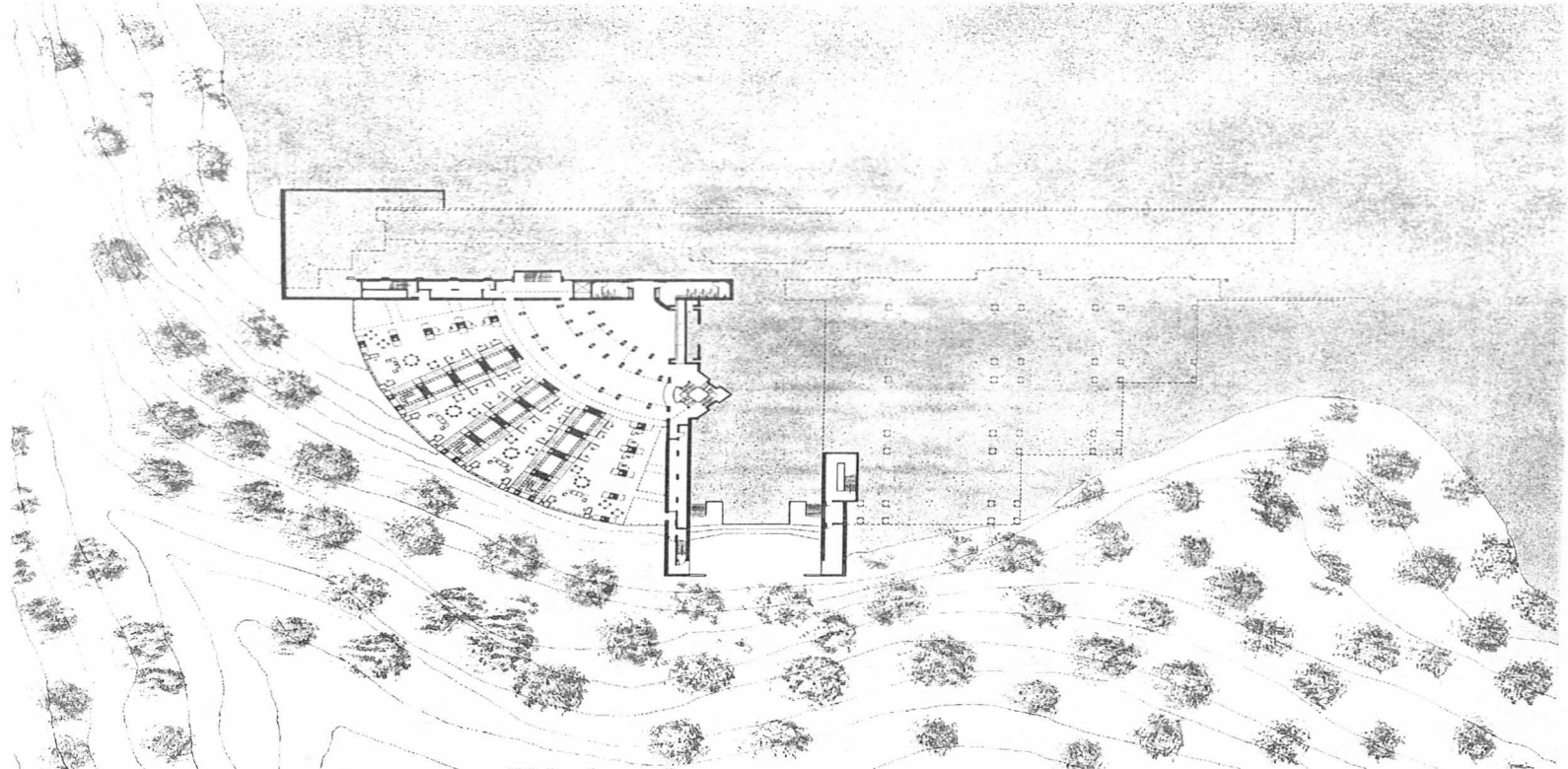


Site study model



Site and roof plan development

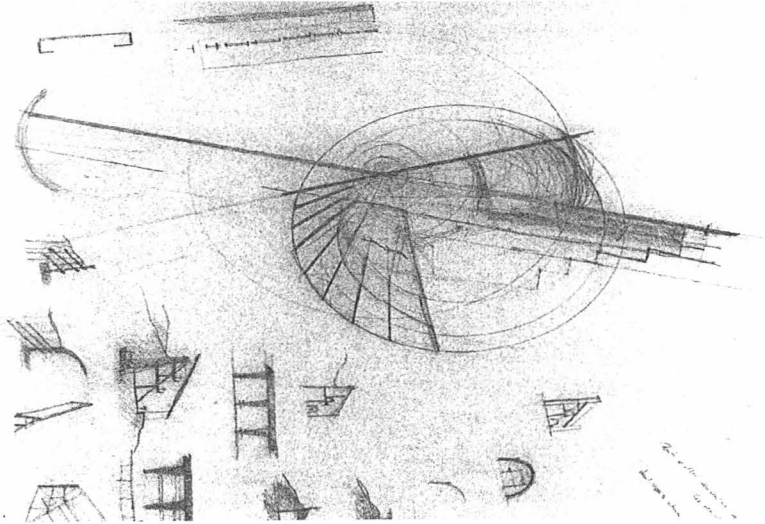
The initial concept was of a wall that traverses the site at its most accessible and level area. Through this wall, one obtains a perception of the dramatic rise and fall of the site. The wall engages the site as a retaining wall that heightens one's awareness of the site and creates an edge, a place for a building to begin. In this capacity, it creates a common datum to which other components of the building respond. It then becomes more than a wall — it is a place and a foundation. The wall connects the observer and the building to the site and the earth as parts of a larger whole. By using nature as the form giving origin for the structure, the feeling of the site becomes an underlying theme to the rational structure. Then the structure creates a building that becomes a man-made extension of the site.



LIBRARY FIRST FLOOR PLAN



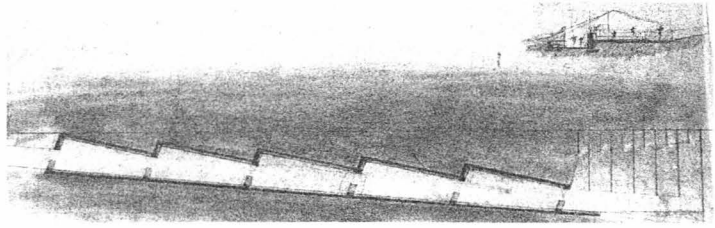
Lowest level - reading rooms and main level stacks



Initial *parti* of site wall and complex

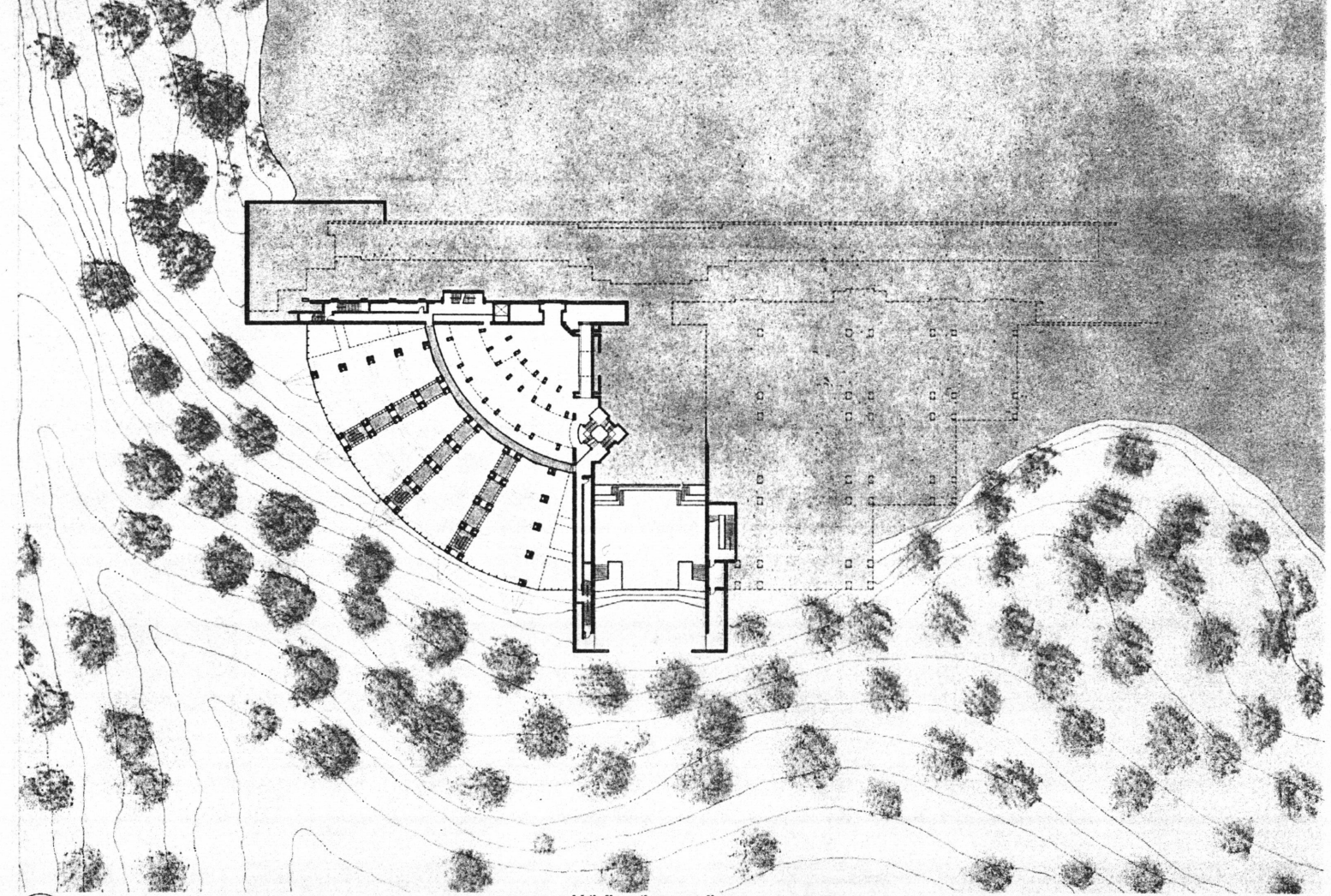



Structural development of site wall and complex



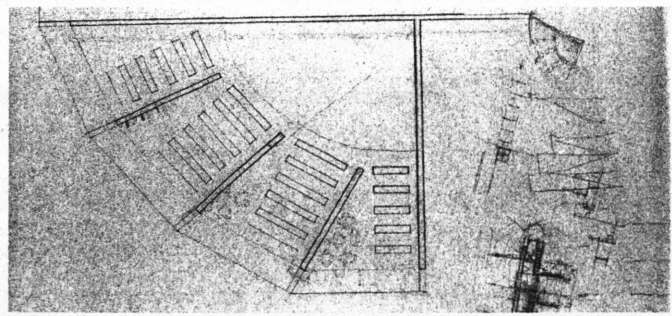
Development of Gallery - entrance to complex

The earth, held back by the site wall, creates a level path and an edge. This wall, so laden with other duties, does not have the capacity to make a building: rather it creates a place for a building to begin. The structure subsequently begins to break down from the site wall. The structure stands exposed to create places within the building for human interaction with the vital components of the building. The spaces created between the structural elements return our orientation back to the site while providing a reminder of our connection to and relationship with the site.

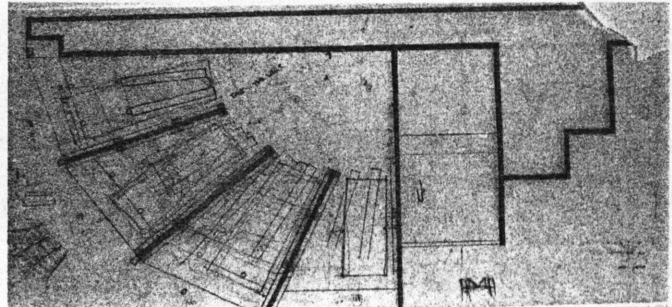


 LIBRARY FIRST FLOOR MEZZANINE PLAN

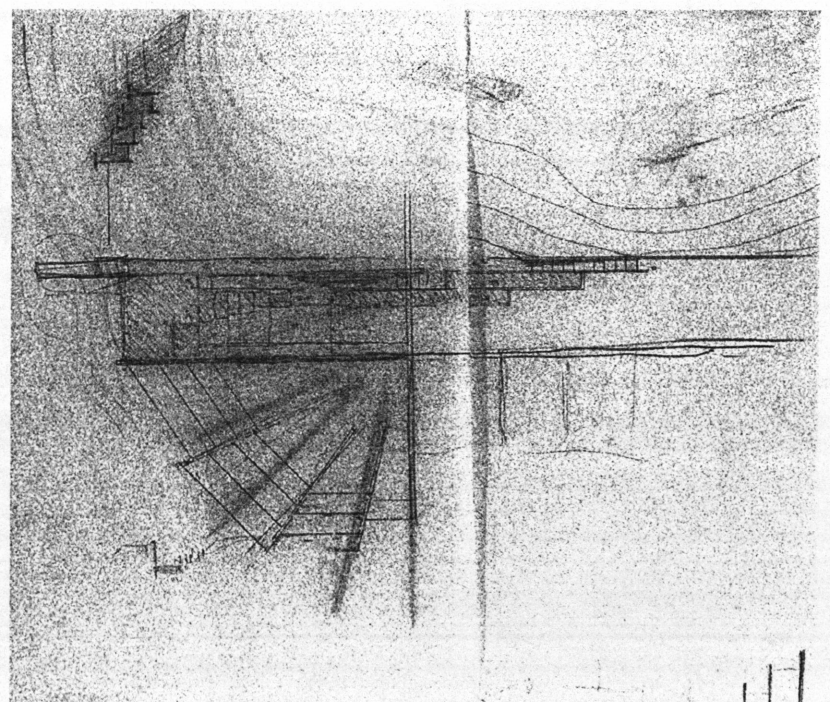
Level of additional stacks within the structure



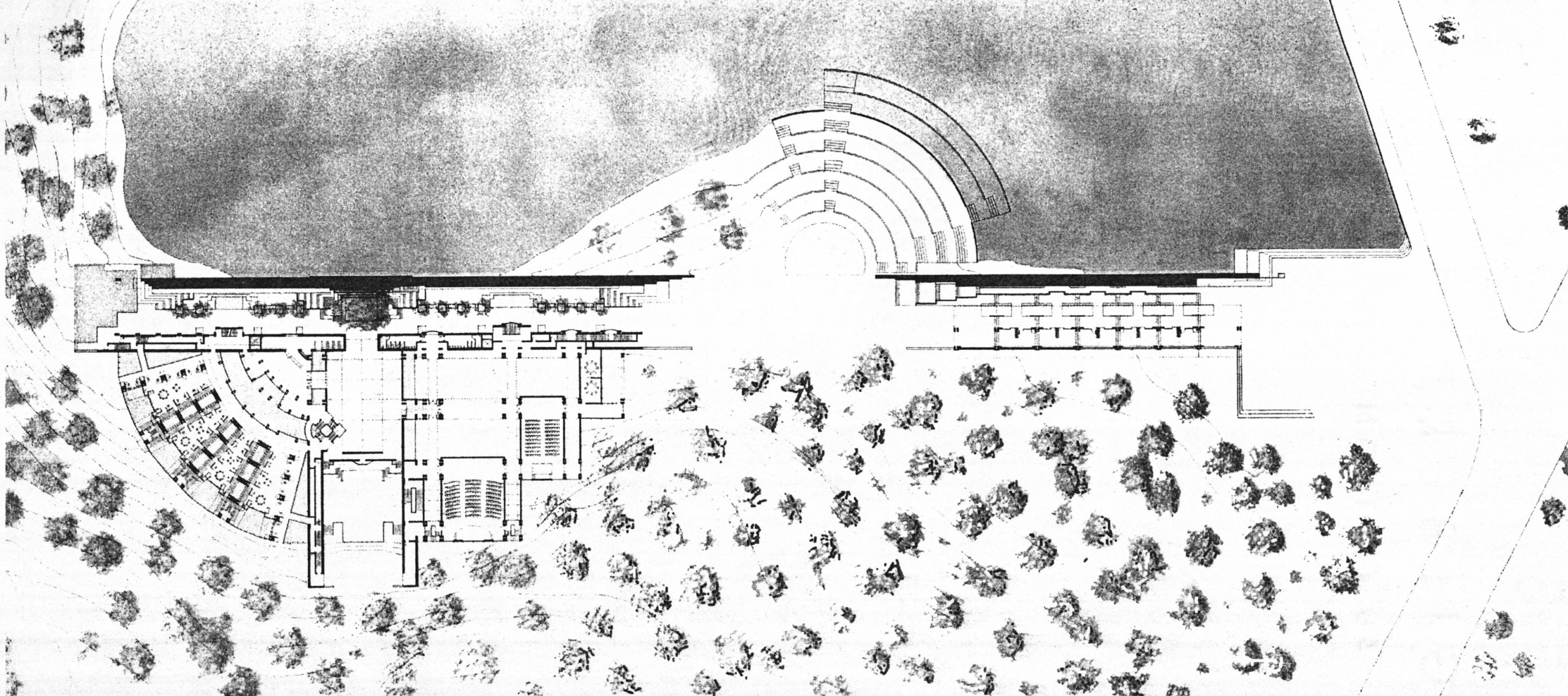
Development of Library from stacks to structure




Development of Library from stacks to structure



Development of site wall and library terraces



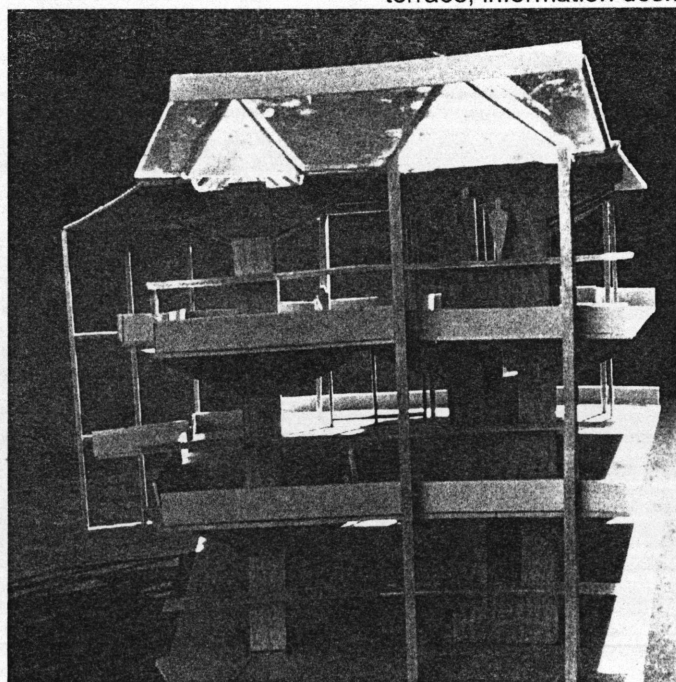

**SECOND FLOOR PLAN  
(MAIN SITE LEVEL)**

**LIBRARY**  
 reading rooms, main level stacks,  
 terrace, information desk

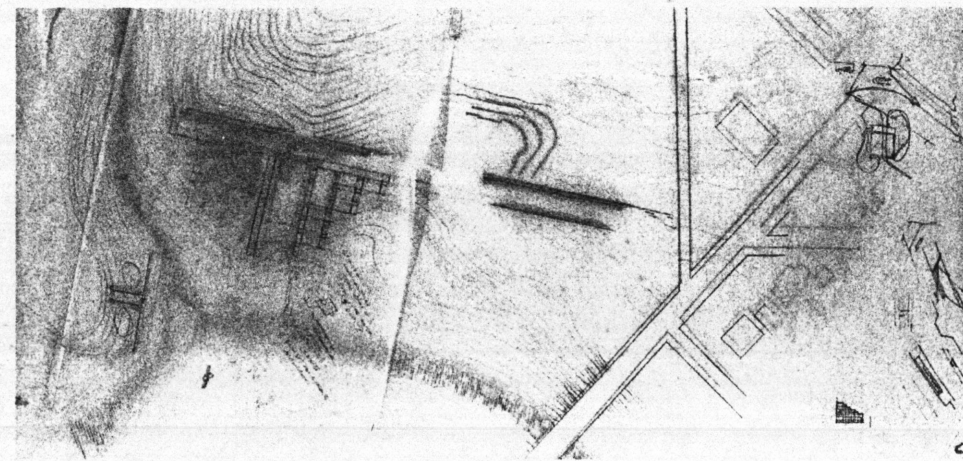
**CLASSROOMS**  
 entry, main level lecture  
 halls, and offices

**AMPHITHEATRE**  
 stage level

**GALLERY**  
 site entrance ramp to  
 main level



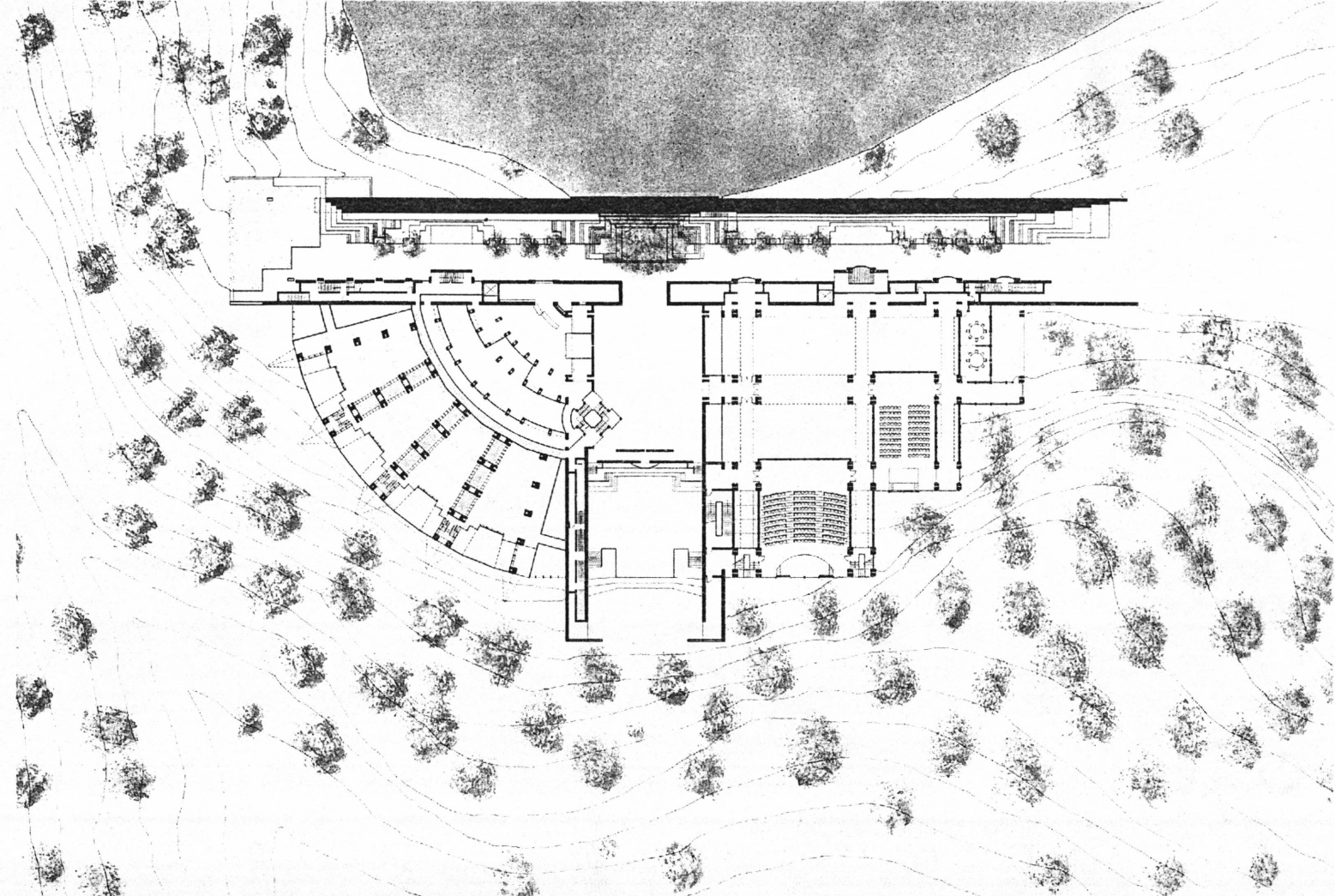
Library structural piers



Plan development

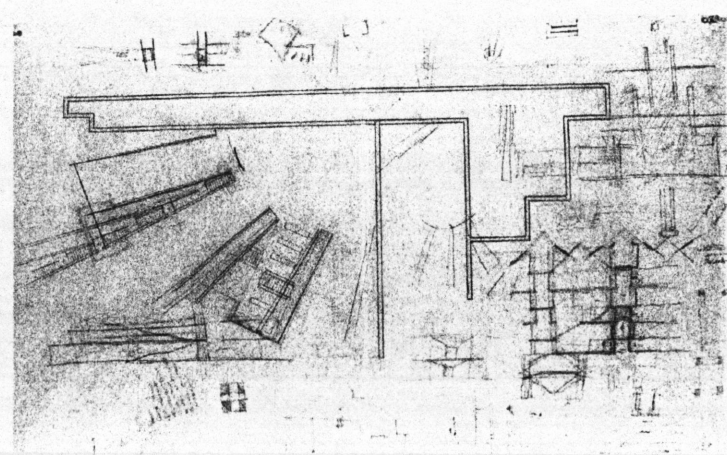
The structural language creates two kinds of spaces: servant and served. The spaces within the dense and enclosed structure are corridors, paths, and services. These servant areas create borders and foundations between which the served spaces exist. These servant spaces being heavier and darker reflect their servient duties and their closer connection to the earth — these spaces are grounded. The mechanical areas in the basement provide a foundation for the served spaces. The service corridors create a boundary. On the lower levels, they exist below ground and retain the earth; on the upper levels they provide a boundary between the various functions of the complex, providing privacy to each while creating a connection to both.

The served spaces, the rooms for learning and gathering dwell within the primary structural groupings. The primary structure responds to the forces that feed into it by changing form and size. The structure roots itself in the site and grows from it, getting lighter and more permeable as it reaches toward the sky. Thus, as the structure's relationship to the earth changes and its form becomes smaller, the spaces in turn become more open, expressing one's position in relationship to the earth. Through the rhythmic use of transparent, translucent, and opaque materials, as well as light filtering objects, the experience of the building mirrors the experience of the site itself: the density of the earth rising to the lightness of the canopy above. The direction of the structural support and the ordering system of the main structure create and reflect the function of the space. The organization and growth of the structure determines the size of room, the relationship of the room to the primary structure, and the room's function, whether served or servant.

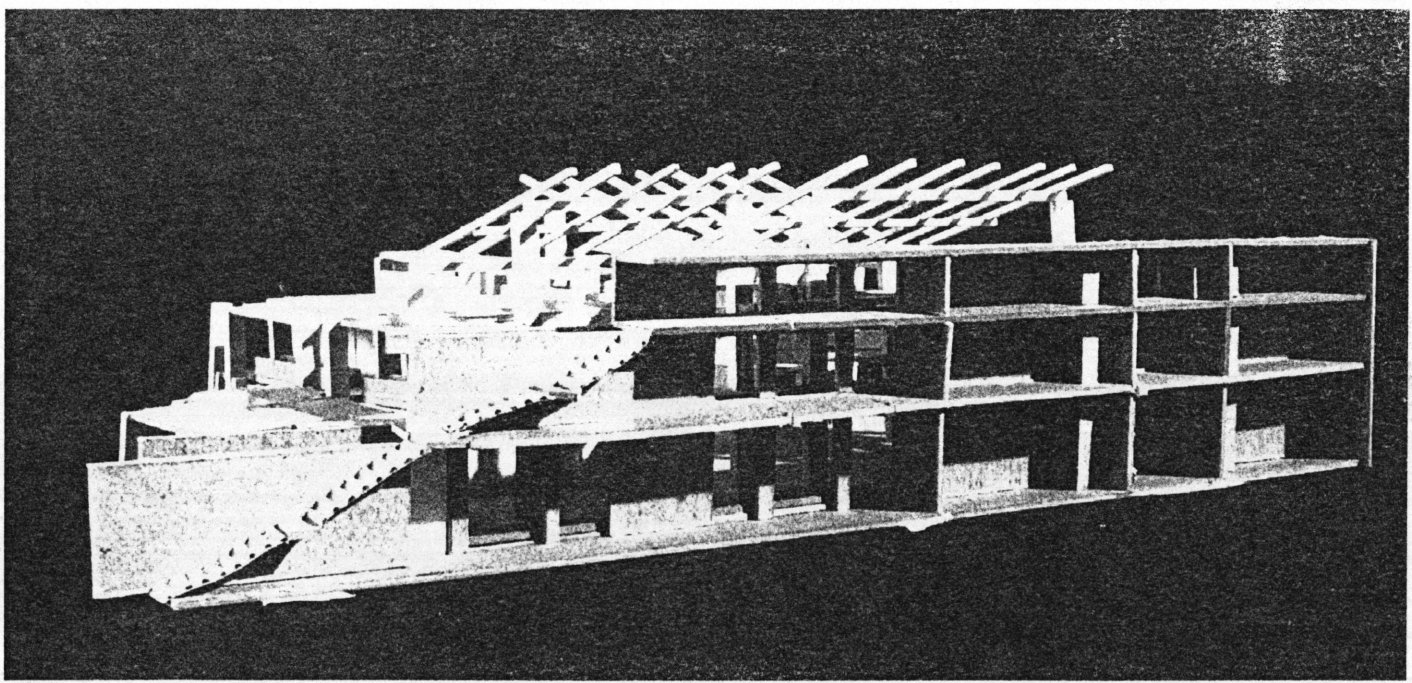


SECOND FLOOR MEZZANINE PLAN

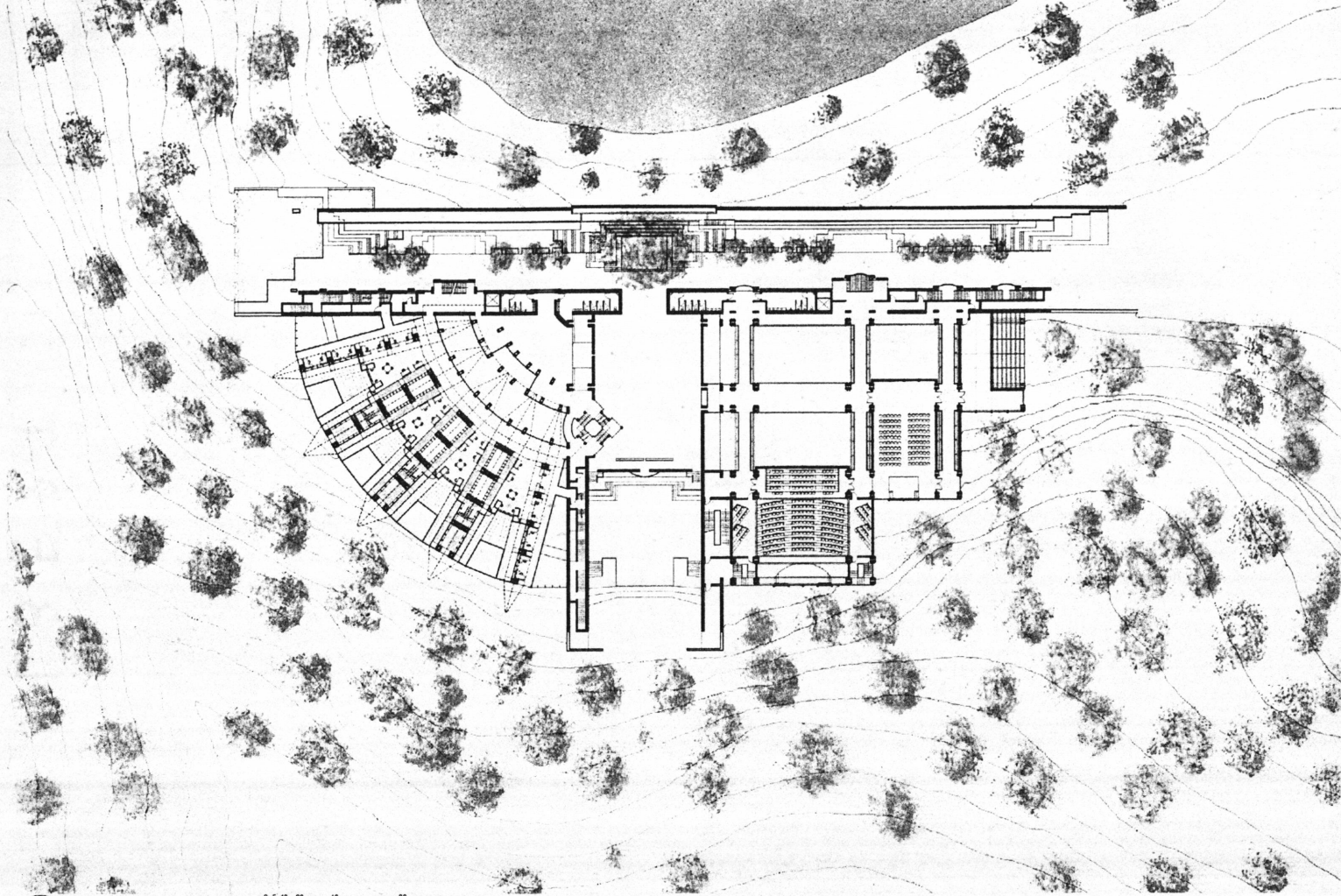
Level of additional stacks within the structure



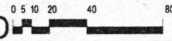
Development of Library stack structure



Classroom service core

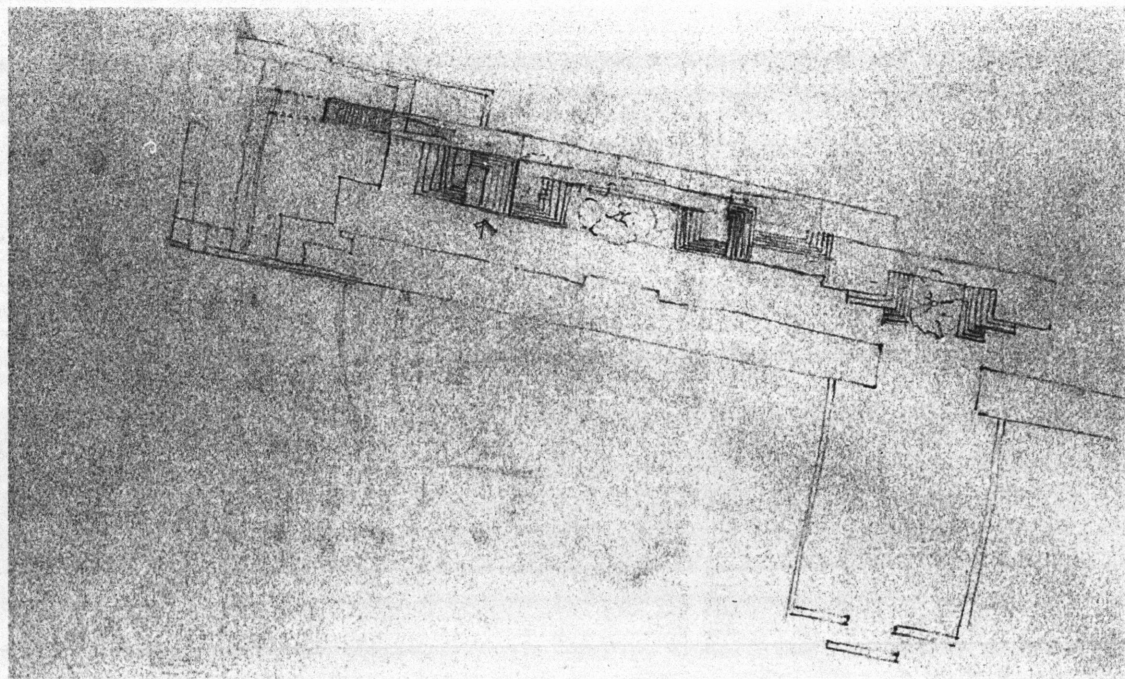
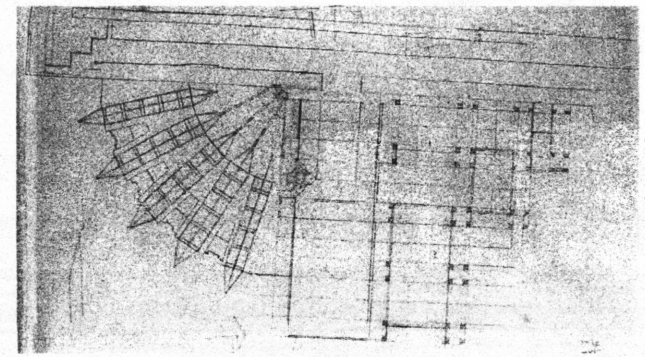


LIBRARY THIRD  
FLOOR PLAN

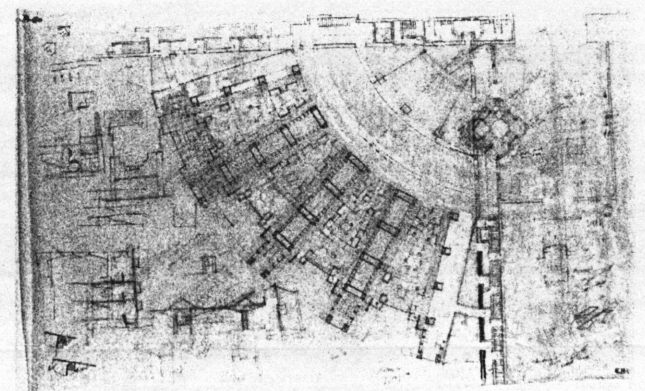


Upper Level - reading room and  
stacks

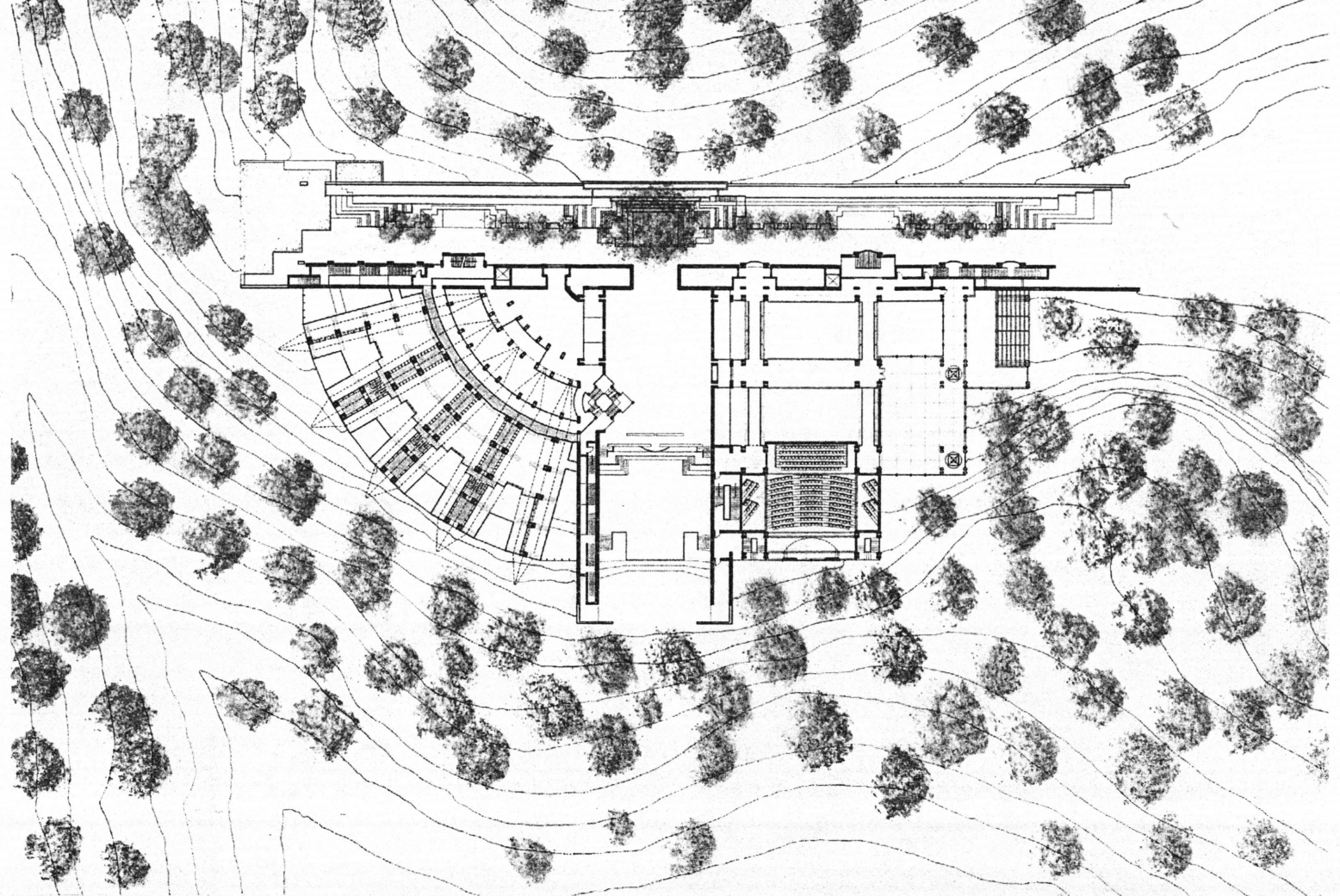
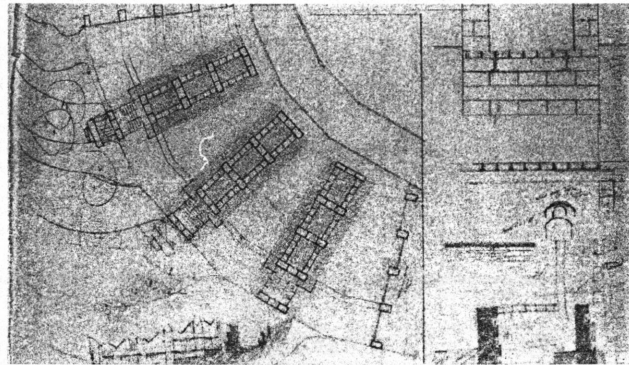
Balcony Level - Lecture Hall , second  
level of classrooms



Development of Meditation Wall

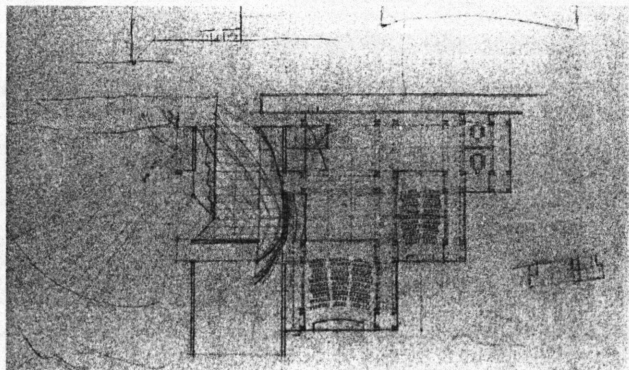


Final development of Library

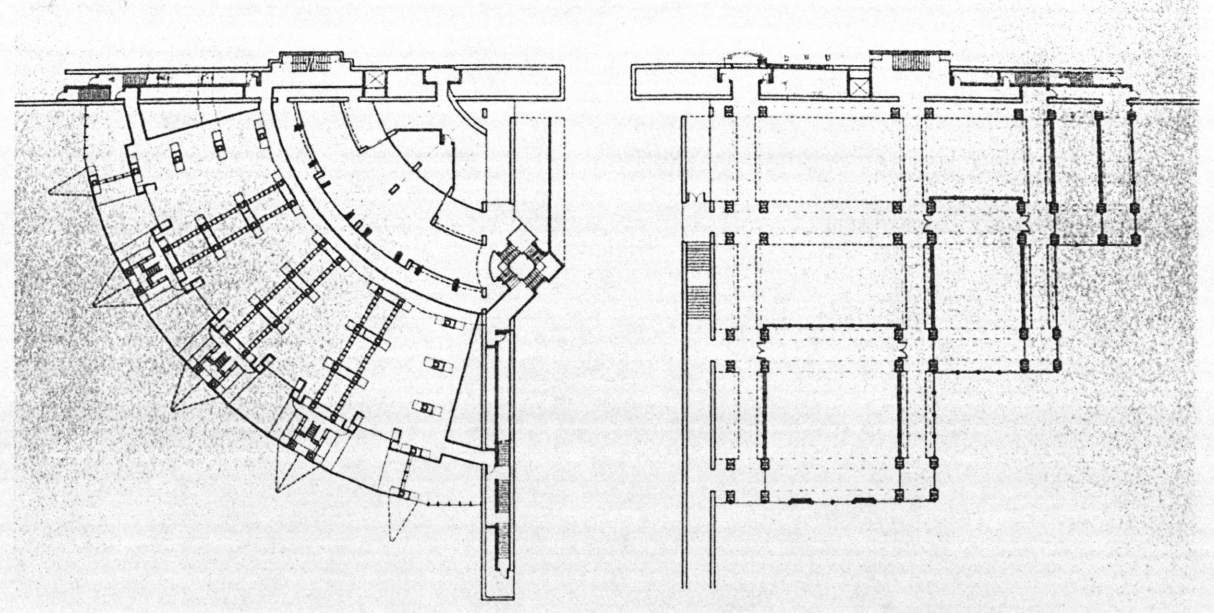


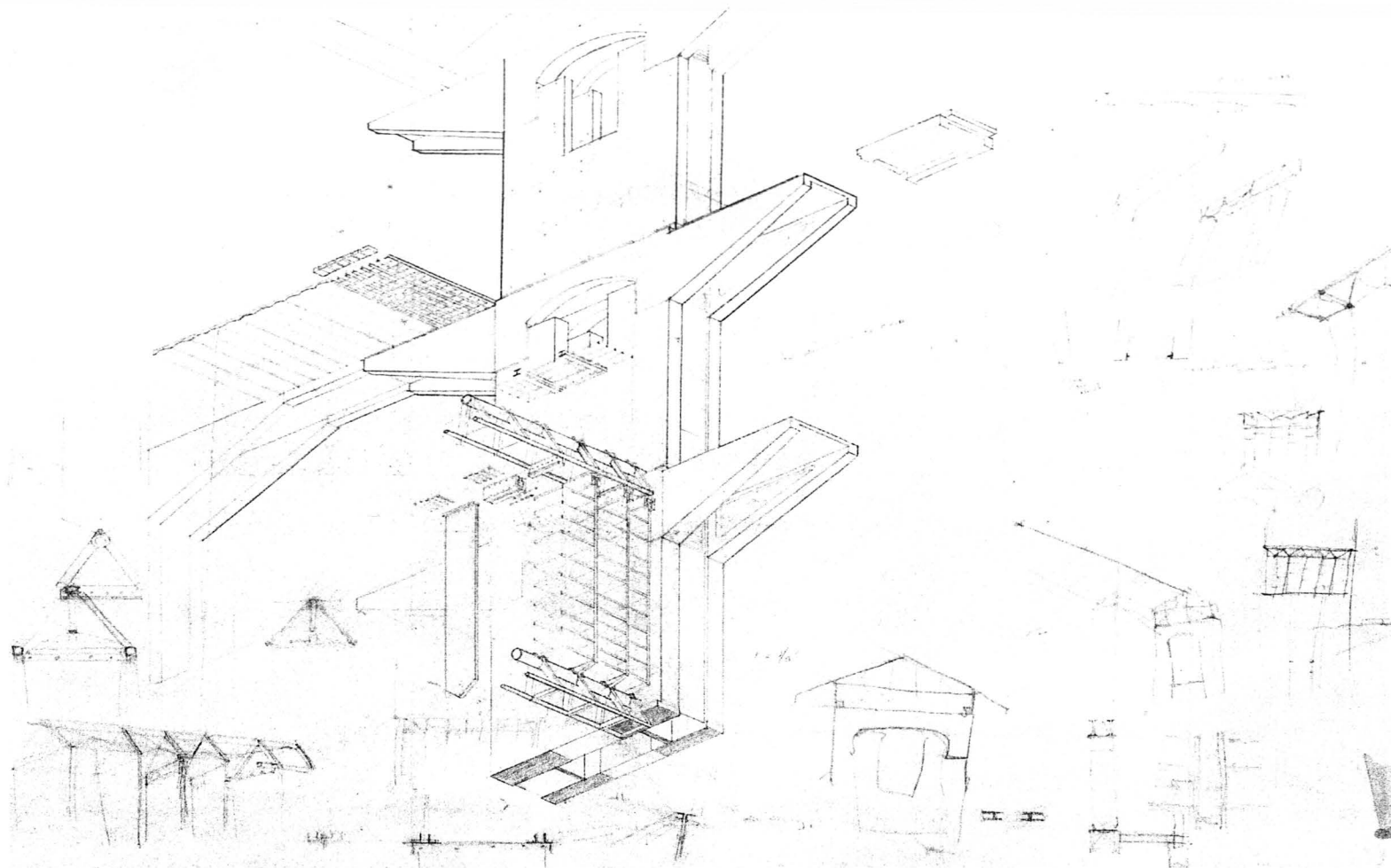
THIRD FLOOR MEZZANINE PLAN

Level of additional stacks within the structure

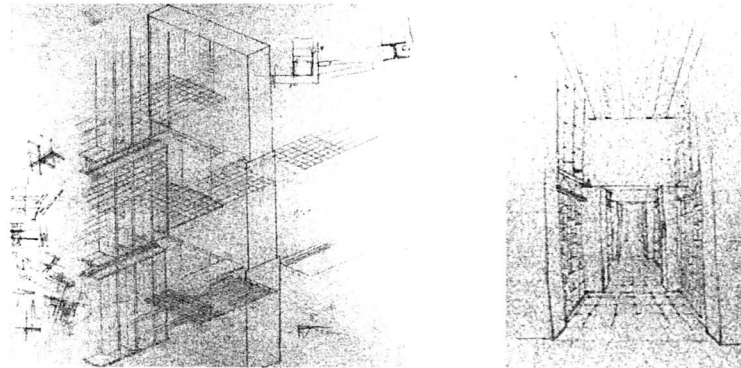
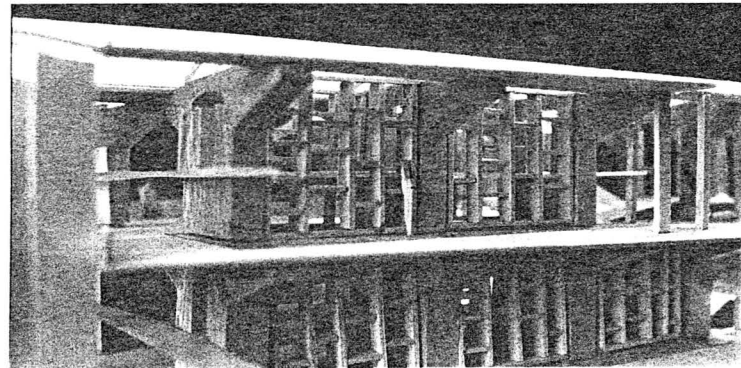


Final development of Classrooms

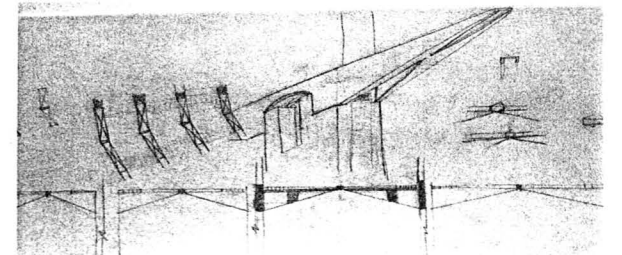
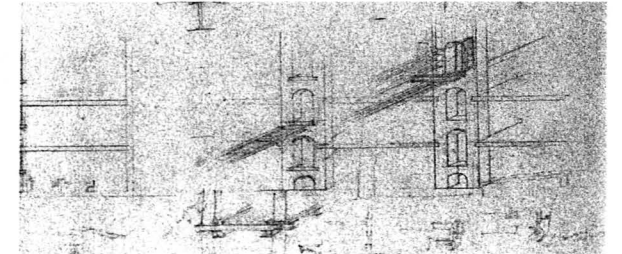




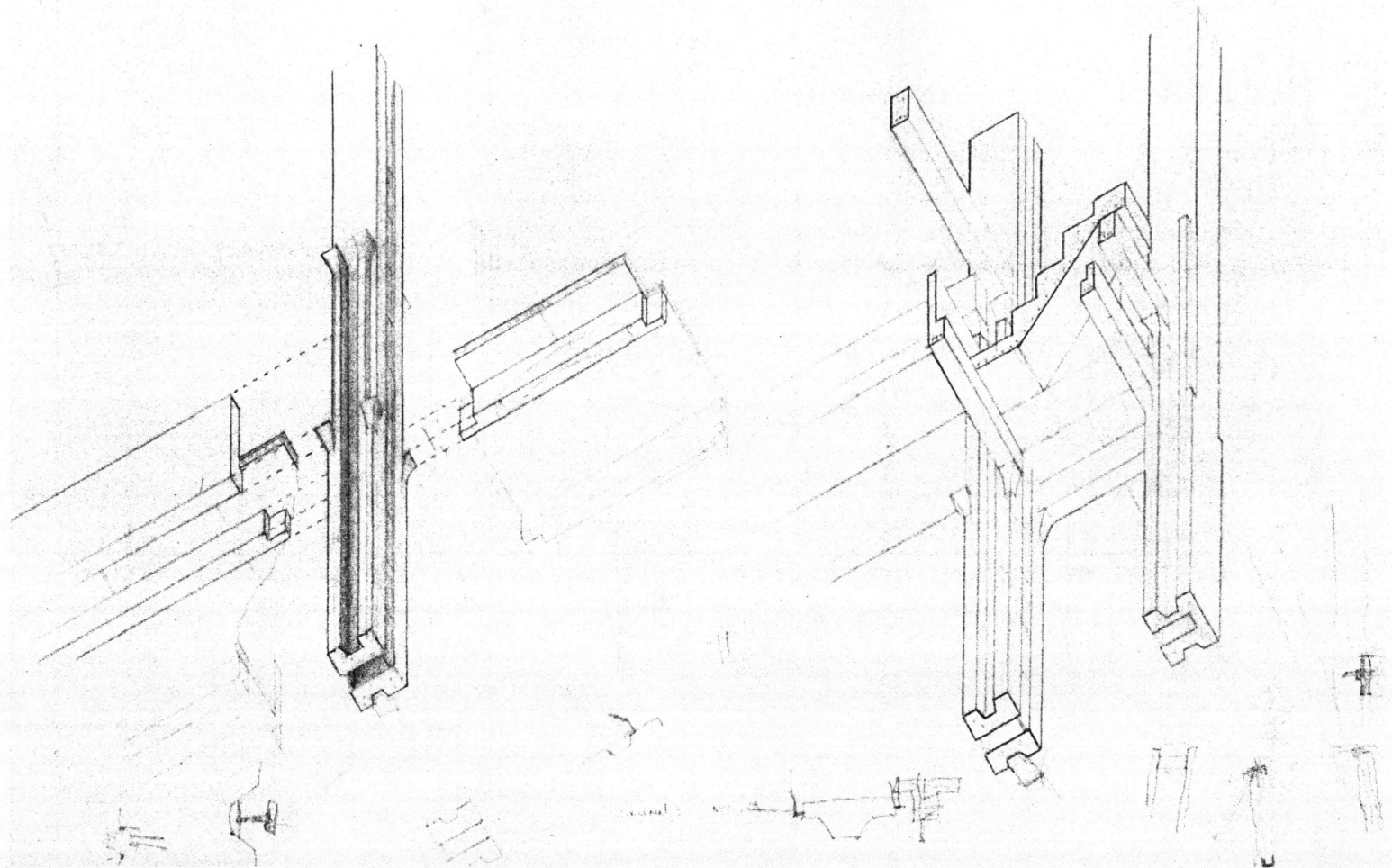
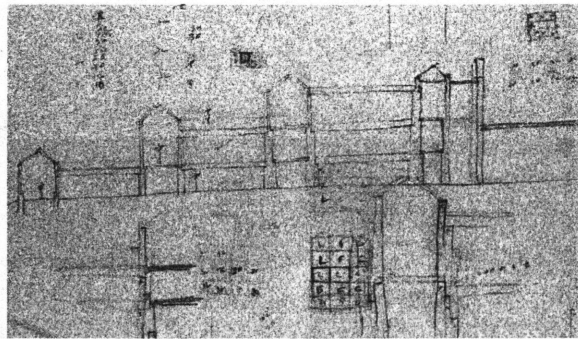
AXONOMETRIC - LIBRARY STRUCTURE



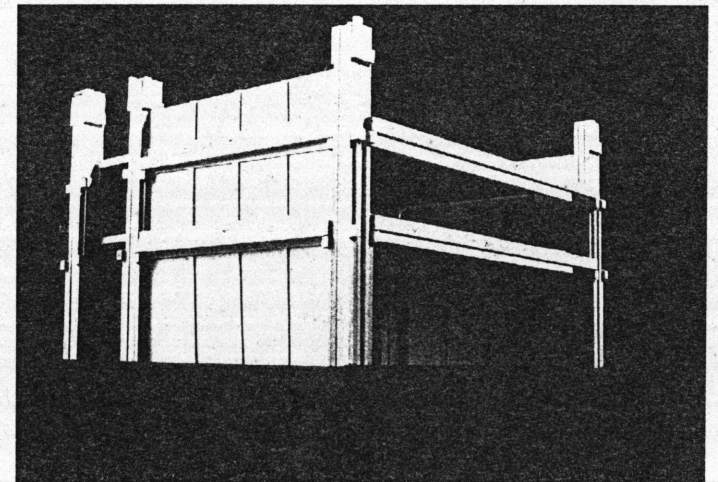
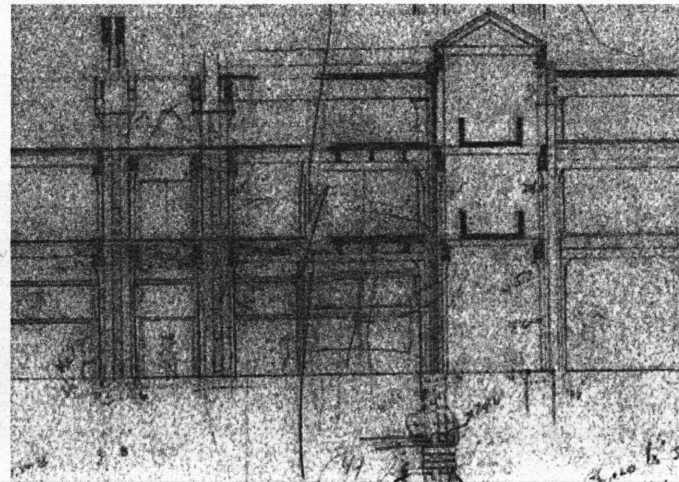
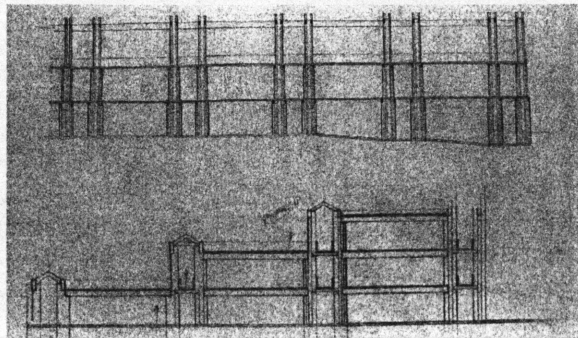
The primary structure truly becomes the core of the building. It supports the building physically, provides a key to one's relationship to the site and the building, and provides a location for the mechanical functions of the building. Since the structure connects to all areas of the building, its design provides a form that can accommodate the other necessary building functions, such as mechanical, and electrical. By housing the mechanical systems within its body, the structure provides the path by which mechanical and information systems reach the user.

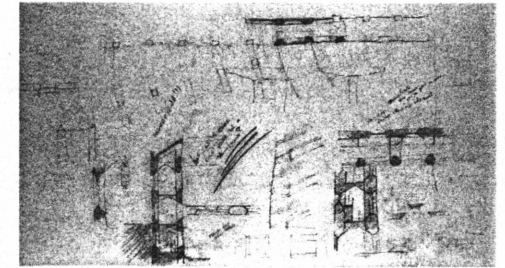
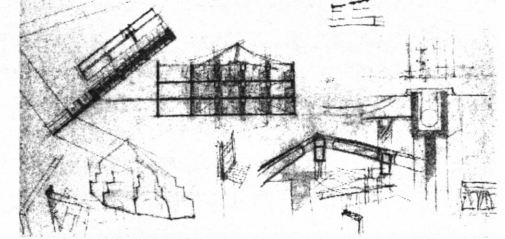
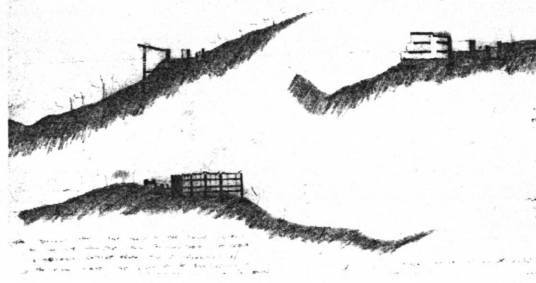
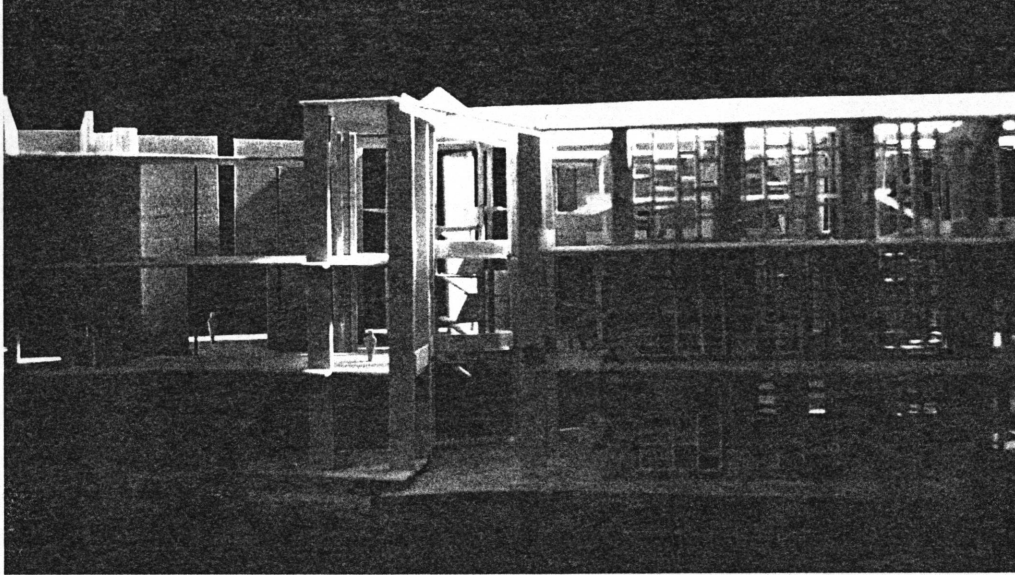


By exposing the structure and mechanical systems of a building, one has the opportunity to gain a greater understanding of the architecture. The exposed form of the structure and its revealed connections create a dynamic diagram of forces relating the pieces of the building to the earth. The exposed mechanical systems housed within the structure create a diagram of the hierarchy of building systems and give form to systems that generally are concealed and formless. This revelation of structure and mechanical connection not only creates the ornament for the spaces, it expresses the forces and duties required to make the building a functioning entity. The structure tells the stories necessary to understand the whole building.

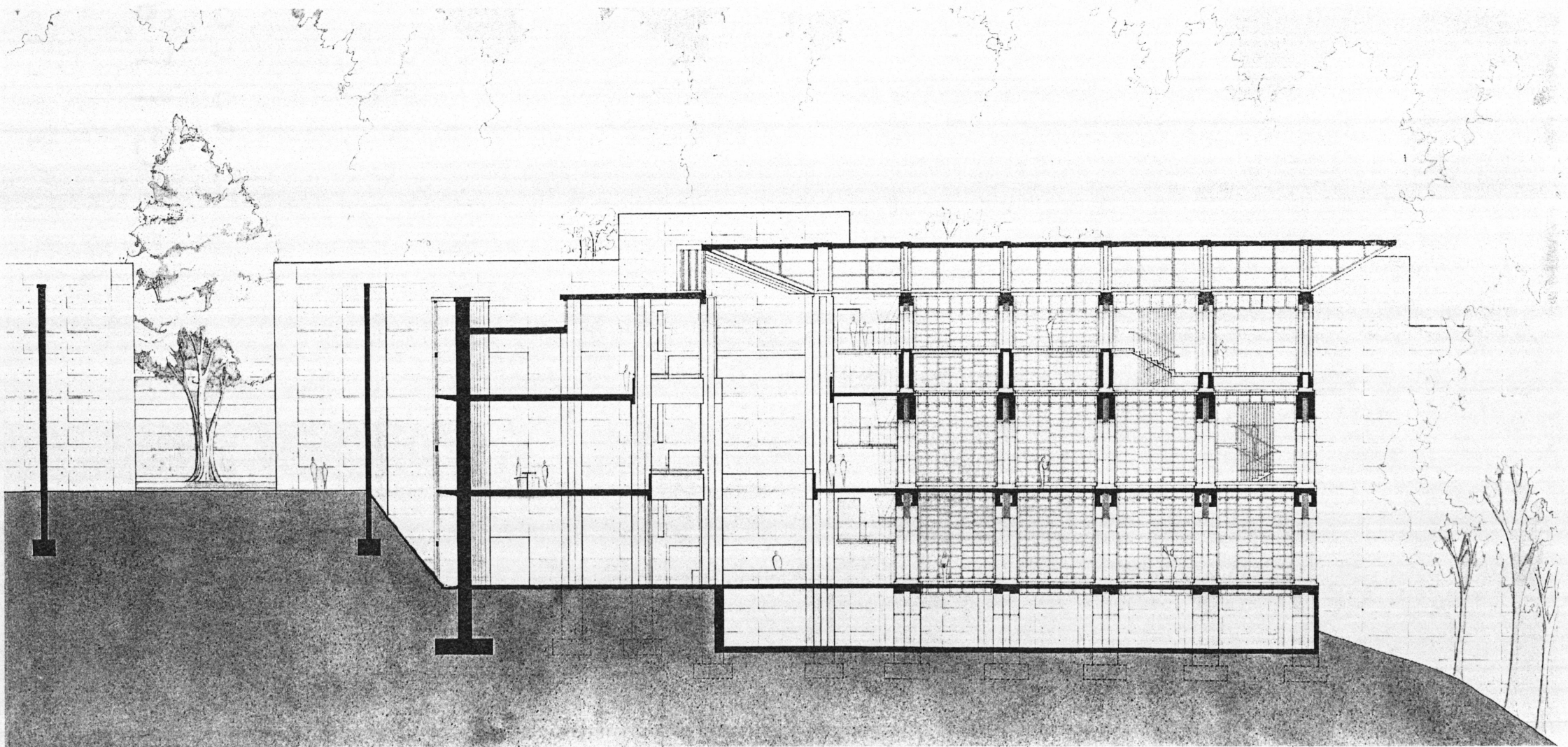


AXONOMETRIC - LECTURE HALL STRUCTURE



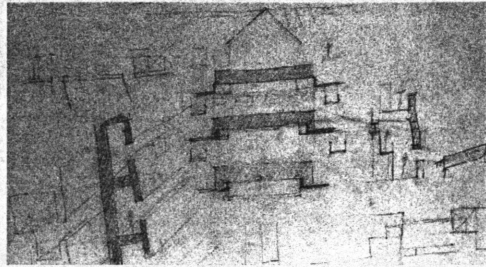
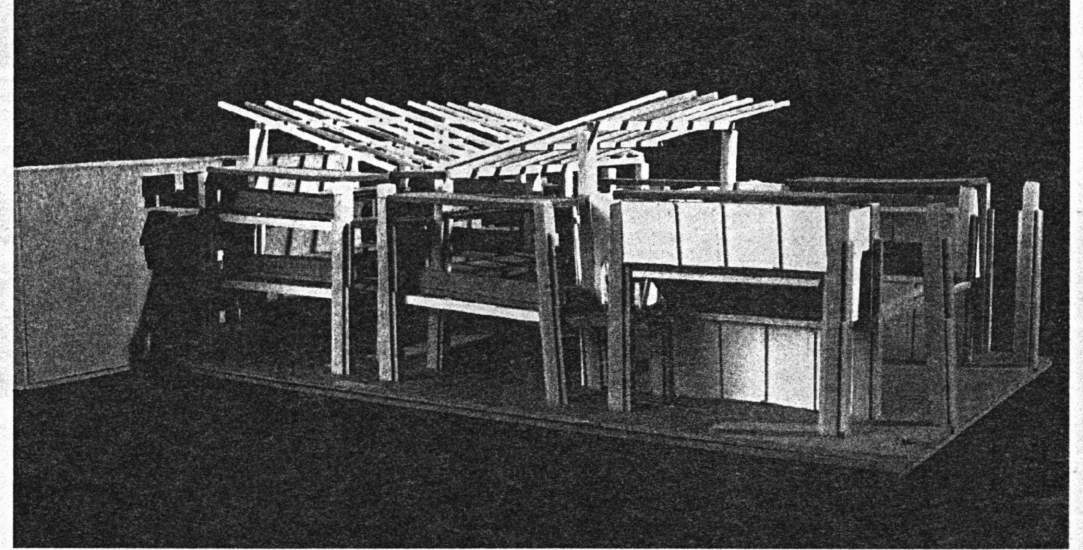
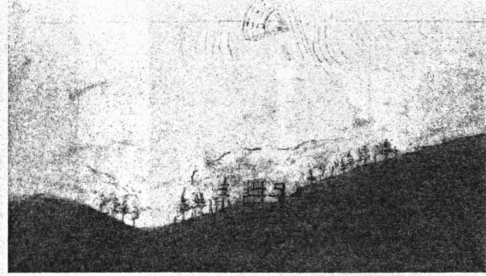


Sectional development of Library

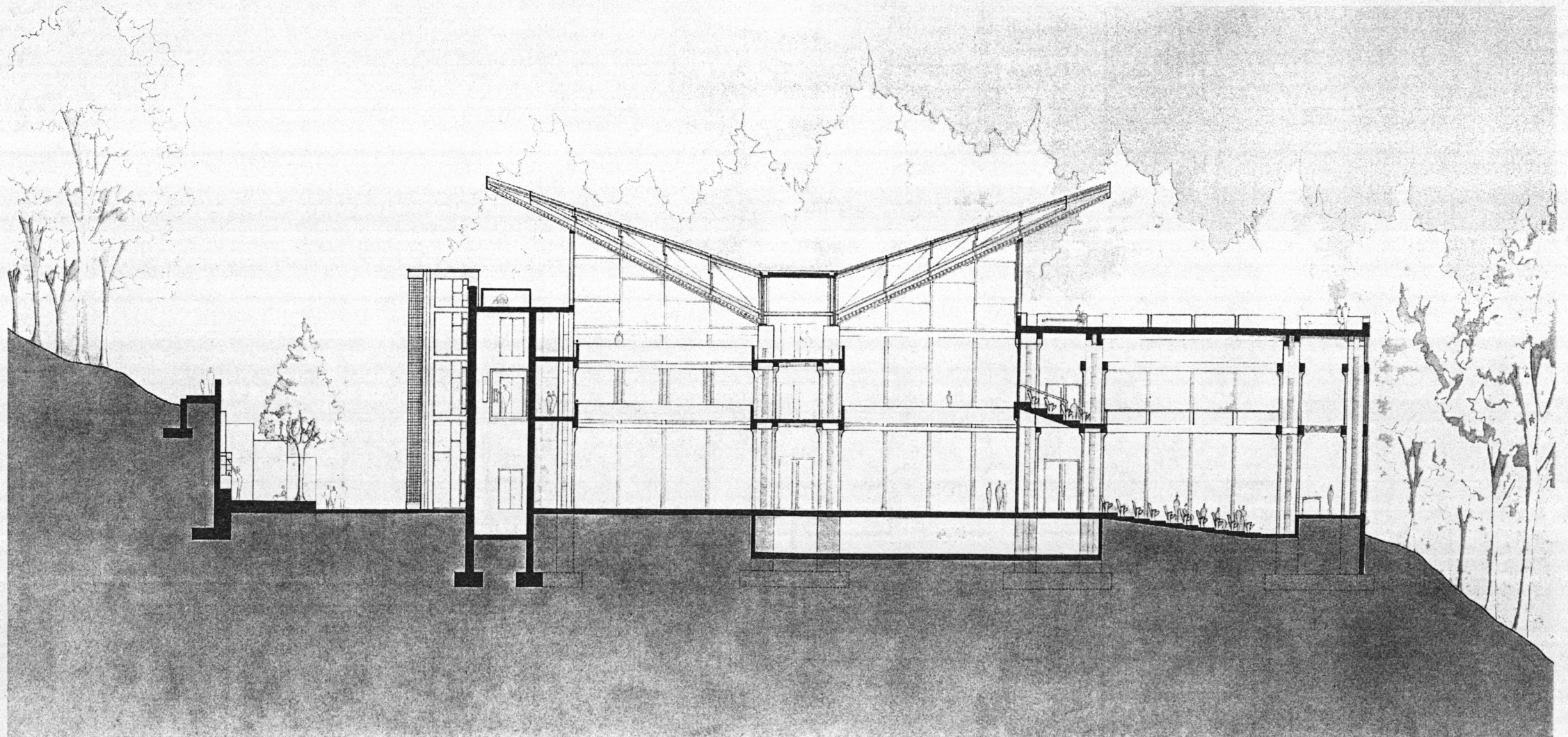


BUILDING SECTION - LIBRARY

Elevation of stacks and structure

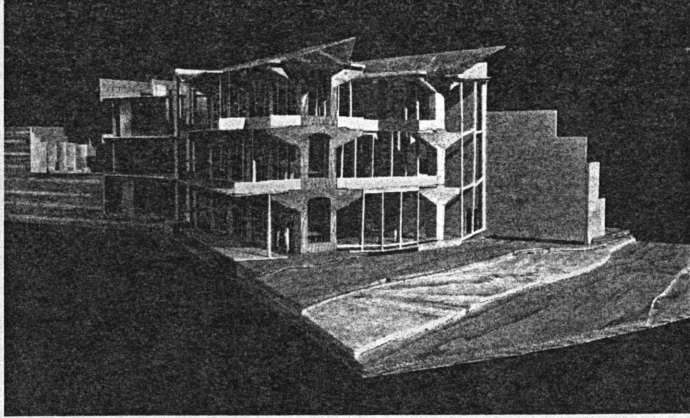


Sectional development of Library

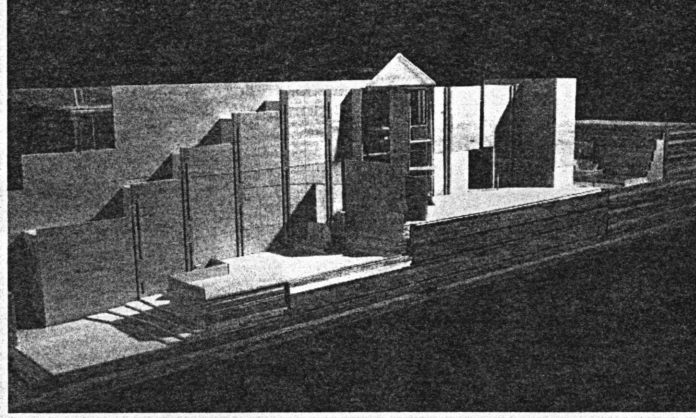


BUILDING SECTION - LECTURE HALL

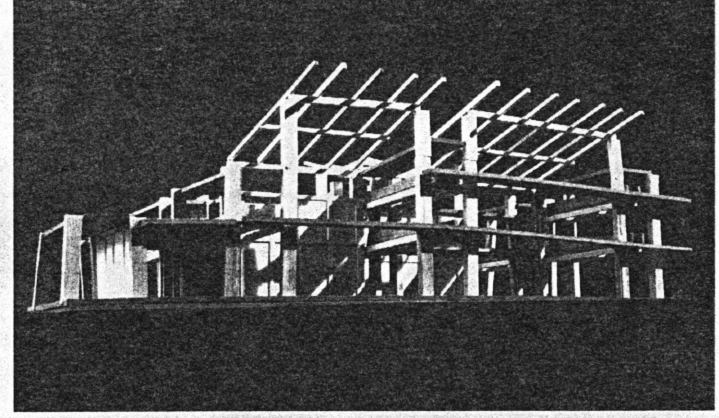
Cut through atrium and main lecture hall



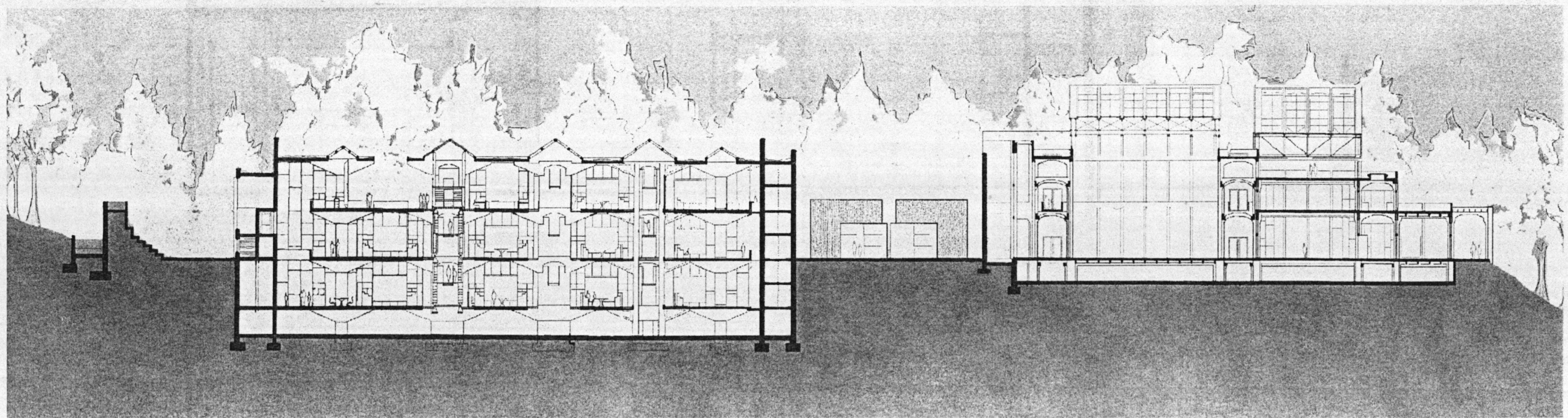
Library



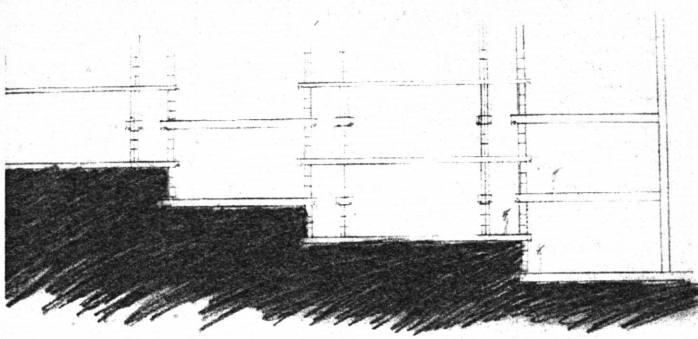
Courtyard



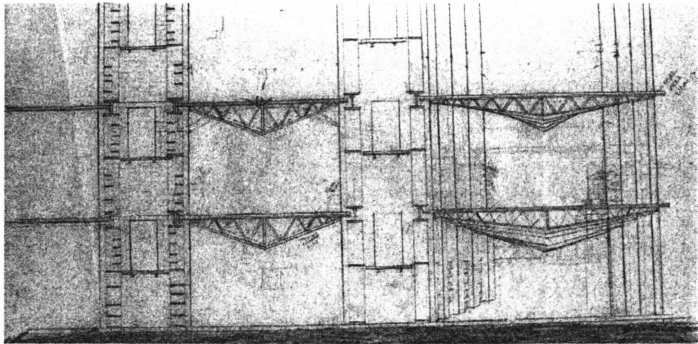
Lecture Hall



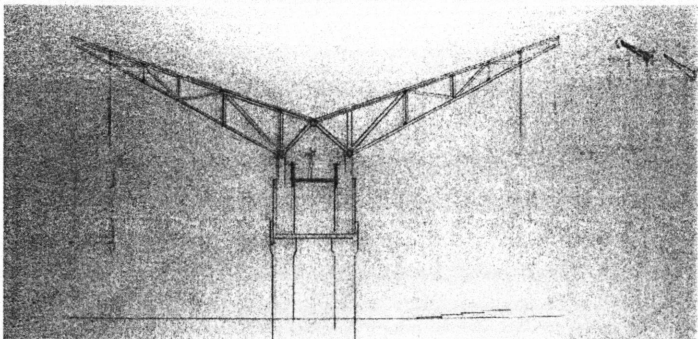
BUILDING SECTION - LIBRARY AND LECTURE HALL



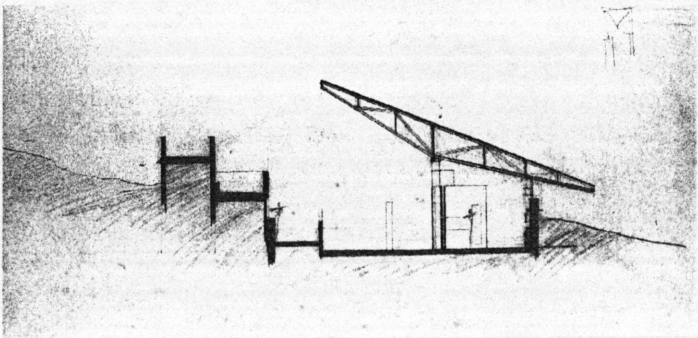
Study of Library structure



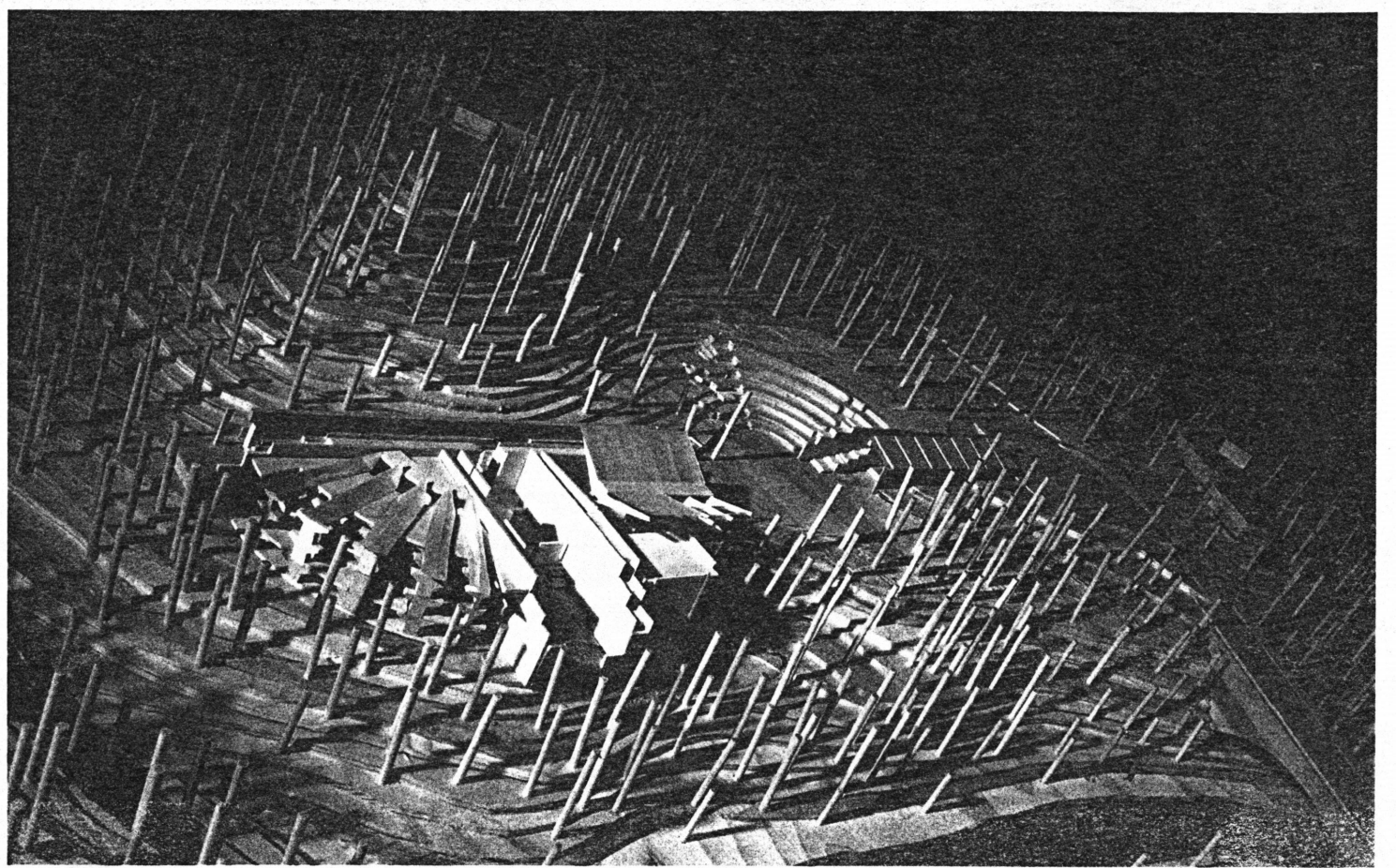
Study of Library structure



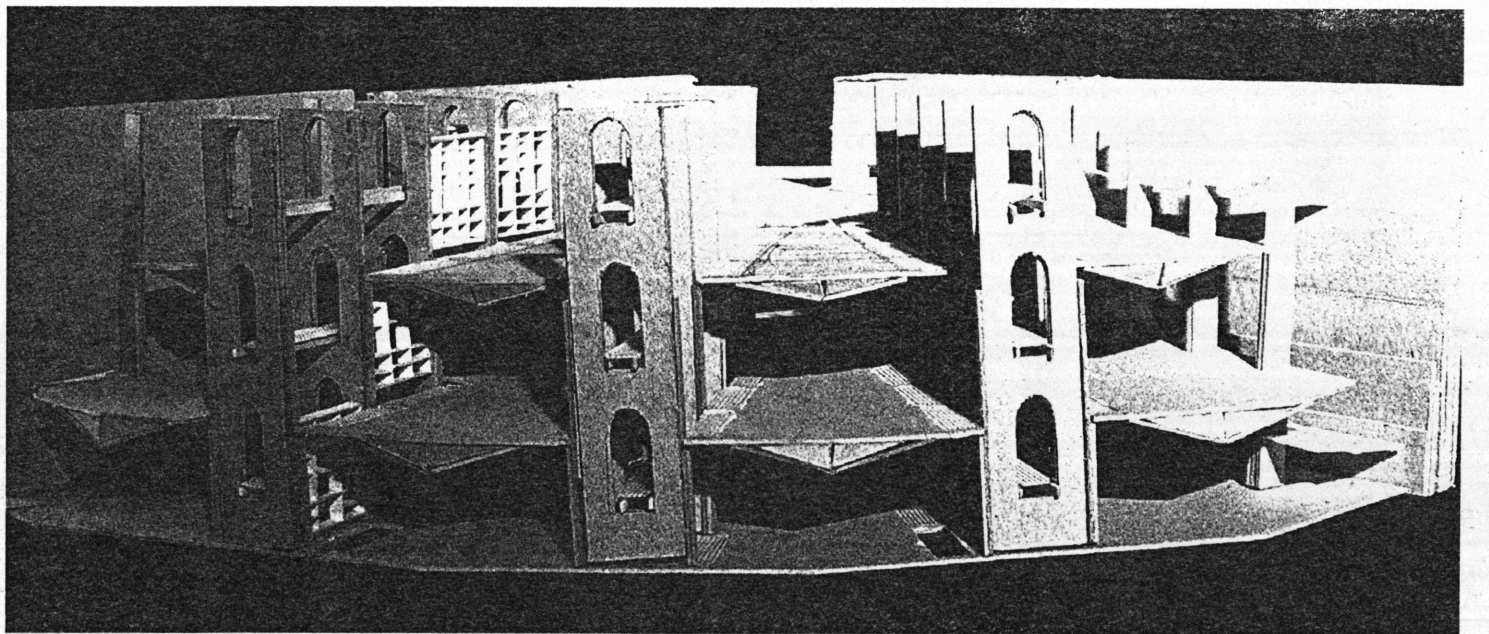
Development of Lecture Hall roof



Gallery section



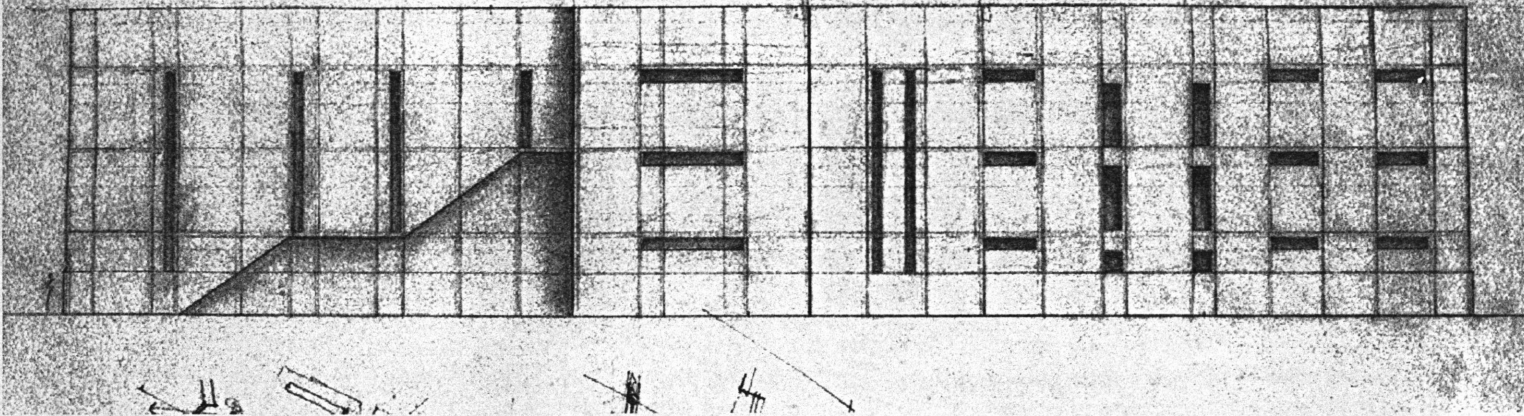
SITE MODEL



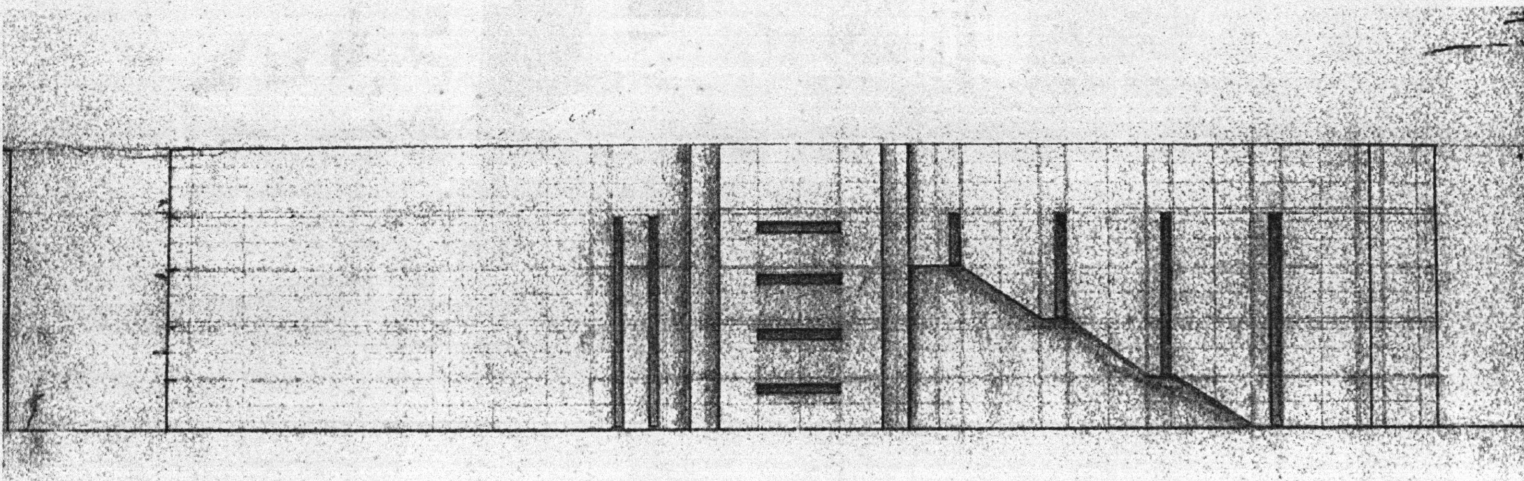
Library study model

"Myth in an eternal mirror in which we see ourselves." <sup>8</sup>

J.F. Bierlein



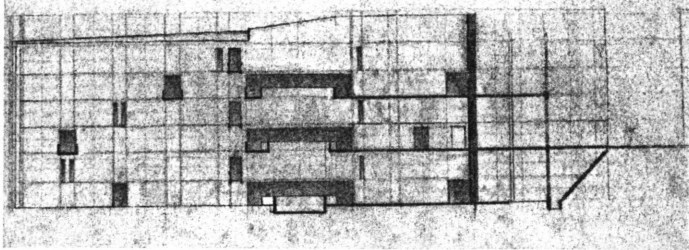
WEST ELEVATION: LECTURE HALL



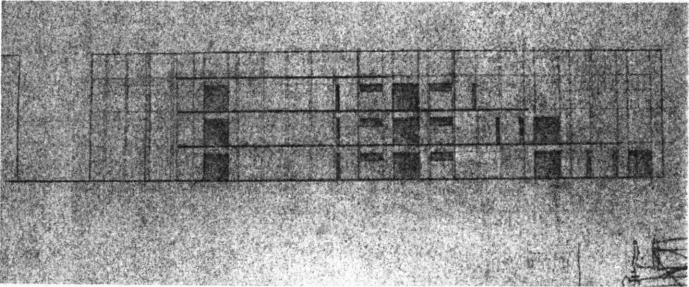
WEST ELEVATION: LIBRARY

"One becomes truly a man only by conforming to the teaching of the myths, that is by imitating the gods." <sup>9</sup>

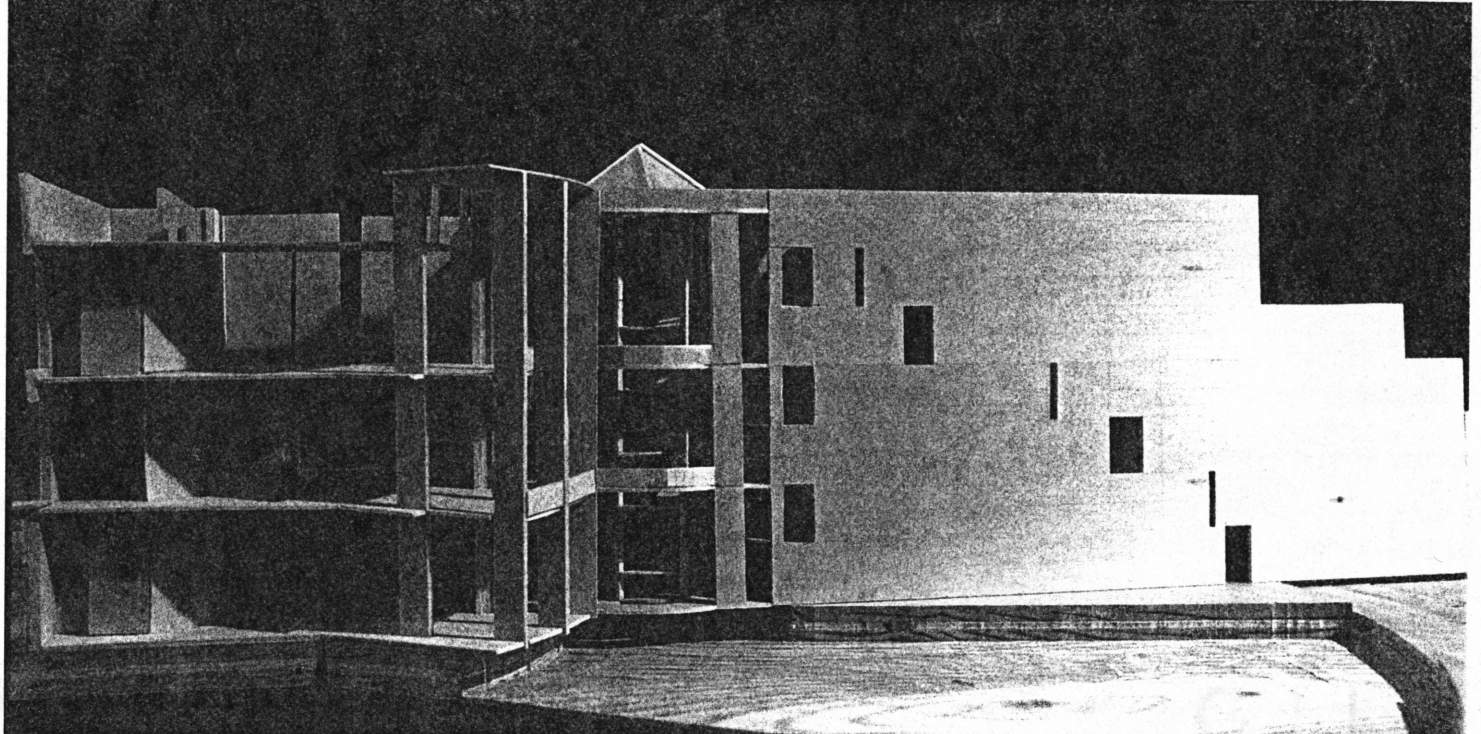
Mircea Eliade



Interior Elevation of west service core: Lecture Hall \_\_\_\_\_

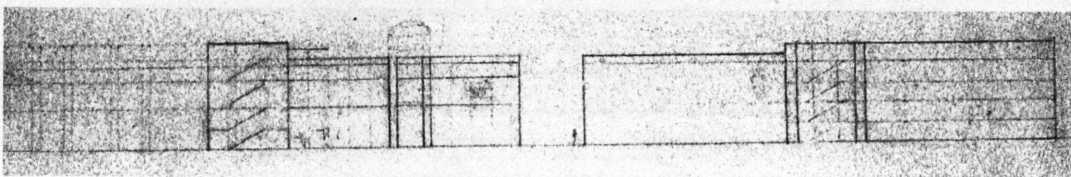


Interior Elevation of west service core: Library \_\_\_\_\_

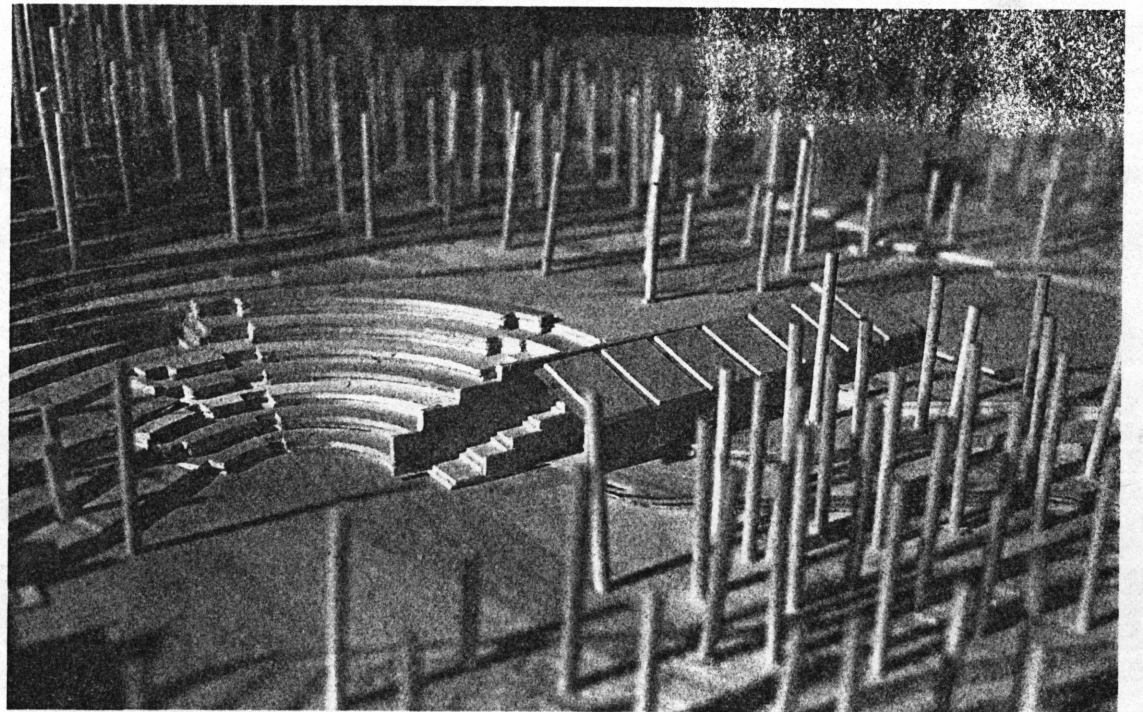


LIBRARY

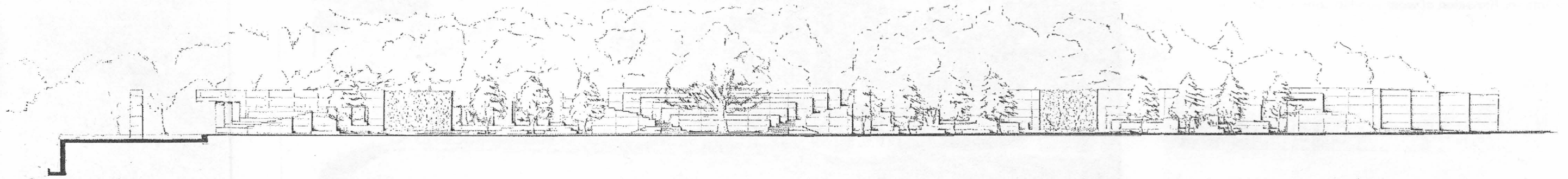
Elevation of north service core



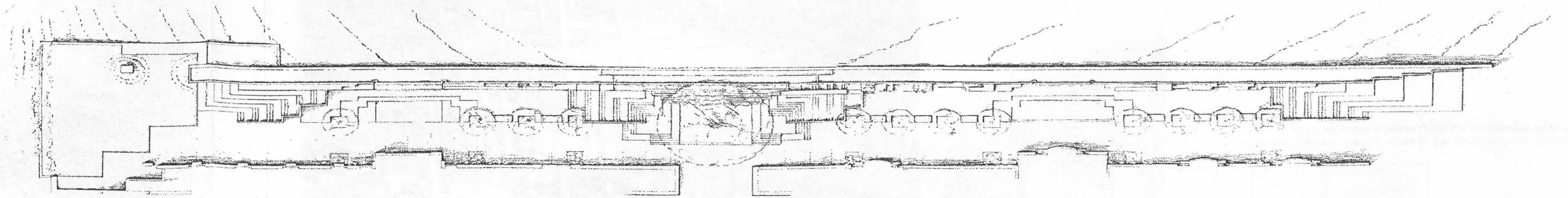
Study of west service core: section and elevation \_\_\_\_\_



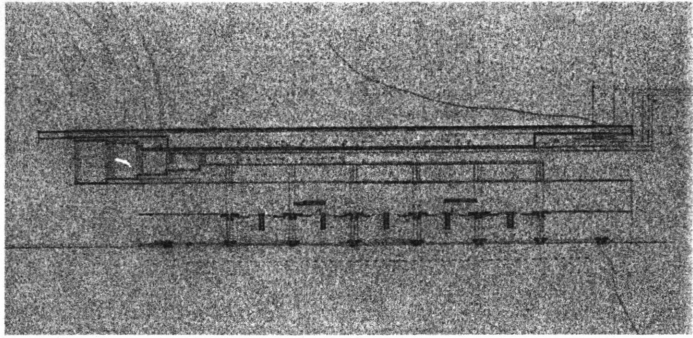
Entrance Gallery and Amphitheatre \_\_\_\_\_



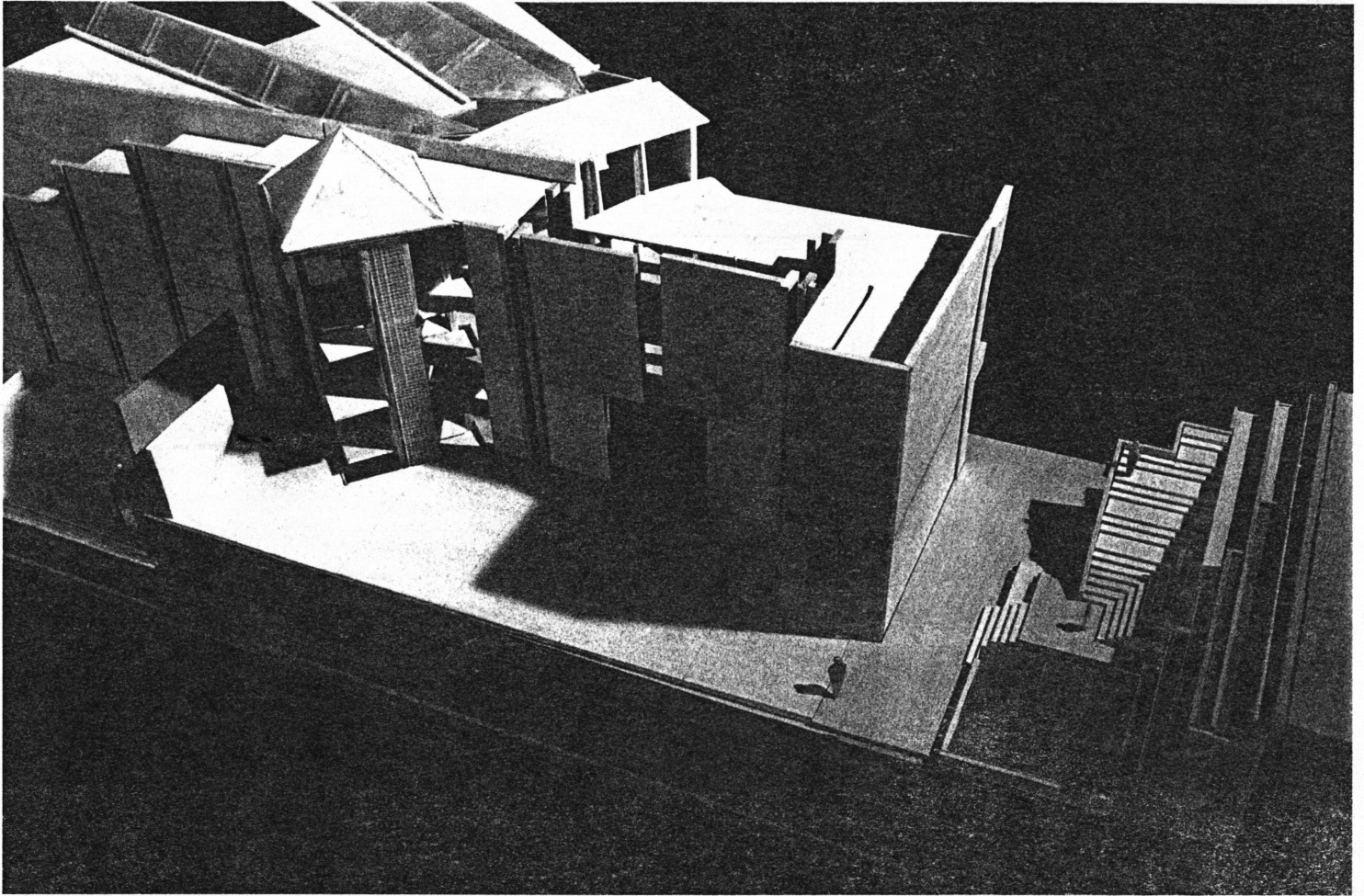
MEDITATION WALL: EAST ELEVATION



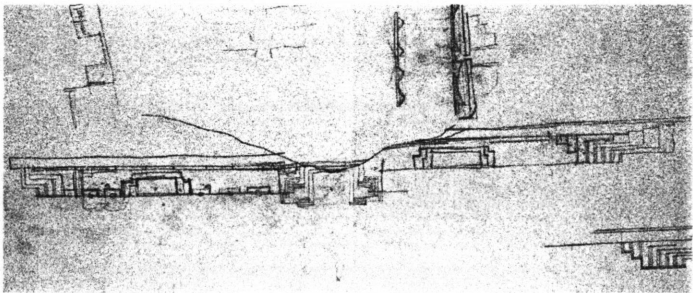
MEDITATION WALL: PLAN



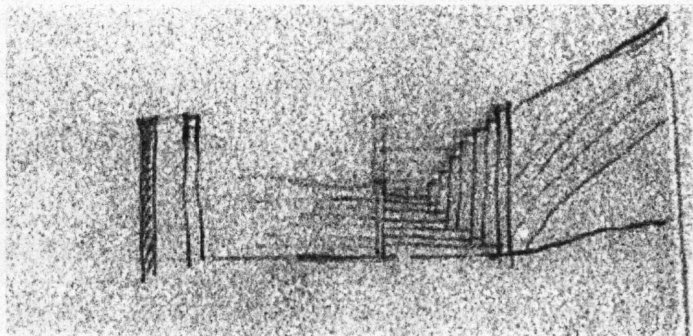
Meditation Wall: development \_\_\_\_\_



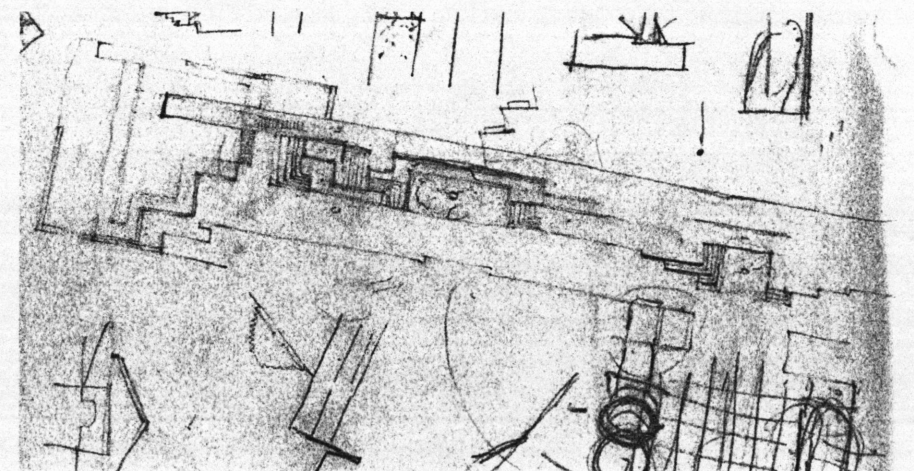
Courtyard and central Meditation Wall \_\_\_\_\_



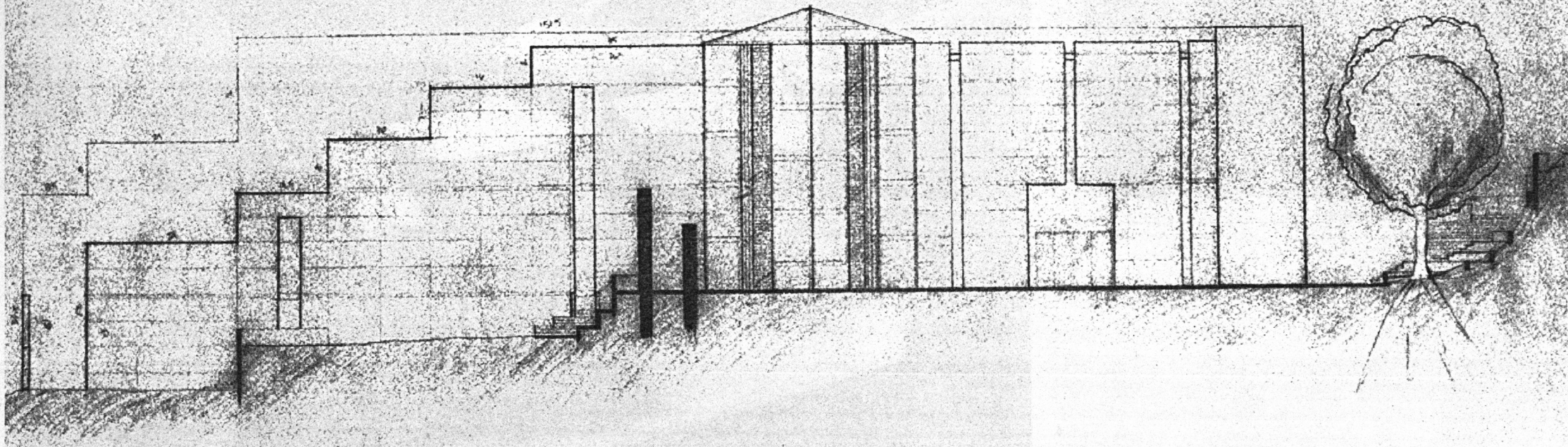
Meditation Wall: development \_\_\_\_\_



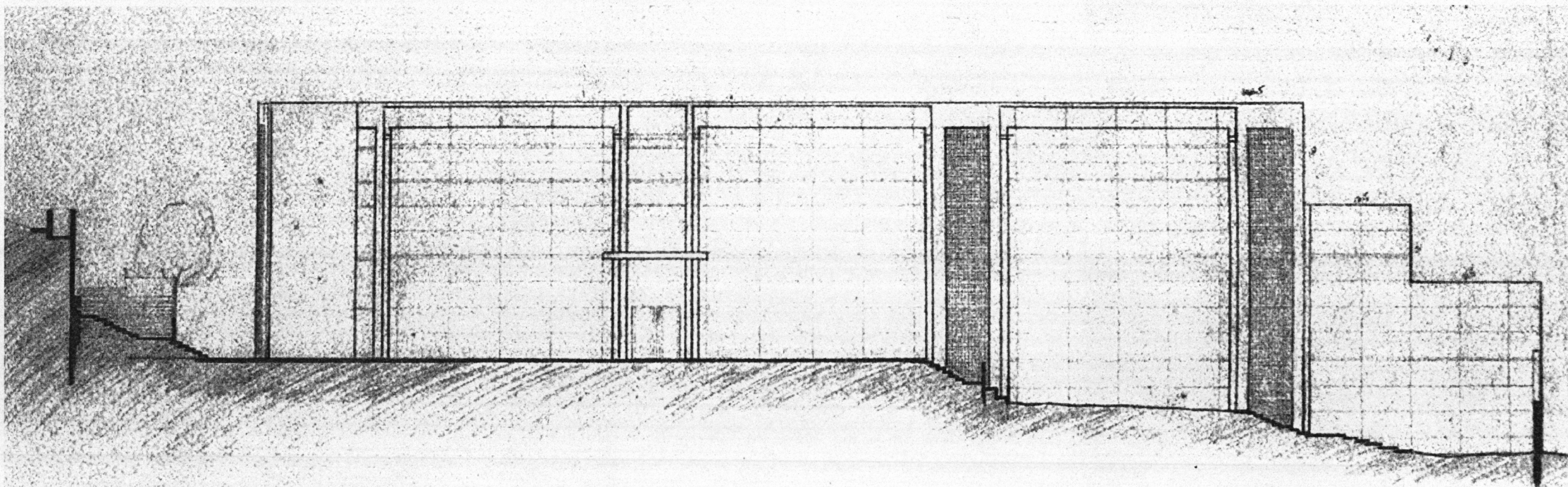
Meditation Wall: development \_\_\_\_\_



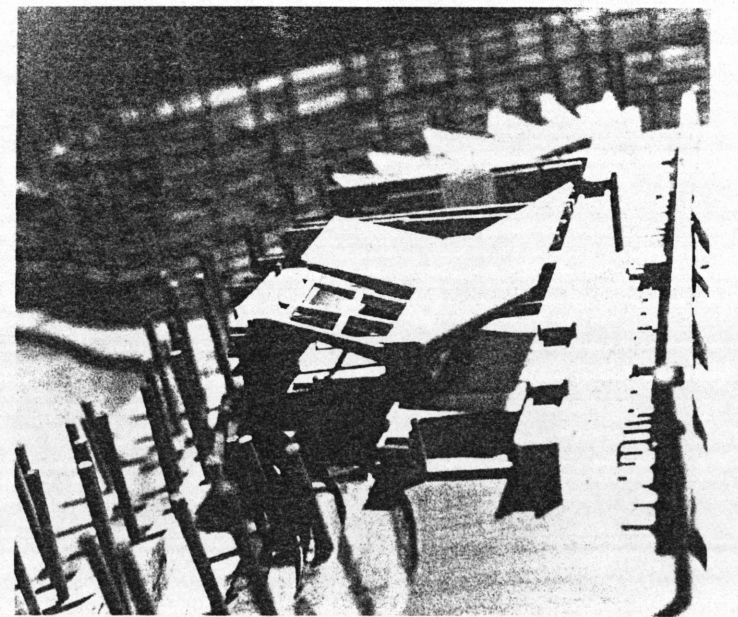
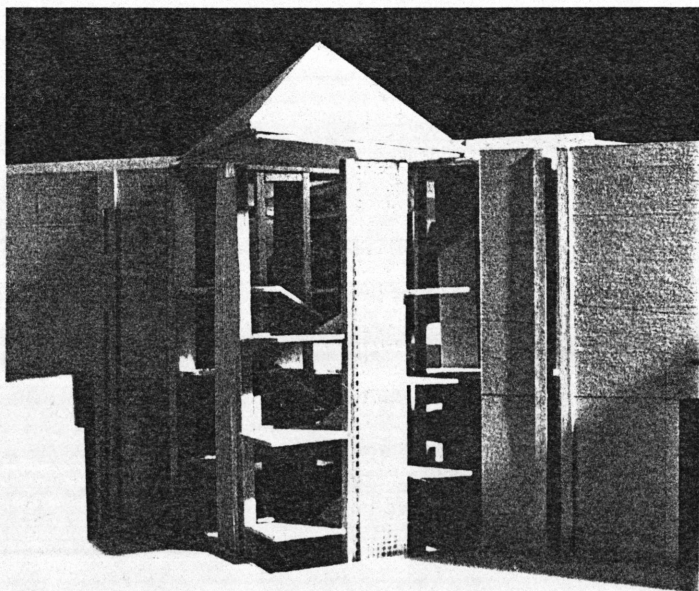
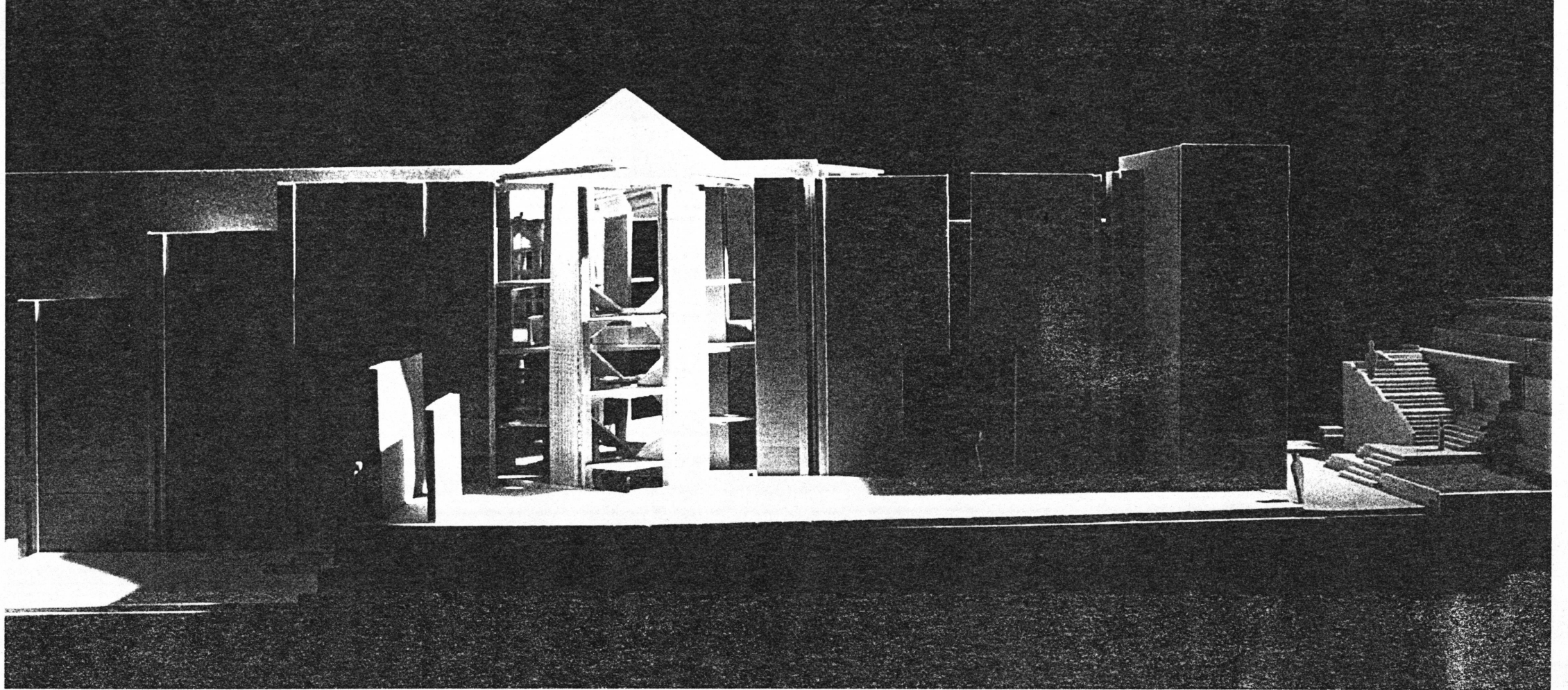
Meditation Wall: development \_\_\_\_\_

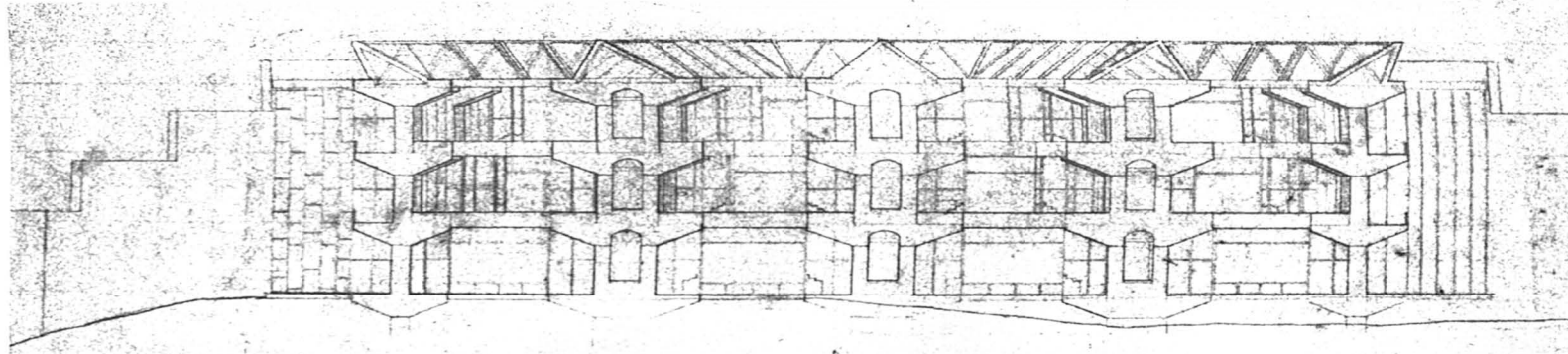


NORTH ELEVATION LIBRARY - COURTYARD SECTION



SOUTH ELEVATION LECTURE HALL - COURTYARD SECTION

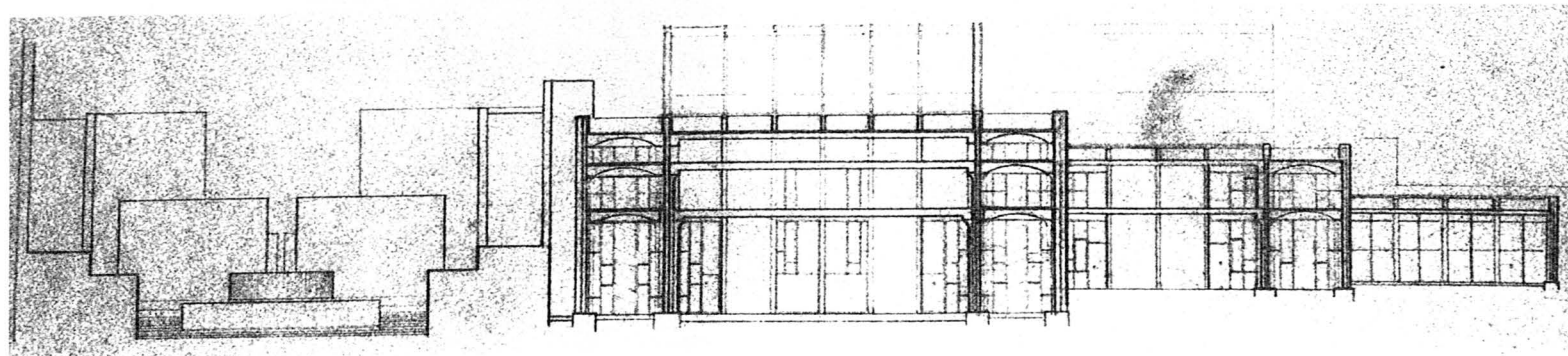




SOUTHEAST ELEVATION LIBRARY

*"To create a myth, that is to say, to venture behind the reality of the sense to find a superior reality, is the most manifest sign of the greatness of the human soul and the proof of its capacity for infinite growth and development."*<sup>10</sup>

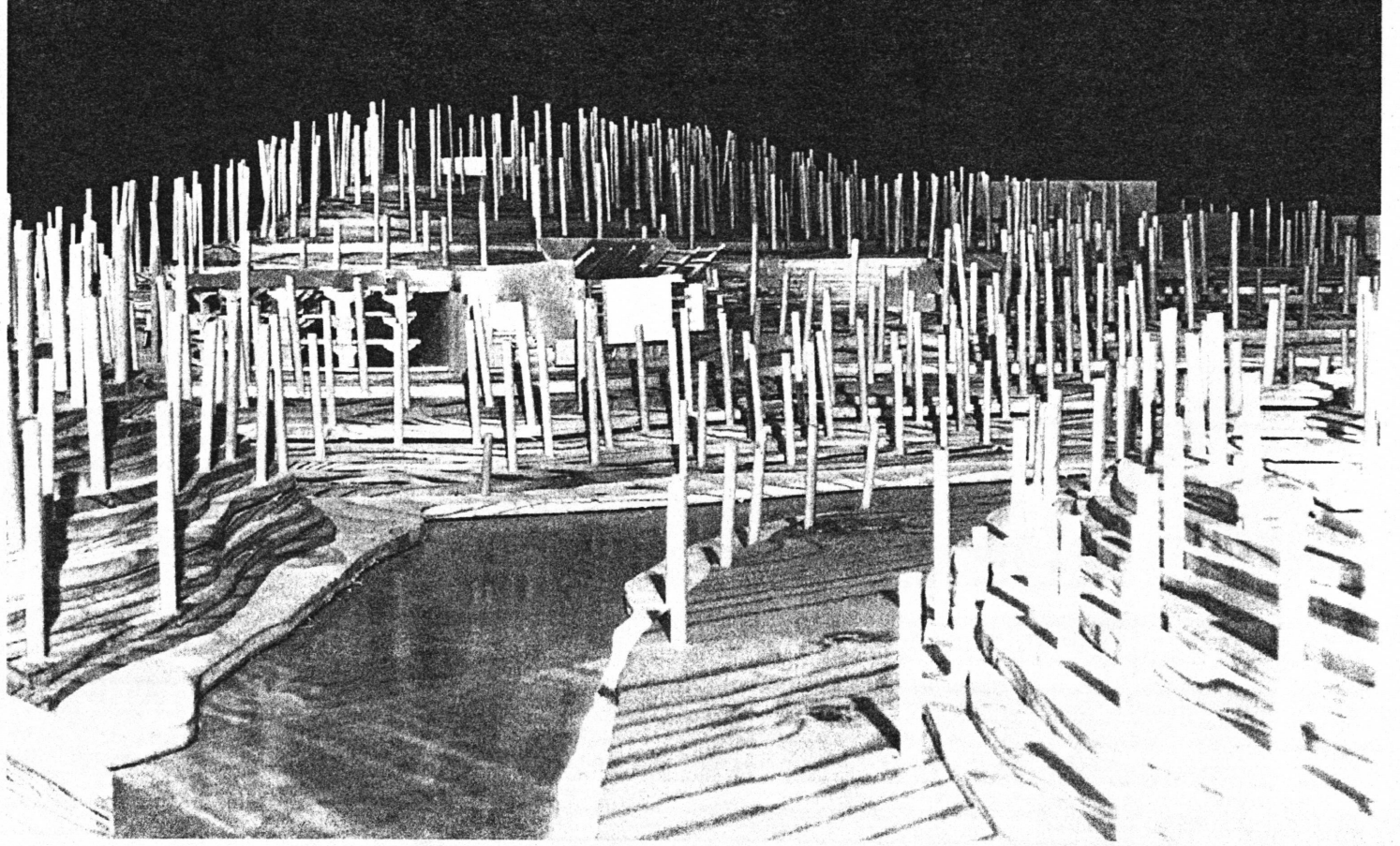
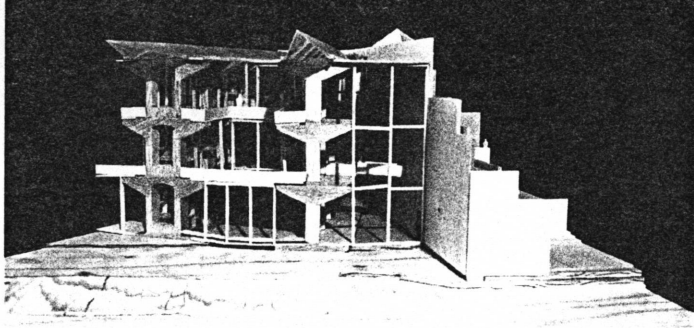
Louis-Auguste Sabatier  
French Theologian



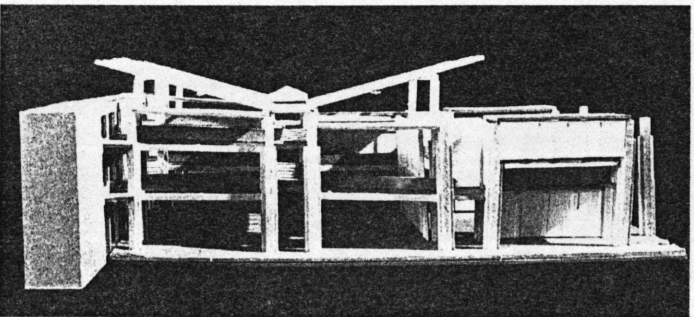
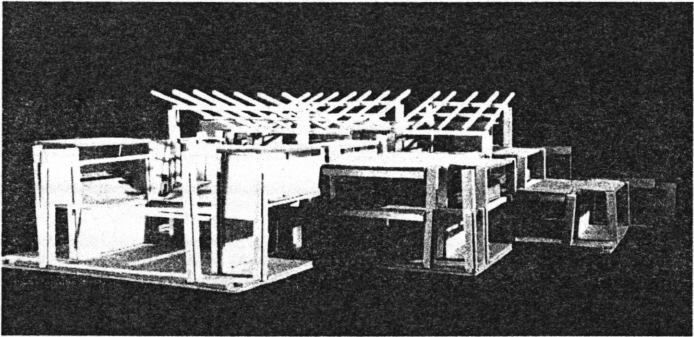
EAST ELEVATION LECTURE HALL

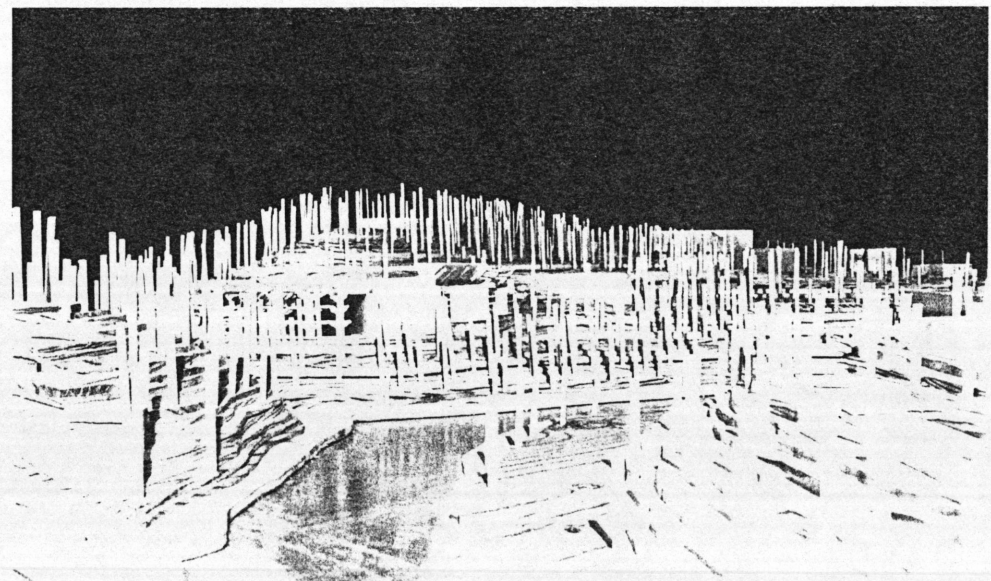
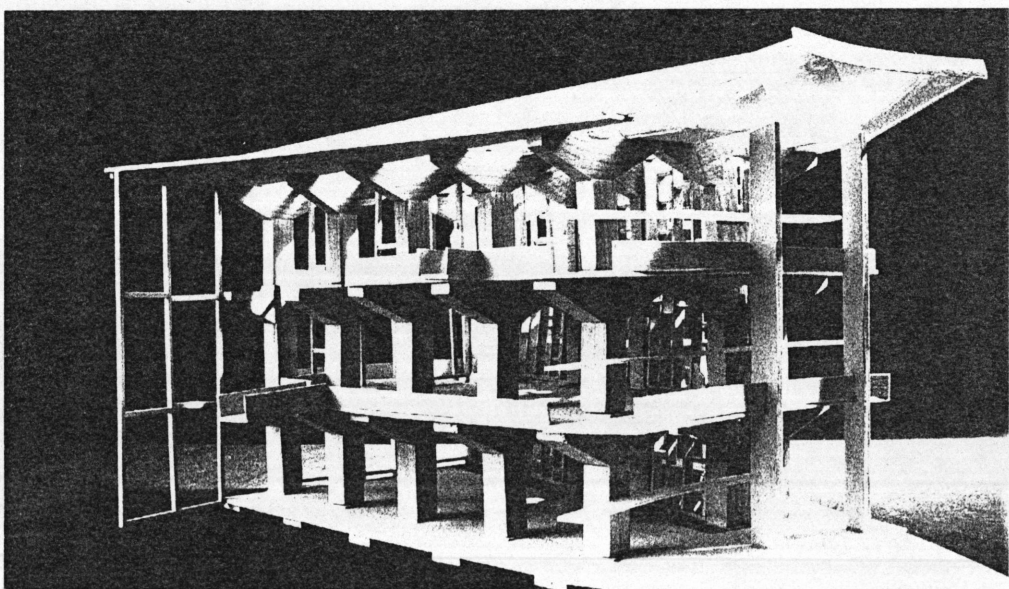
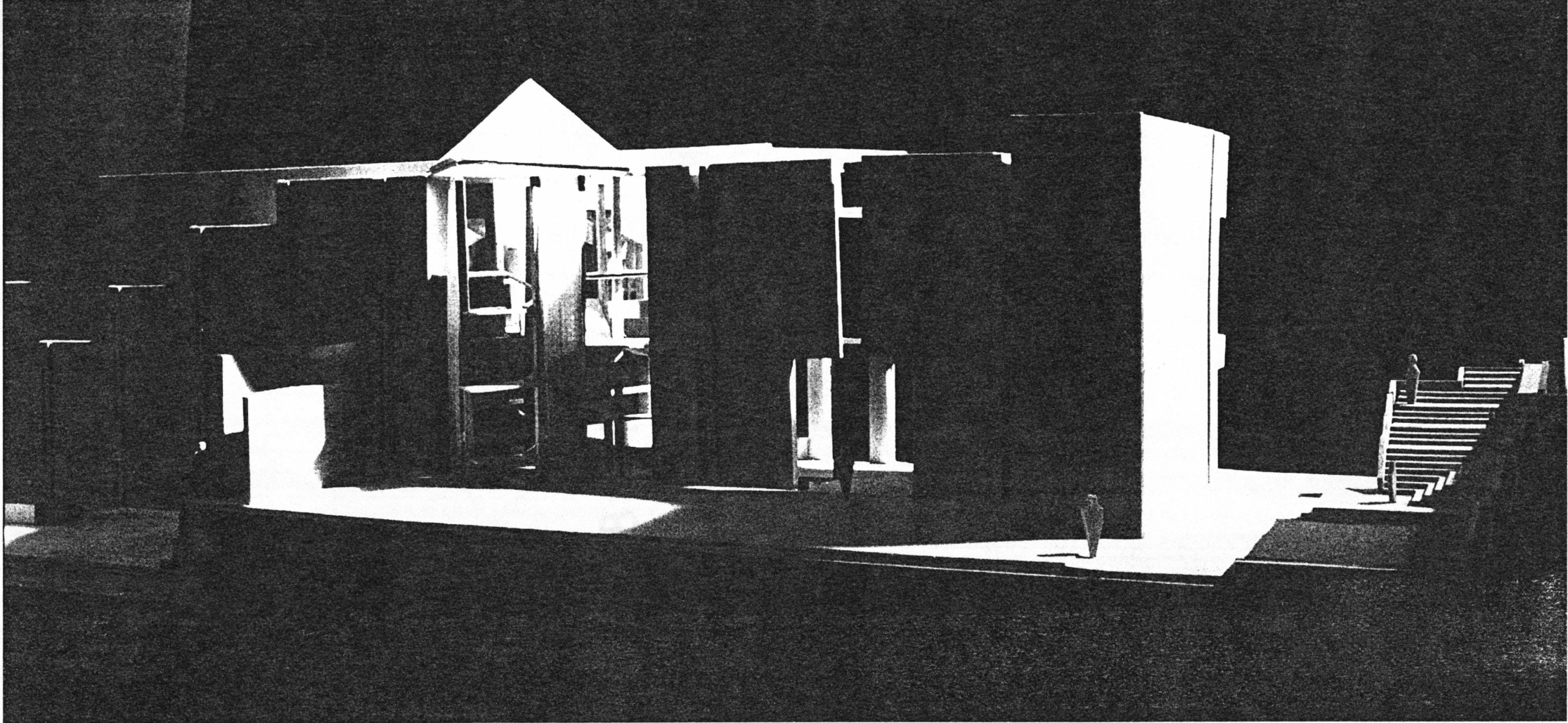
*"Myth and Religion are not phases in human consciousness, but a part of human consciousness itself."*<sup>11</sup>

Mircea Eliade



VIEW OF COMPLEX FROM ROCK CREEK PARKWAY





## CONCLUSION

If life is a journey, what is its destination? Death, life after death, heaven, hell, or reincarnation? Is the meaning of that journey still a mystery? Or is it, as Camus suggested, that the striving itself can give life meaning? This question, this need to understand, has been with us since we evolved into creatures with cognitive reasoning.

I don't profess to have the answer, nor to have a greater understanding than anyone else. However, I chose this thesis project to aid in my own struggle, my own journey towards understanding. Education and learning are a part of our journey, another aspect of our striving for meaning. I linked my architectural education to my life's education. Although, I didn't find the meaning of life, I did clarify my own beliefs. I found my personal truth in architecture: structure is the essence of architecture.

*"...The universe is made up of stories, not atoms..."<sup>12</sup>*

Muriel Rukeyser

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the scanned document**

## ENDNOTES

1. Candela, Felix. *Santiago Calatrava*. El Croquis Editorial. 1994: 86.
2. Camus, Albert. *The Myth of Sisyphus*. Alfred A. Knoff, Inc. 1955: 119-21.
3. Camus, A.: 121-23.
4. Wright, Frank Loyd. *In the Realm of Ideas*. Southern Illinois University Press.1988:28.
5. Holl, Steven. *Anchoring*.
6. Weston, Richard. *Alvar Aalto*. Phaidon Press Limited. 1995: 122.
7. Weston, R.: 98.
8. Beirlein, J.F. *Parallel Myths*. Random House, Inc. 1994. xiii.
9. Eliade, Mircea. *The Sacred and The Profane: The Nature of Religion*. Harcourt, Brace, Jovanovich, Inc.:1959.
10. Beirlein, J.F.:263.
11. Eliade, M.
12. Rukeyser, Muriel.

