

ARCHITECTURAL JOURNEYING:
THE DESIGN INVESTIGATION OF ARTICULATED IN-BETWEENS

by
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ABSTRACT

ARCHITECTURAL JOURNEYING:
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By Steven Imrich

Submitted to the Department of Architecture in February, 1980 in partial fulfillment of the requirements for the degree of Master of Architecture.

Perhaps the easiest way to comprehend the complexity of our built and natural landscape is to draw an example from common experience. As ambulatory beings we must all move from one place to another. Architects, too, must travel a distance, but in a more abstract manner; from the idea to the design to its execution. Yet a journey is not just getting there; for the space which surrounds and fills our experience both defines and acts as the log of that movement. A journey, therefore, seems a fitting metaphor for an exploration of the wider implications of how built form might help us get from here to there, and understand the quality of in-betweens as well. From a cross-country journey, to the path we travel between rooms, there lie many clues to inform the way we design.

The journeys in this thesis are both figurative and literal. Viewed as life-giving connections for all arrivals and departures, they take on a more positive definition than the void between objects. Within their contextual field they become a kind of built cytoplasm, or the living substance which helps structure the whole of our perceptive universe. "Journeying" is my way to study a larger issue, that of the in-between regions of built landscape. The concept of articulated in-betweens acts as a vehicle to make positive association with space, in a culture that puts a premium on objects and equates the in-between with emptiness. In this study I have momentarily turned the tables on a casual view of in-betweens, as if I were held throughly accountable for all "left-over" space. The articulation of in-betweens is the primary objective.

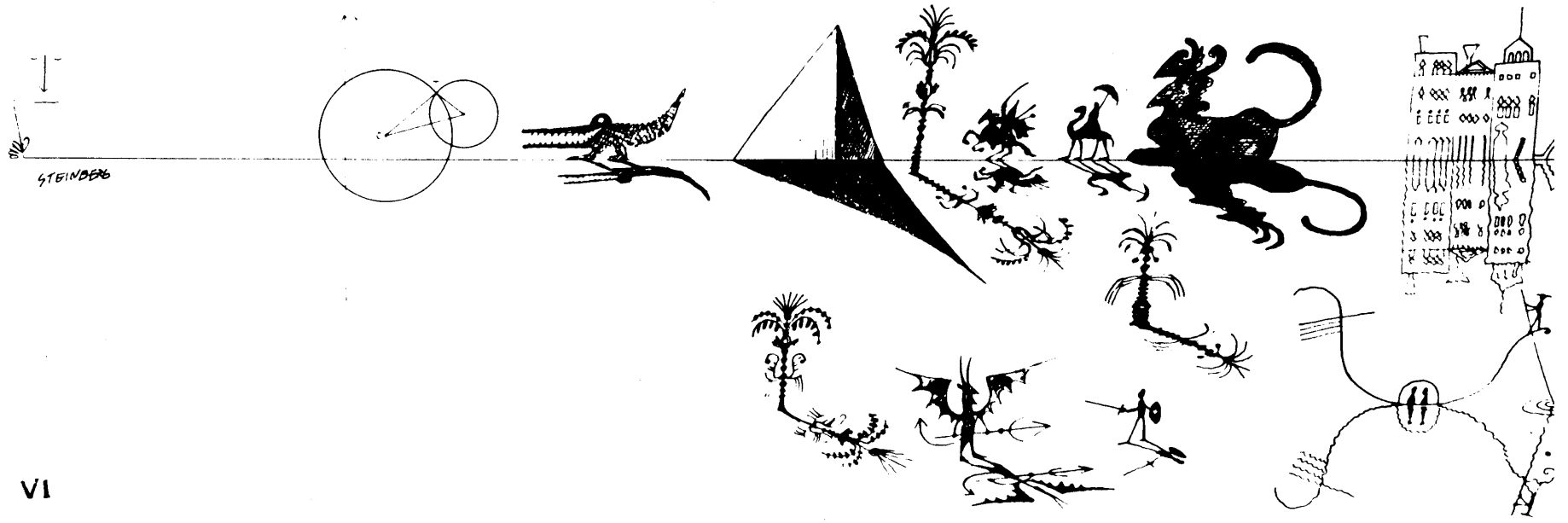
While the written expression of the journey process and ideology of in-betweens has been building with my experience and plays an important role, the most substantial effort in the thesis has gone into the actual design study. My investigation graphically documents the processes of designing the path of one journey and several of its sub-journeys. Each sub-journey is contained within the limits of the larger path yet focusses on the in-betweens with the same intensity. As a context for the investigation I have used a small section of an urban residential and commercial area in Boston.

Thesis Supervisor: Jan Wampler
Title: Associate Professor of Architecture

ACKNOWLEDGEMENTS

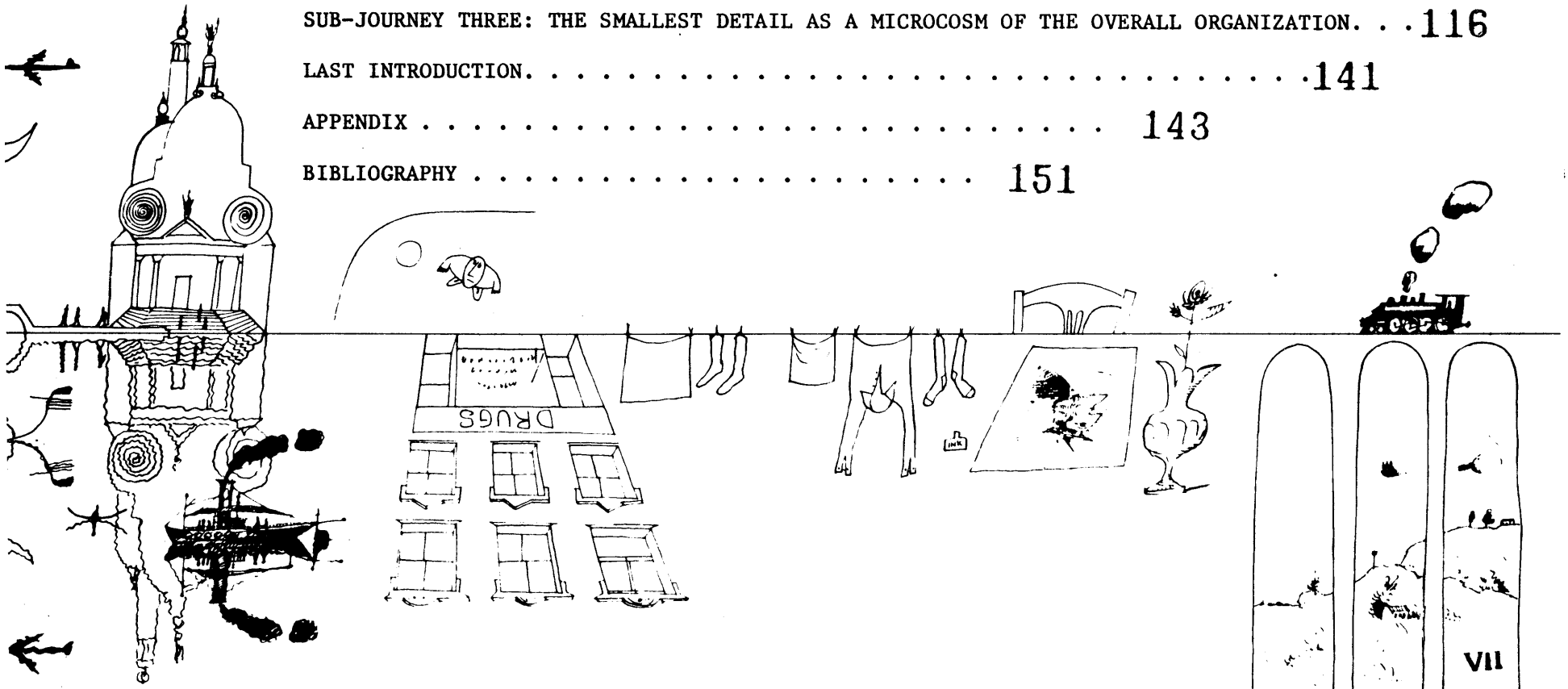
To all the people who have helped me through this last journey at MIT, I extend my deepest appreciation and thanks.

It is also my privilege to extend grateful acknowledgement to: The thesis room compatriots Nancy Angney, John Freeman, John Graham, and Philip Pipal, for their continued patience and optimism in the face of adversity...and endless hours of shared confinement without going over the edge; Mike Haran my roommate, for putting up with my schedule; Hilmar Jensen for his editing and kind criticism on conceptual matters; Shun Kanda for providing helpful hints early on in the study; The AIA and the NEA for their financial support; The Neighborhood Development Corporation of Jamaica Plain for the use of their site in this study; Maurice Smith, John Habraken, Aldo Van Eyck and Herman Hertzberger who have profoundly influenced my thinking about design; The working people who have provided the opportunity for me to be here; My family; Extra special thanks to Zaurie for her sustaining spirit; And most of all to Professor Jan Wampler, who has not only inspired my design work and demonstrated that politically thoughtful designers can be good, but has my most sincere appreciation for his continued support and friendship throughout my stay at MIT.



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PREFACE

Architecture should be conceived of as a configuration of intermediary places clearly defined.

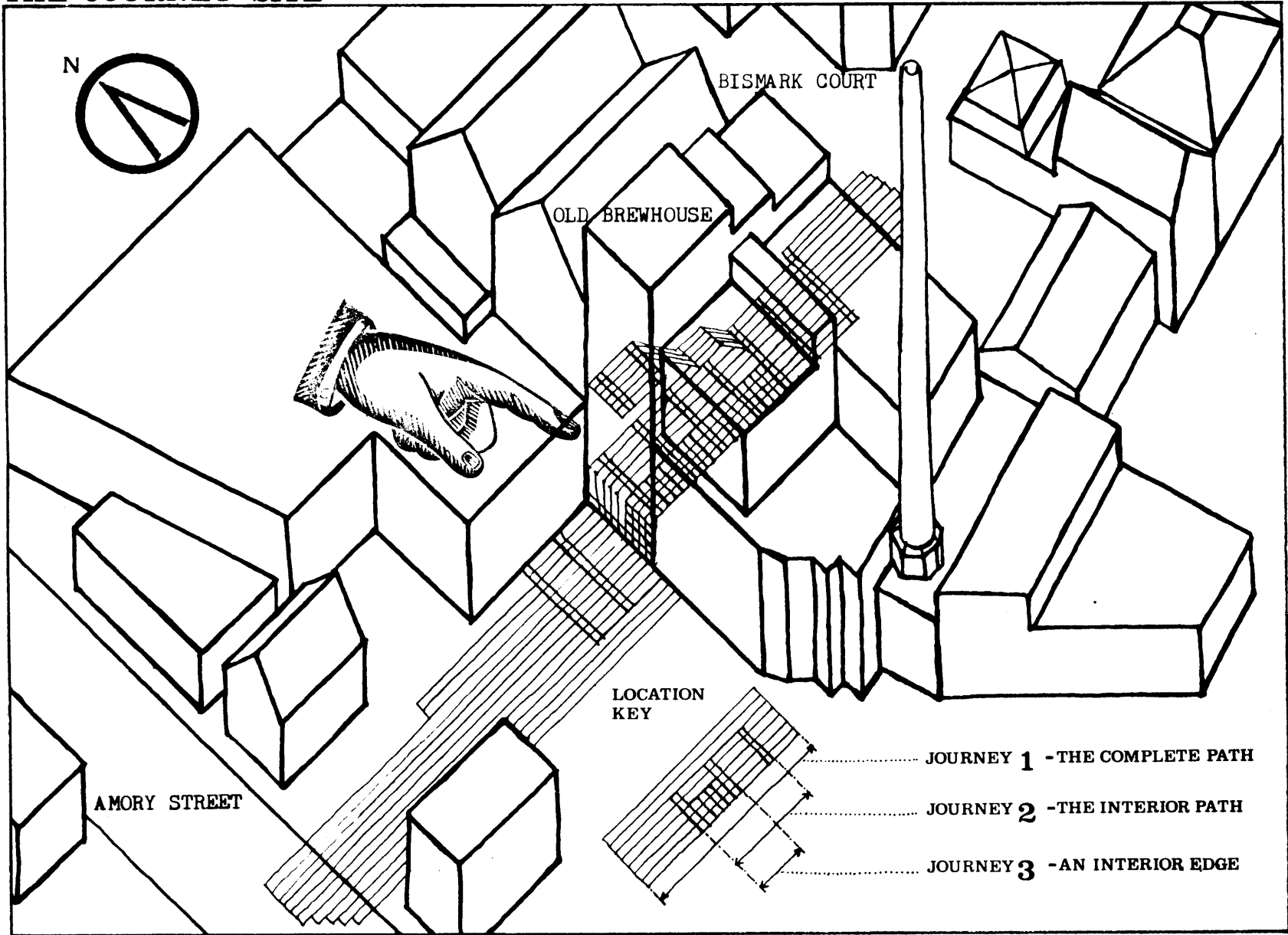
This does not imply continual transition or endless postponement with respect to place and occasion. On the contrary, it implies a break away from the contemporary concept of statial continuity and the tendency to erase every articulation between spaces, i.e. between outside and inside, between one space and another (between one reality and another).

Instead, the transition must be articulated by means of defined in-between places which induce simultaneous awareness of what is significant on either side. An in-between place in this sense provides the common ground where conflicting polarities can again become twin phenomena...

And that's where I'll end - at the beginning.

Aldo Van Eyck

THE JOURNEY SITE



- 1 -

FIRST INTRODUCTION: This thesis can be considered as many journeys or only one, but qualities of journeying permeate the point of view throughout. For convenience I have identified the limits of the largest journey and two sub-divisions of decreasing size, so that the third is contained within the second and the second within the first. The first describes the path between a major street (Amory) and the enclosed court of a building complex (Bismark Court). The second concentrates on a section of the path which passes through a building (the old brew-house) before reaching the court. The third is really a group of smaller excursions which show qualities of the finer grain details within the second (paving patterns and window details). Altogether, they demonstrate the expression of spatial articulation at a range of sizes.

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INTENTION: The emphasis of my investigation turns our traditional understanding of "empty space" as related to object/goal on its head. My intention is to reverse roles by accounting for in-between space as a necessary positive interval rather than as emptiness. Beyond that, I hope to use the directional quality of this interval as a primary organizer of built form. To make this reversal is not completely without disadvantage, for in our landscape nothing should be viewed in isolation. It would be just as much a mistake to see the objects of our journeys as inconsequential or empty as it is to see the in-betweens as void. By concentration on the interval I merely hope to weight the scales in another direction for a brief time.

THE QUALITY OF A JOURNEY/ARTICULATED SPACE

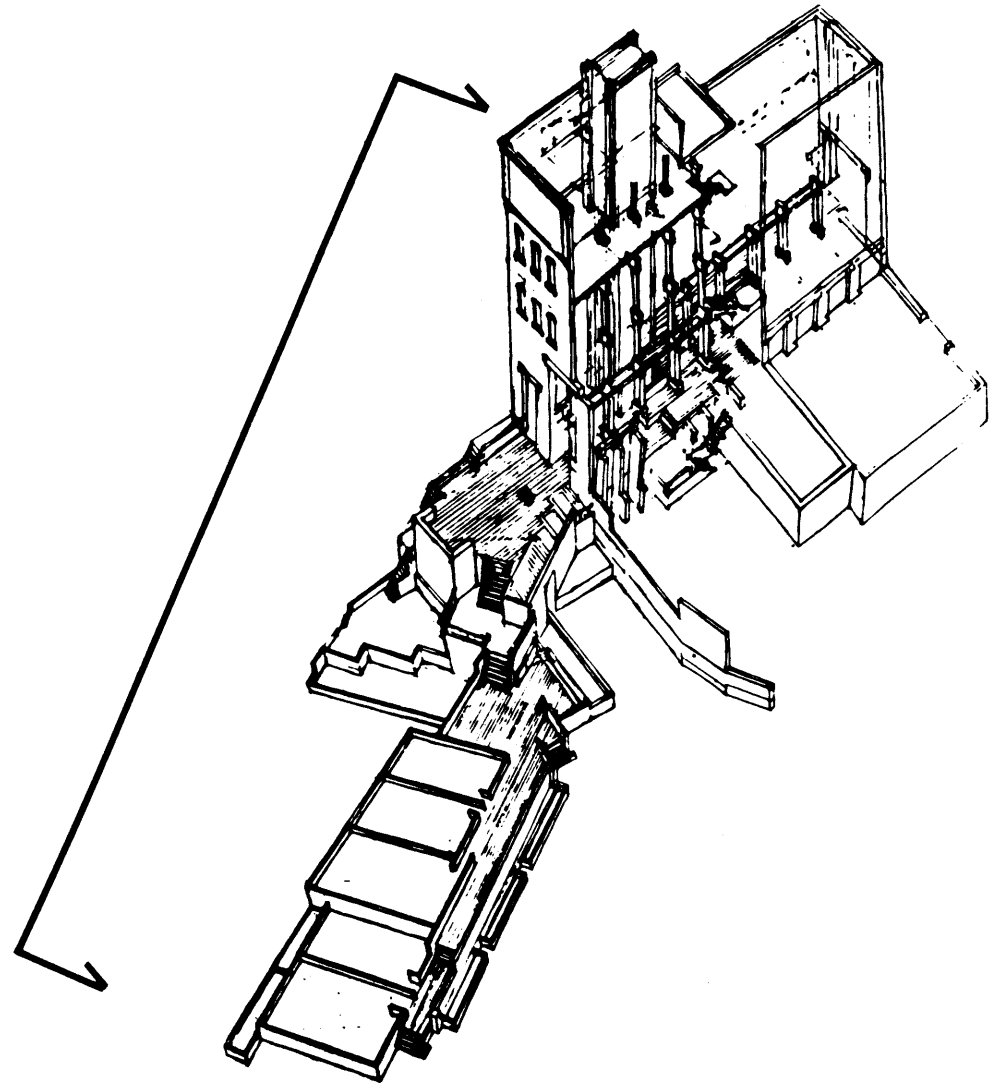
In those simple days before the gringo came, a stranger could journey from San Diego to Sonoma and be sure of a welcome and hospitality wherever he chose to stop. Not only would a room and food be provided him, but upon his table, covered with a napkin, was a pile of uncounted silver known as guest money, from which he was to take what he needed to speed him on his way.

Charles Keeler

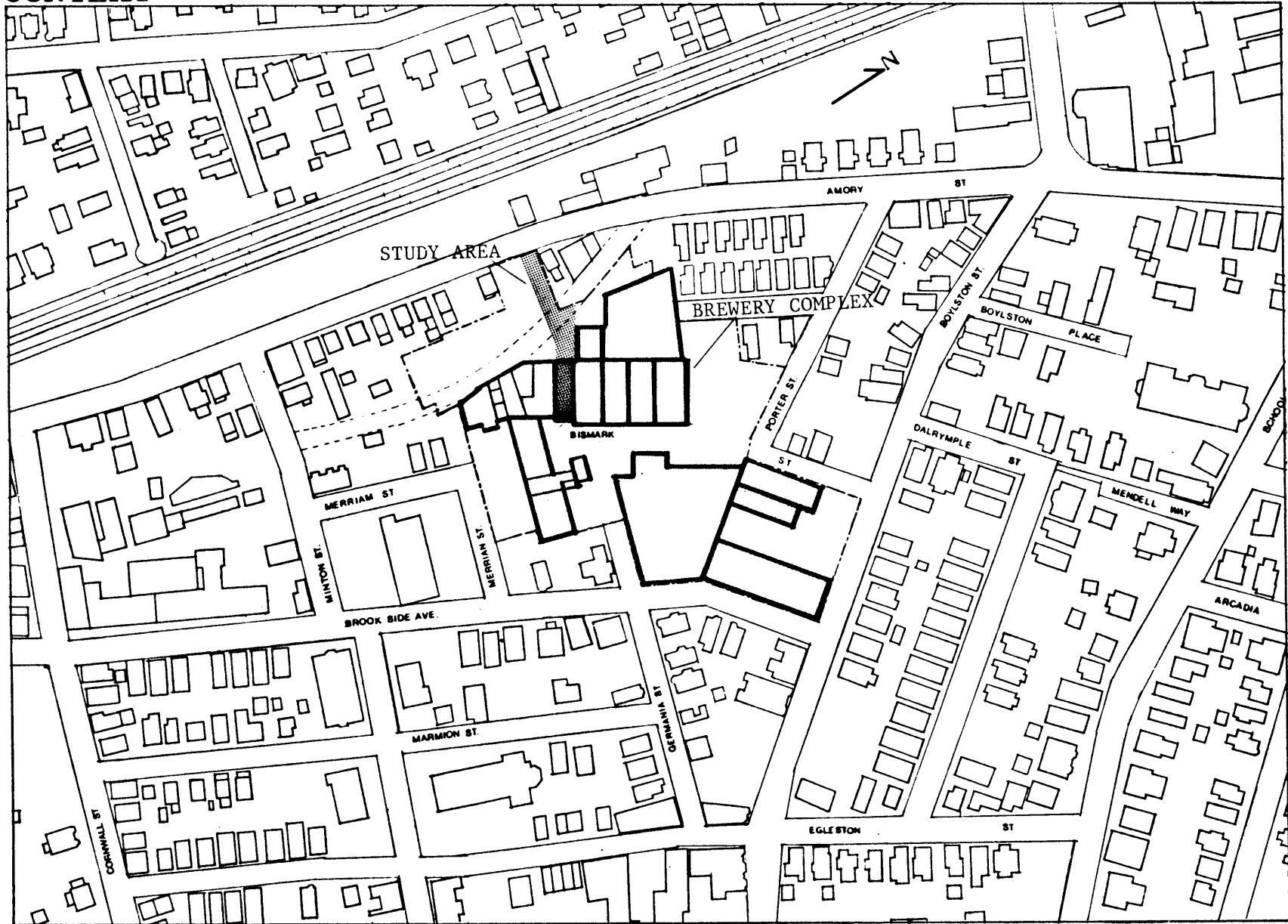
Today space and what it should coincide with in order to become 'space'—man at home with himself—are lost. Both search for the same place, but cannot find it. Provide that space, articulate the inbetween.

Aldo Van Eyck

JOURNEY 1



CONTEXT



BEGINNING

In poetical work there are only a few general rules about how to begin. And these rules are a pure convention. Like in chess. The first moves are almost always the same. But already from the next move you begin to think up a new attack. The most inspired move can't be repeated in any given situation in your next game. Only its unexpectedness defeats the opponent.

Vladimir Mayakovsky
How Are Verses Made? p.18

FIGURE-GROUND: NOTHING-SOMETHING

LECTURE ON SOMETHING

This is a talk about something and naturally
nothing. About how something and nothing are not
but need each other to keep on going also a talk about
opposed to each other

John Cage
Silence p.129

-0-

SECOND INTRODUCTION: The journeys are not literal even though many of their aspects could be interpreted as such. Each journey elicits some form of extended experience by describing passage from one place to another. It is within this notion of "passage" that the key to my investigation lies. Passage, or "journeying," is a dynamic concept having to do primarily with movement. In our culture I believe that we are accustomed to looking at and experiencing this movement as an "in-between space," if you will, a space between the goals of our travel. We often see in-betweenness as a void which separates specific goals instead of having a positive association. Left over or discarded space are its other names.

-0-

A SIMPLE LANDSCAPE EXERCISE: The design that was pursued here is really an elementary exercise, so elementary that it begins to be radical in a sense, because it returns to the essential qualities of landscape. It attempts to grasp the most basic lessons from natural form, yet in its simplicity encounters the most serious design issues. Its point was to explore the various ways that landscape changes level and direction through plate shifts, rifts and channels. In its barest form, it was merely the design of the path, employing terraces, walls and steps. The sequential experience of the elements' location in time as well as their variations in form act as a microcosm of larger design issues. They open a universe of problems that would rival those of the most complex buildings.

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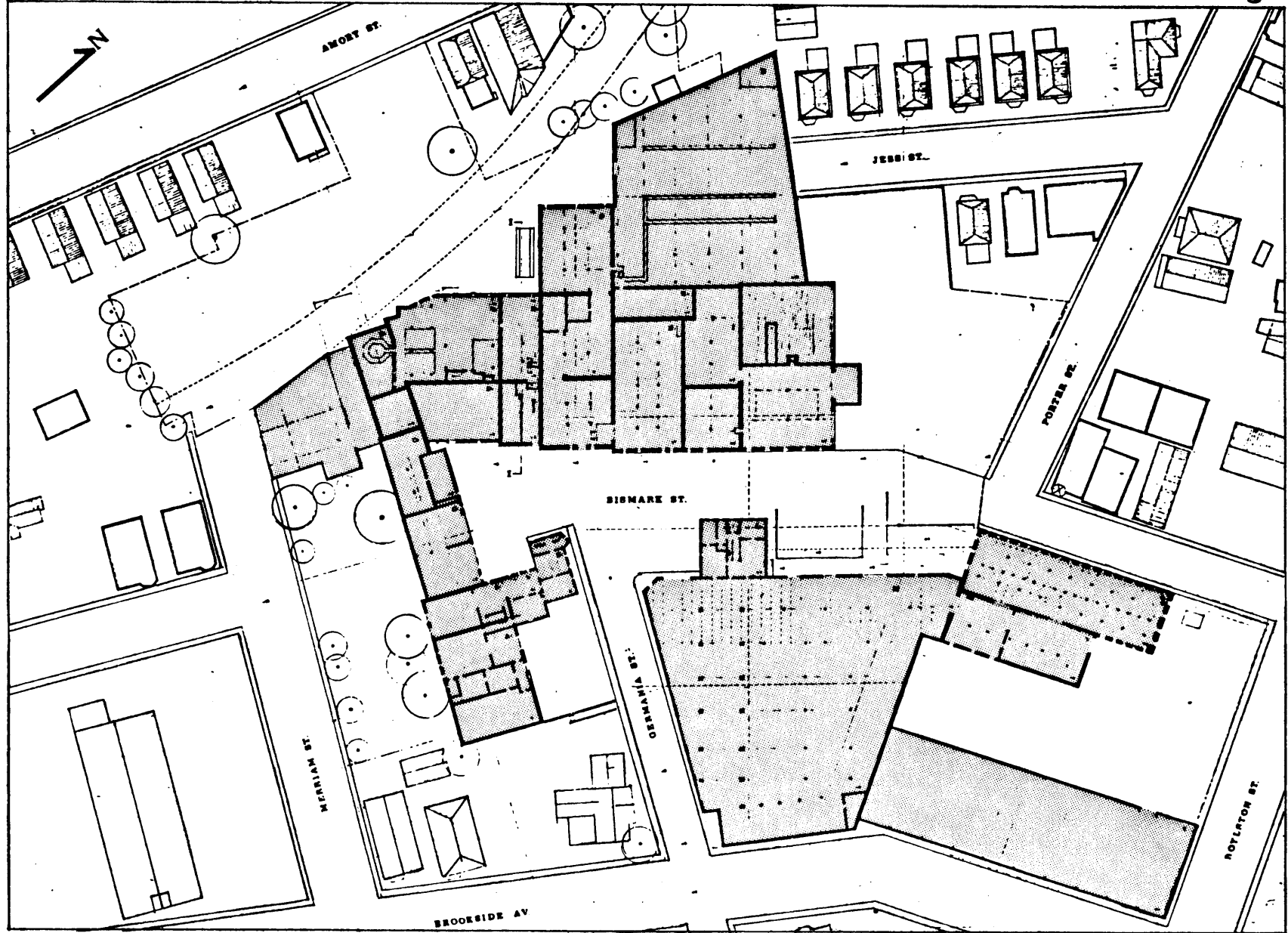
CONTEXT: This map shows the relation of the study site to the larger directional field of movement routes from north to south. A brook which has since been put underground had been the impetus for the location of a major railway corridor. From the unyielding continuity of the rail bed, major streets were then located in reinforcement of the initial direction. The spine, (or court) of the thesis site is parallel to this movement as is the road which borders the site. The context exercises a marked influence over the study area because of the location of major public terminals and thru-ways.

- 3 -

THE IMMEDIATE FIELD: To go on a journey one needs a mental or literal map of possibilities. The map acts as a reference for making decisions about a direction in which to proceed. This map is really a representation of the field in which we operate. The immediate field which influences the first path includes a mixture of tightly knit industrial buildings and more loosely scattered single family residences. Their configuration is based on the directional qualities spelled out by the larger context. The first journey penetrates the major field direction by crossing between two parallel routes. In section, the topography changes about 16 feet in level from west to east. Currently, all of this change is taken up within the existing buildings so that the court is 16 feet above the ground immediately behind the buildings to the west. The remaining ground to the road is virtually flat.

IMMEDIATE FIELD

- 3 -



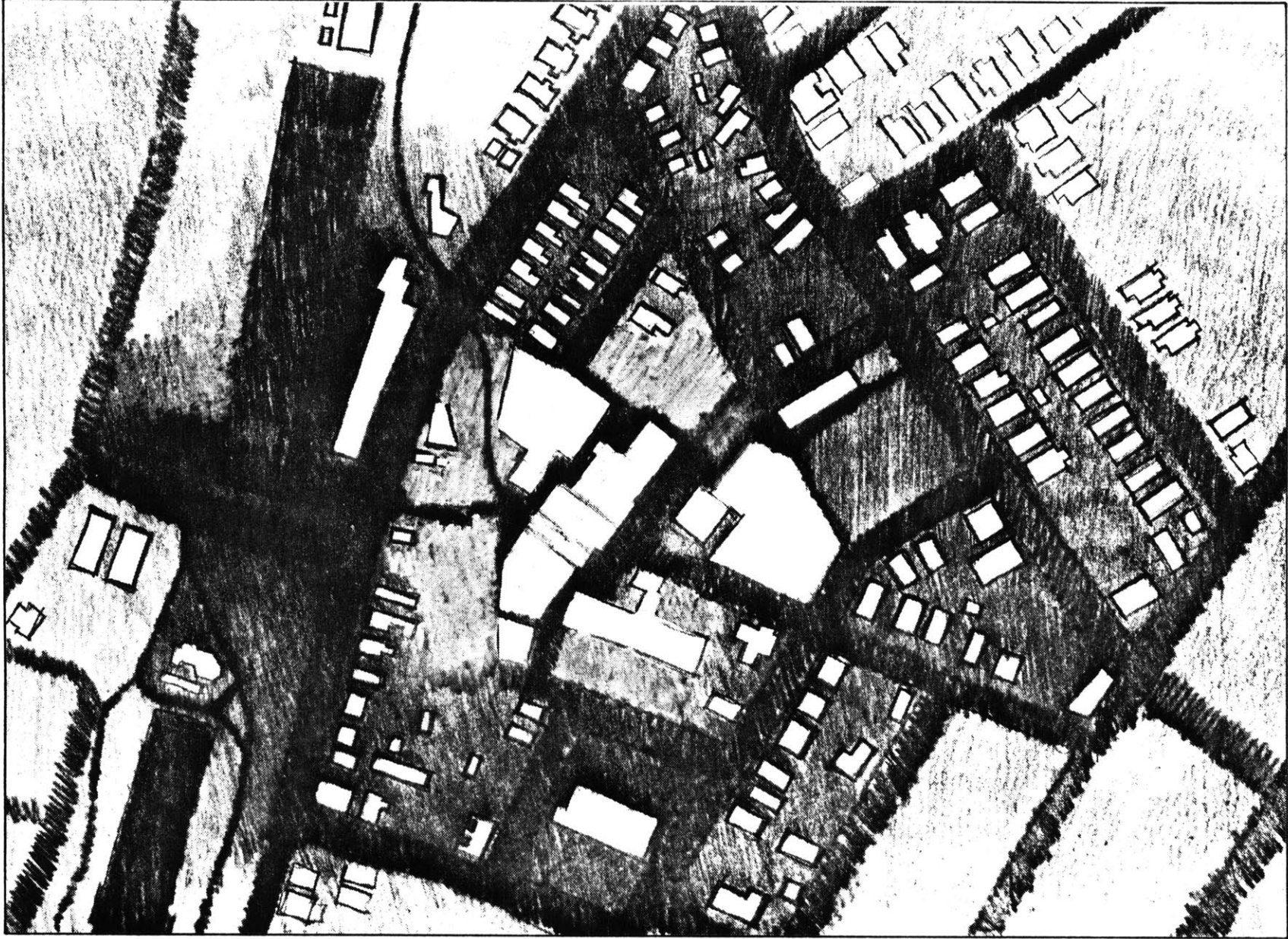


FIGURE-GROUND VS. LANDSCAPE-BUILDINGS-ACCESS: In a Figure-Ground relation the figure has an equivalent value to the ground; that is where its usefulness stops. The figure clearly plays a different role than the ground by implying a place or containment, whereas the ground implies movement through on-going territory. There should really be a way of depicting more of the landscape's subtlety than the purely black and white figure-ground study portrays. It seems appropriate that the intermediate areas between "figure" and "ground" should also play a role in determining the amounts of relative built and unbuilt territory since access and "ground" are not always coincidental. For this reason a preliminary site analysis would be more helpful if it showed buildings, landscape and access separately.

The separation will illustrate how the "ground" need not always be constrained by access, and that at times access is part of the figure as well. In my initial study of the site area the "access" is colored most intensely whereas the landscape goes more towards grey. The buildings remain untoned. The study shows relatively large amounts of land devoted to access as opposed to landscape, showing a need for more "place-making" in the landscape.

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BOUNDARY OF THE STUDY SITE: This plan shows the property that was available for development according to the program (see appendix) and the specific area within which the journey is located. The first schemes dealing with path lengths, links, and nodes were made with this information at one sixteenth inch equals one foot.

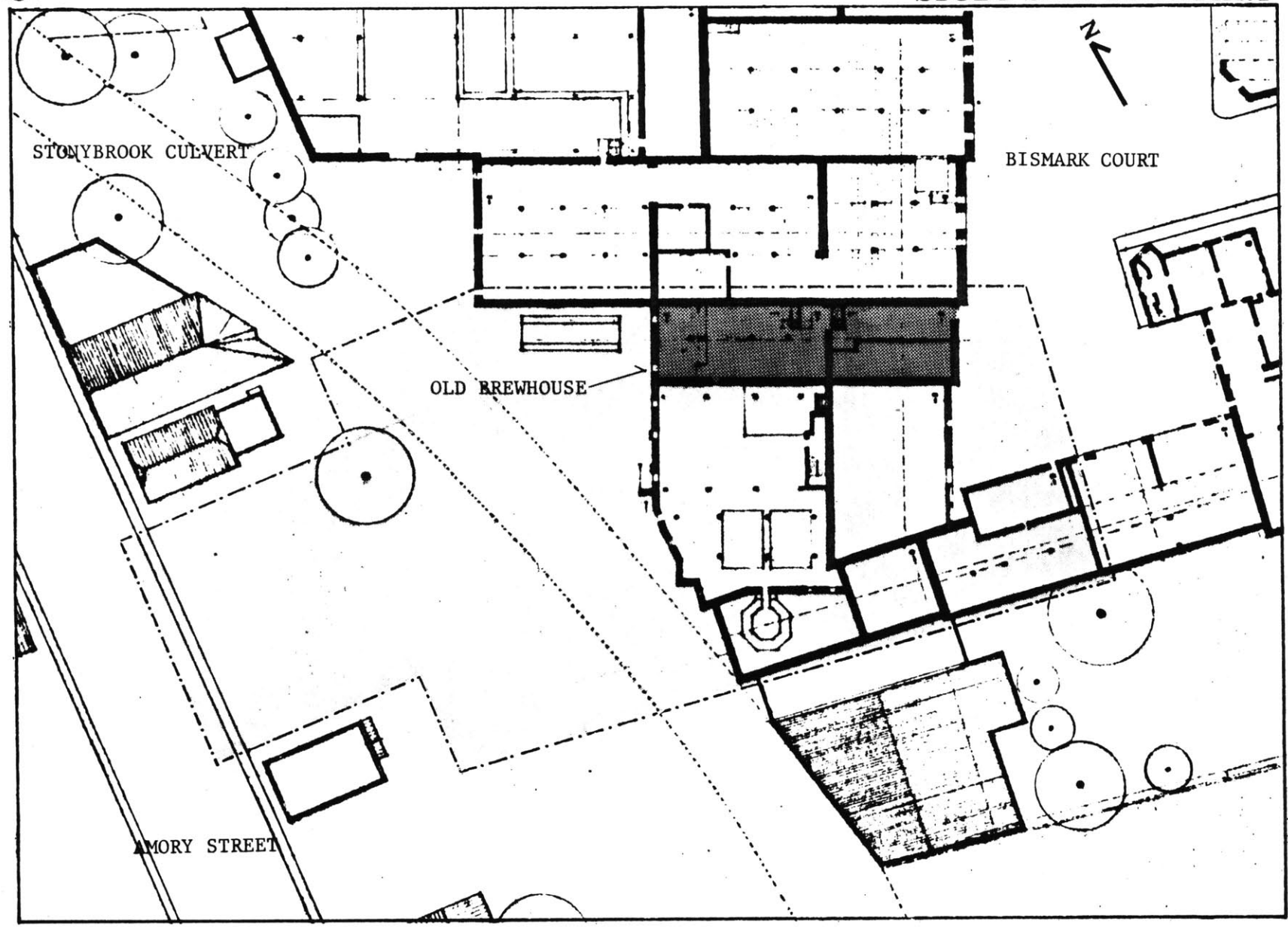
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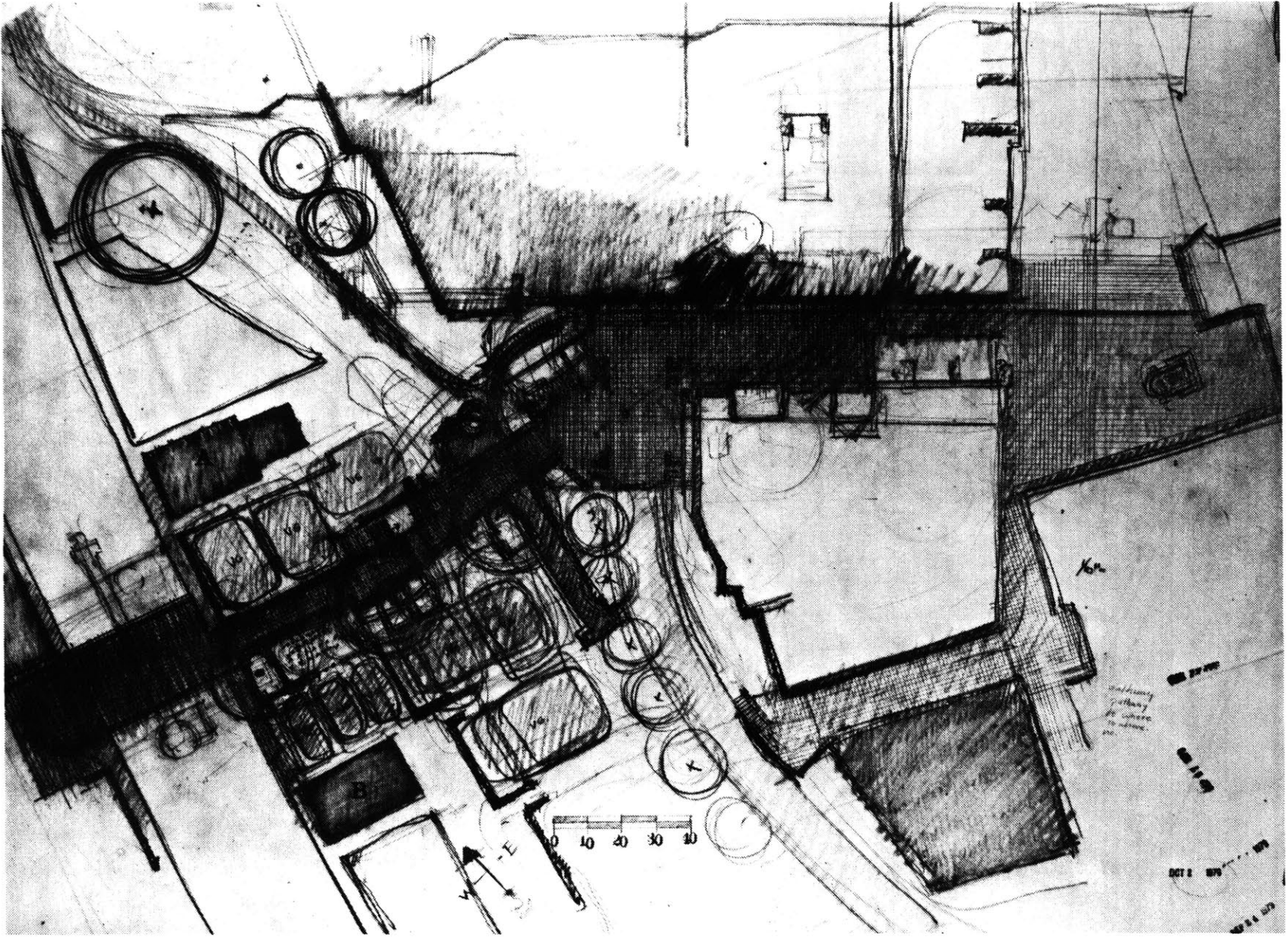
WORKING WITHIN A FIELD: To turn the tables on the "empty space" point of view it seems necessary that work be accomplished within a field. Field studies are usually part of a designer's basic training through site planning and figure-ground relation exercises. Because architects are largely concerned with facades and closure these days, the basic field studies have less meaning. Working with a field means that responsibility is taken for all aspects of a given territory, so that in-betweens are as important as objects. The formal consequence of this responsibility is articulation of those in-betweens. Figure-ground studies can graphically account for the relative quantity of in-betweens in a two dimensional way, but a more useful reference for studying the field is the natural landscape.

- 0 -

THE CONFIGURATION OF INDUSTRIAL BUILDINGS: An abandoned brewery accounts for most of the industrial buildings on the site. Because of the brewery's incremental growth, the buildings vary markedly in their styles. This rich variation, in combination with a close-knit courtyard arrangement provides a stimulating contrast to the loose residential area which surrounds.

STUDY SITE BOUNDARY

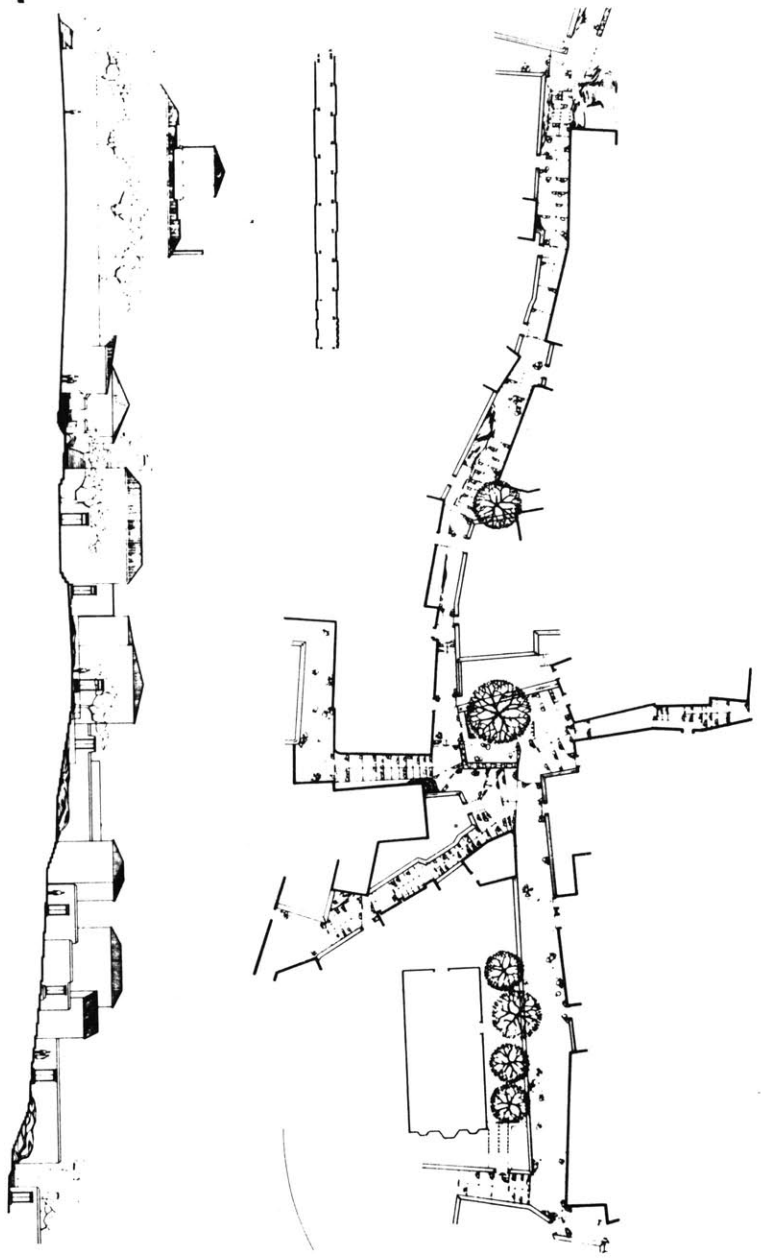




ORDER IN THE NATURAL LANDSCAPE

When an artist looks at a landscape, no matter how rugged the terrain, his eye sees a measure of order and symmetry in what lies before him. Was the order always there, or has the artist introduced it? A physicist looks for symmetries in nature, and when he finds them, people are amazed at the extent of order which exists in nature. We walk around the universe, and, like Winnie the Pooh and Piglet, whenever we encounter our own footprints we say, "Aha! Someone has been here."

Adolph Baker
Modern Physics and Antiphysics p.10



EMPTY SPACE

A flat experience, a 'vacuum', a 'void', preclude space and dimensionality. These concepts are non-spatial. There can be an empty place, but there is no such thing as an empty space. Either space exists or does not exist. When the mind does not have the energy to conceive a space for 'something', there is 'nothing' to conceive. 'Nothing' is the negation of space in the human mind. When the sensation of space is contracted in the mind through shock, or the mind's inability to form a structure to contain 'something', the sensation of 'nothing' is activated.

I. Rice Pereira
The Nature of Space p. 39

NATURAL LANDSCAPE/UNITY IN DIVERSITY

“The most delightful and fruitful of all the intellectual energies is the perception of similarity and agreement, by which we rise from the individual to the general, trace sameness in diversity, and master instead of being mastered by the multiplicity of nature.”

FRIEDRICH FROEBEL.

from Kate Riggs and Nora Smith
The Gifts of Froebel p.52

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BEGINNING: To me, starting a design means organizing a new field within a previously existing field. The initial diagrams demonstrate the intentions for reinforcing or altering the existing directional forces. The sketches locate areas of resolution by defining where new edges signify movement in their direction. In the first journey, traveling from the major street to the courtyard is the object. The land available for the path splits into two pieces which front the street. I have chosen the more direct piece as the location for a major path for several reasons. Even though the angled piece would provide a smoother directional transition to the court area, the more direct piece allows a view of the buildings, an advantage from an orientation standpoint. It is also in the right position for simultaneous pedestrian and service access. Lastly, it is closest to a new intersection which will be added as part of the nearby subway relocation.

-6-

A FIRST PASS AT LOCATING THE PATH: Drawn at 1 inch equals 20 feet, a series of drawings like this one congealed the issues concerning a major link between the road and the Bismark court. My approach was to provide house-size privacy definition between the two residences (A & B) by means of low walls and terraces. The intention was to have these definitions hold the street edge while letting the pathway sneak through to a new gap in the building complex which would act as a major entry. One could then proceed through the gap in open air to the court.

-7-

GREEK REFERENCE FOR PATH: This plan and section shows the diversity of a path which has been built in harmony with the natural terrain.

-8-

NATURAL LANDSCAPE AS A REFERENCE: The basis for my point of departure (journeying) lies in an understanding of the natural landscape. For me the range of qualities and sizes of elements in the landscape makes it one of the richest design references imaginable. At a glance its richness appears to be dependent on a kind of endless variety; but upon closer inspection the apparent disorder reveals itself as a subtle yet highly organized system. It is so subtle that trying to duplicate it would surely fail, yet so inspirational that its underlying organizing principles cannot be ignored. Without being too presumptuous about defining the natural landscape, I have tried to impart some of its qualities into the path. The structure of the landscape is my primary reference, and the predominant aspect of the structure as I see it is an organic order. The path in a Japanese garden shows the subtlety and complexity of organic order in reference to natural landscape features.

-9-

SURROGATE NATURAL LANDSCAPE: This Japanese garden shows the amount of intricacy which occurs in the course of a small footpath when designed by referring to the order of natural landscape.

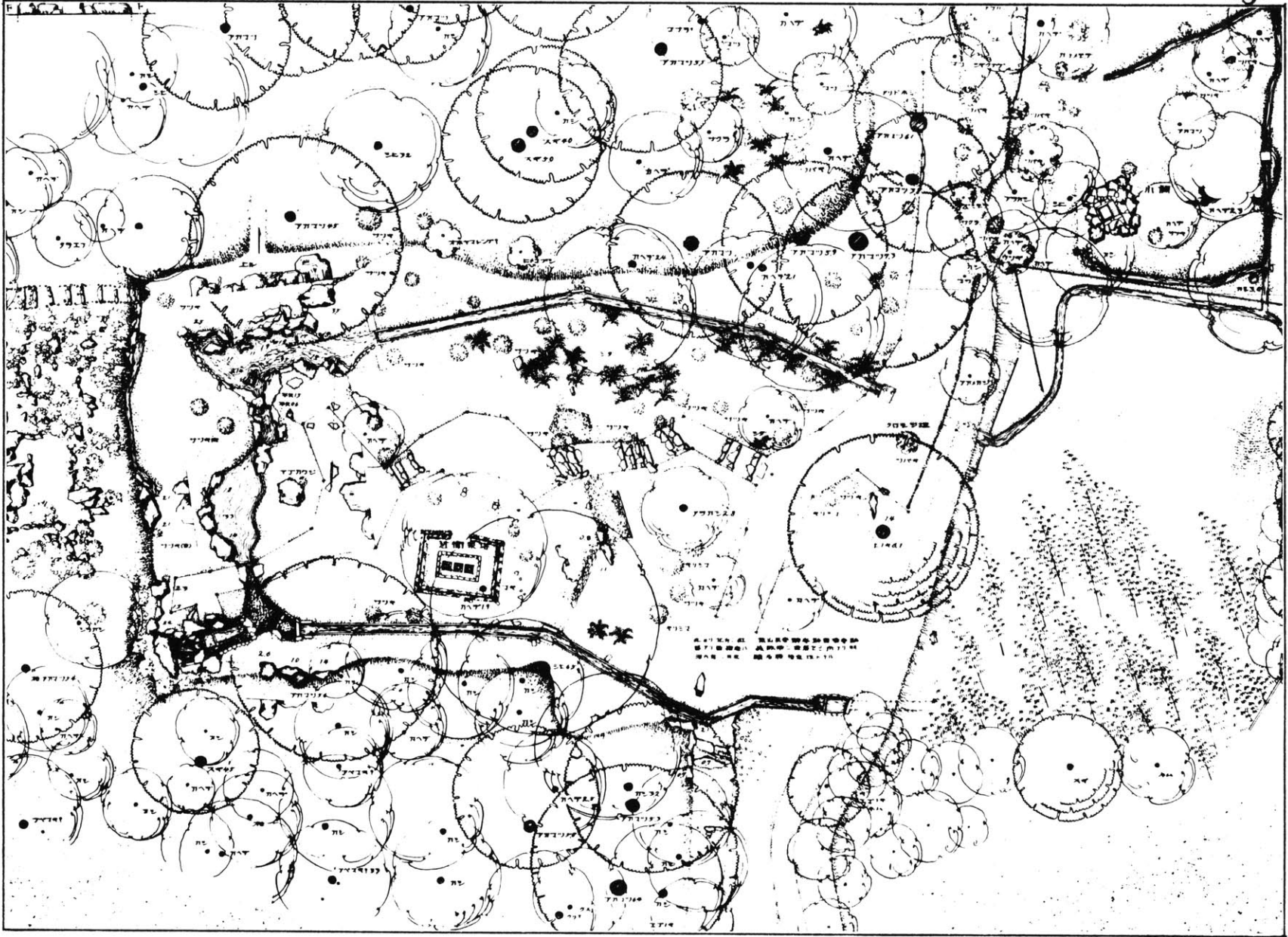
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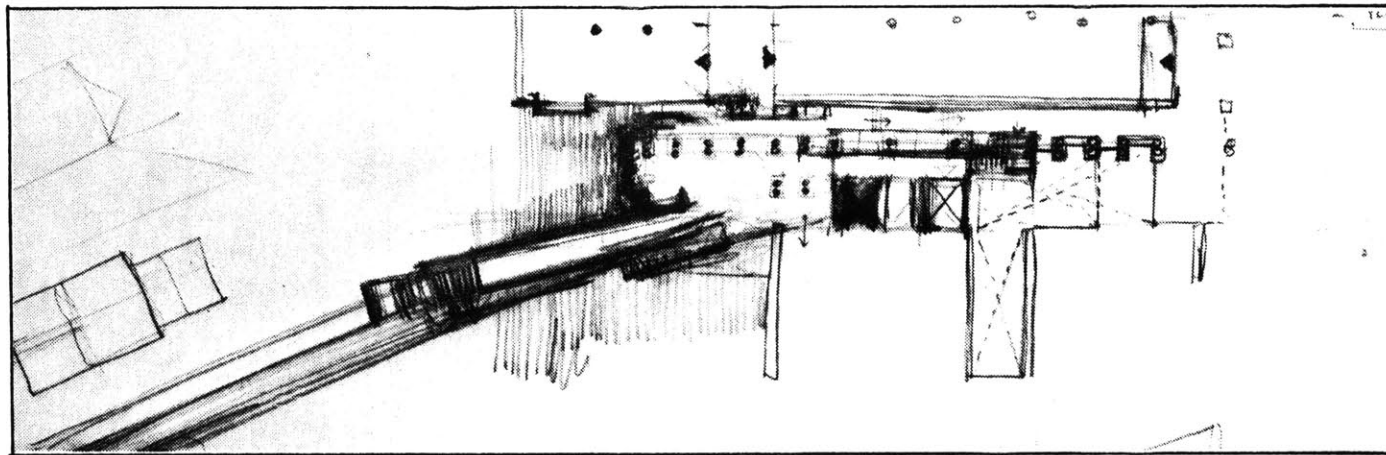
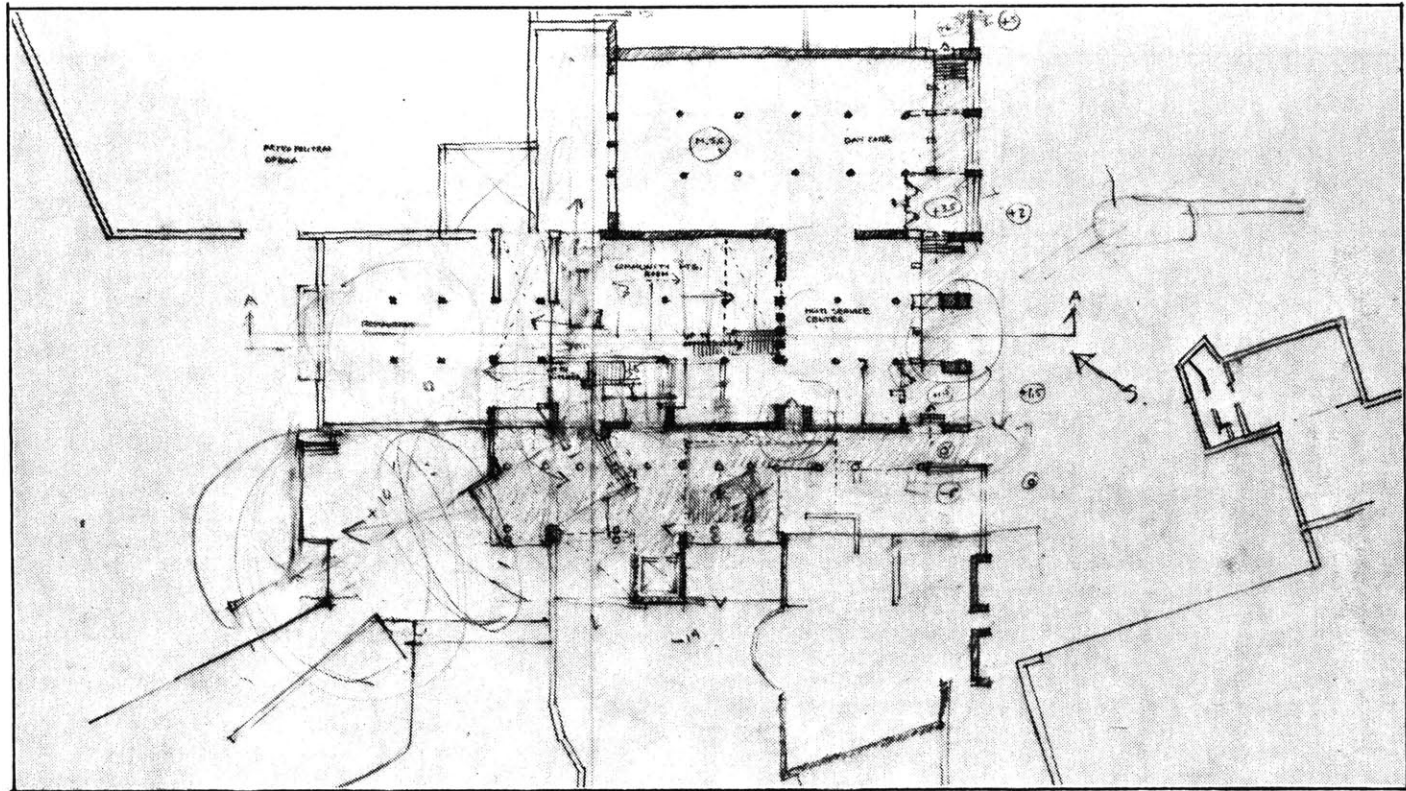
COMPLEXITY AND ORGANIC ORDER: The complexity of organic order results from the special problems of adaptation in nature, like mobility in animals. The frontal quality of directional vision is one such case. Another attribute which adds complexity to organic order is the dual phenomenon of something being partially complete within itself yet being part of a larger whole or context. For example, "There is much closure in an apple's symmetry, yet its shape recognizes its dependence upon the stem from which it grew." Camillo Sitte describes this dual phenomenon by referring back to the origins of the word symmetry itself. Quoting from Vitruvius he points out that: "Symmetry is a proper agreement between the members of the work itself, and relation between the different parts and the whole general scheme in accordance with a certain part selected as a standard."

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ORGANIC VS. SIMPLE ORDER: According to the dictates of entropy, unless some circumstance interferes, order will prevail. For example, in a closed system forces always arrange themselves to minimize tension. It is in this kind of unconstrained system that everything eventually reaches a state of homogeneity. The phenomenon of even distribution is considered the lowest kind of order because of its simplicity. Organic order on the other hand is not part of a closed system and consequently has attributes that make it more complex than an evenly distributed field. Its main attributes as I see them have to do with directionality and additive assemblage.







HOLISM/ORGANIZATION

If one wishes to be admitted to the presence of a work of art, one must, first of all, face it as a whole. What is it that comes across?...We look for a theme, a key to which everything relates... Gradually the entire wealth of the work reveals itself and falls into place, and as we perceive it correctly, it begins to engage all the powers of the mind with its message.

Rudolf Arnheim
Art and Visual Perception p.8

RELATION OF PARTS TO A WHOLE

much of what we think of as an "element" in fact lies in the pattern of relationships between this thing and the things in the world around it, we then come to the second even greater realization, that the so-called element is itself nothing but a myth, and that indeed, the element itself is not just embedded in a pattern of relationships, but is *itself* entirely a pattern of relationships, and nothing else.

the things which seem like elements dissolve, and leave a fabric of relationships behind, which is the stuff that actually repeats itself, and gives the structure to a building or a town.

Christopher Alexander
The Timeless Way of Building p.p. 88-89

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FIRST PLAN STUDIES OF THE INTERIOR PATH: The location of the point where the path would actually change to coincide with the existing structure was the primary issue. At this stage, the direction change was being delayed to the interior of the building to make more differentiation in the relative lengths of the path. The delay allowed the distribution of the straight stretches in the path to be more in the proportion of two thirds to one-third instead of the more symmetrical one-half to one-half.

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STUDIES FOR NEW LANDSCAPE ELEMENTS: These studies show the first attempts to develop the form vocabulary for the elements of the overall path. They include sketches of various kinds of wall definition including those designed for retaining land and those which provide a place for trees.

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APPARENT DISORDER AND THE NATURAL LANDSCAPE: Anything that does not have a geometric organization is disorderly, that is the dictum of our culture. In fact, at a cursory glance the natural environment appears to lack an organization. However, through closer observation and the increasing scientific perspective, it seems fair to say that the composition of our natural landscape is actually based on a very complex order. The landscape includes aspects of geometric order but is also layered with other passive and fortuitous organizations.

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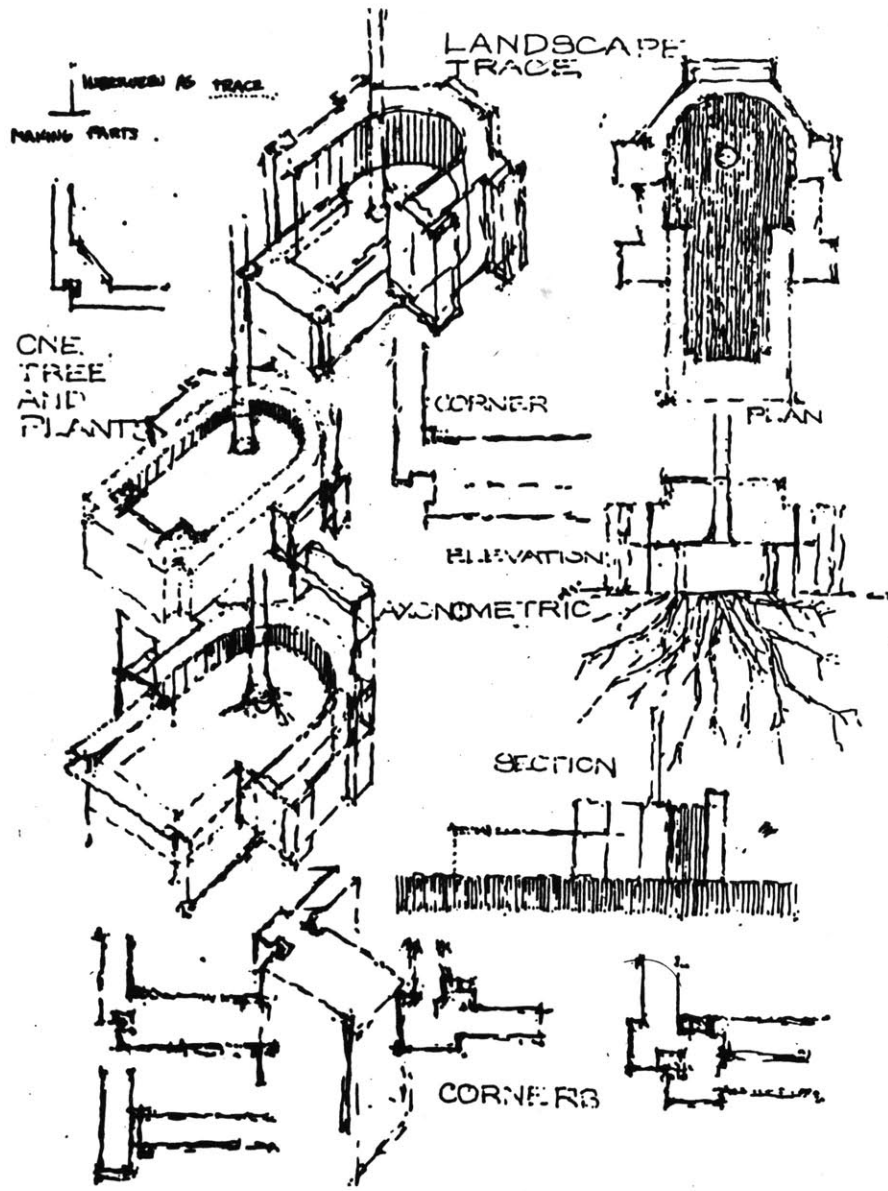
SECTION REFERENCE AND FIRST SECTION OF INTERIOR PATH RELATION: Showing floor levels, major new wall openings, and relative relation to the surrounding topography.

- 13 -

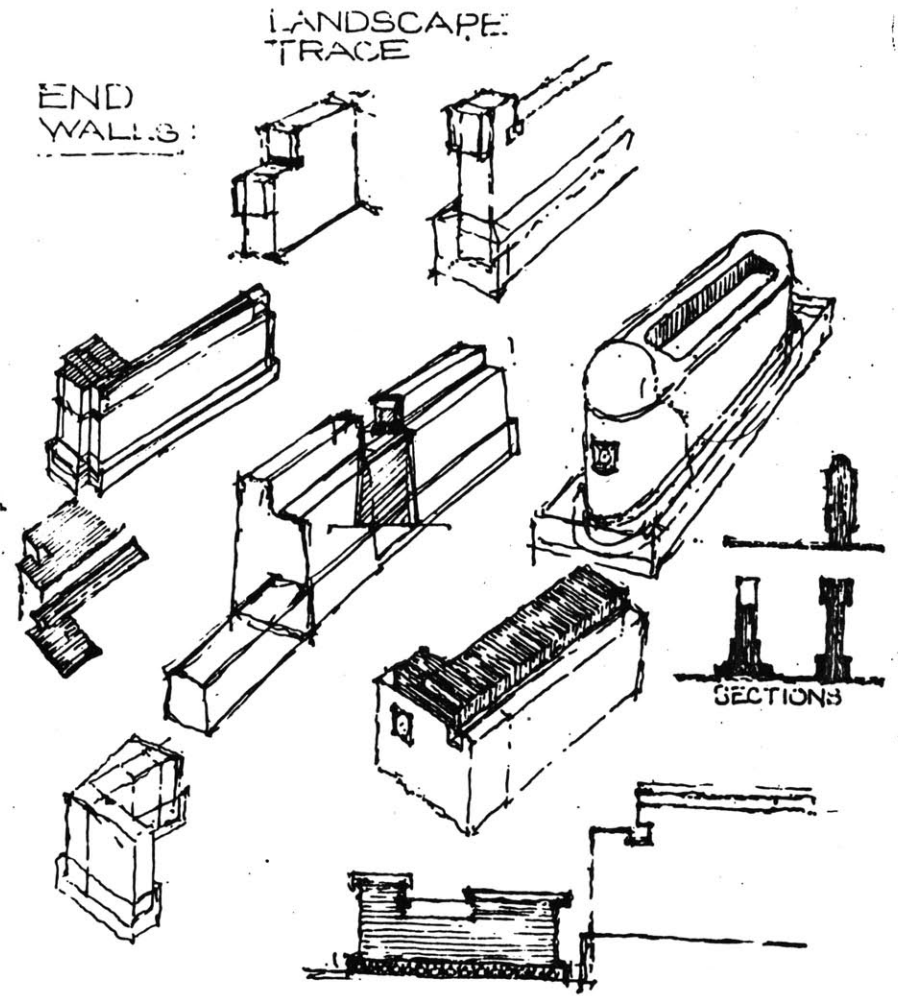
THE DIRECTIONAL FIELD ORGANIZATION: There are three "use-form" families which define the elements in a field; buildings, landscape and access, or built, unbuilt and virtual forms. It is the interlocking aspect of the built and unbuilt territories in combination with virtual associations between forms that give organization to the field. The continuity of virtual association (access) provides the field with directionality. These references show field organizations which demonstrate the use families with varying intensity in each case: A-Van Eyke who is generous with the directional elements, B-Portogheshi who concentrates on place making, C-Scharoun who lies somewhere between with a more even distribution of all elements.

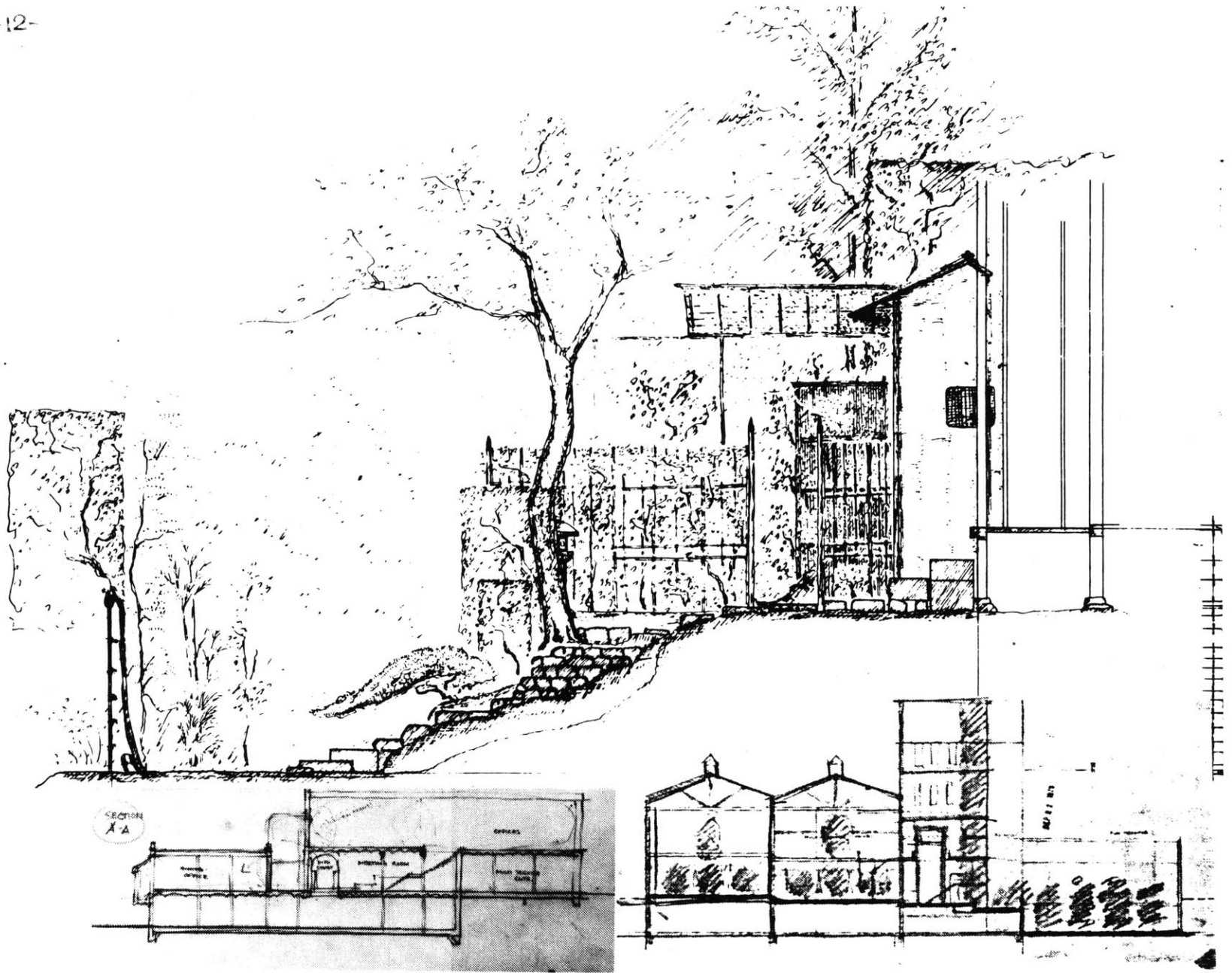
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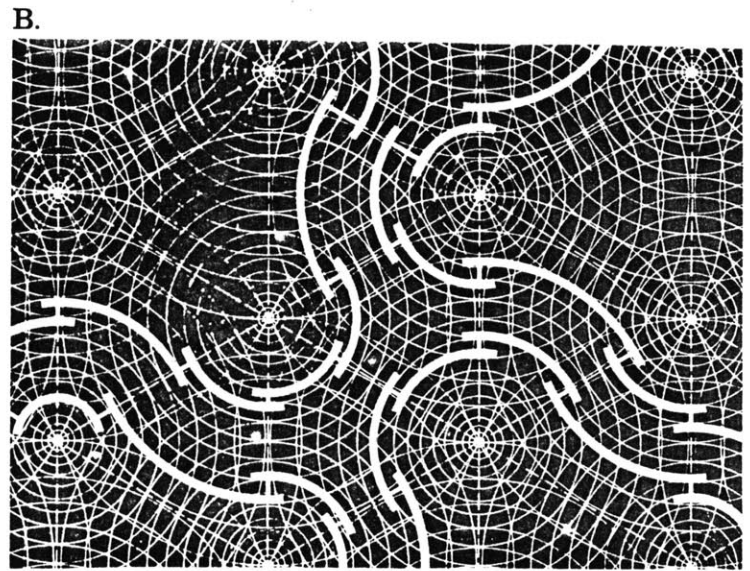
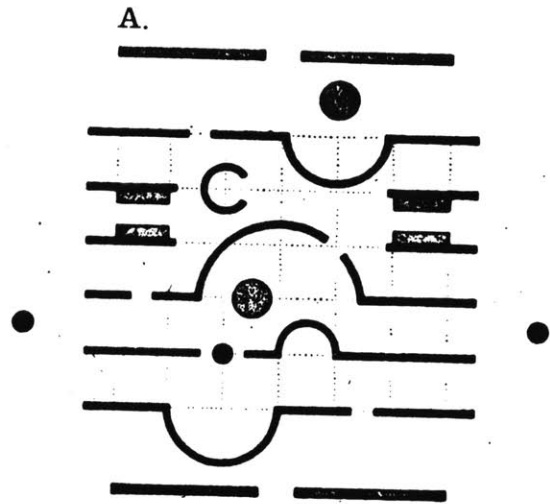
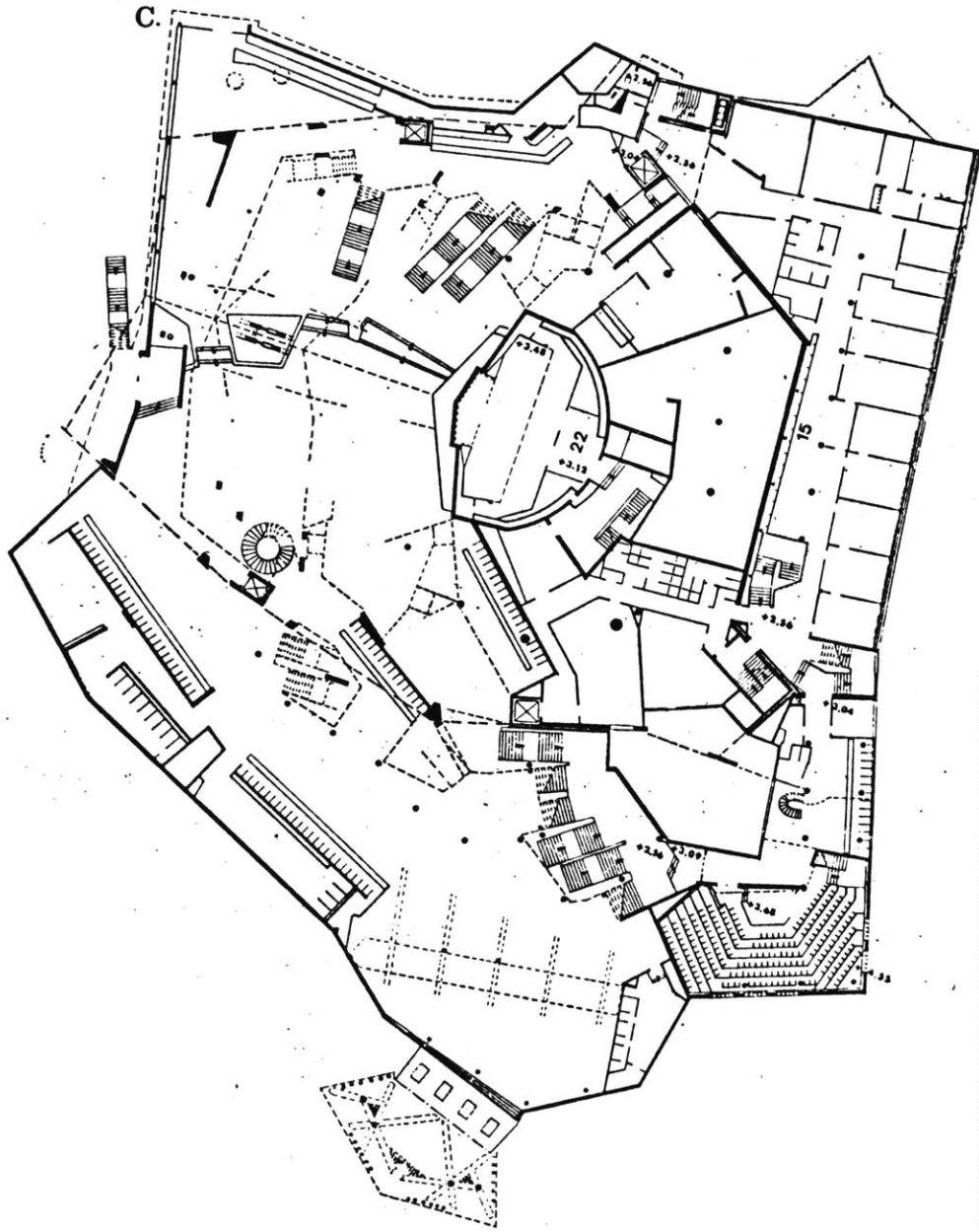
NEVER PERFECT ORGANIC ORDER: Another major attribute of organic order has to do with the slight "mistakes" that are everpresent in nature. Because our world is "not a machine shop run by infallible powers," as Arnheim points out, there are many irregularities which graciously alter even the intended perfect forms.

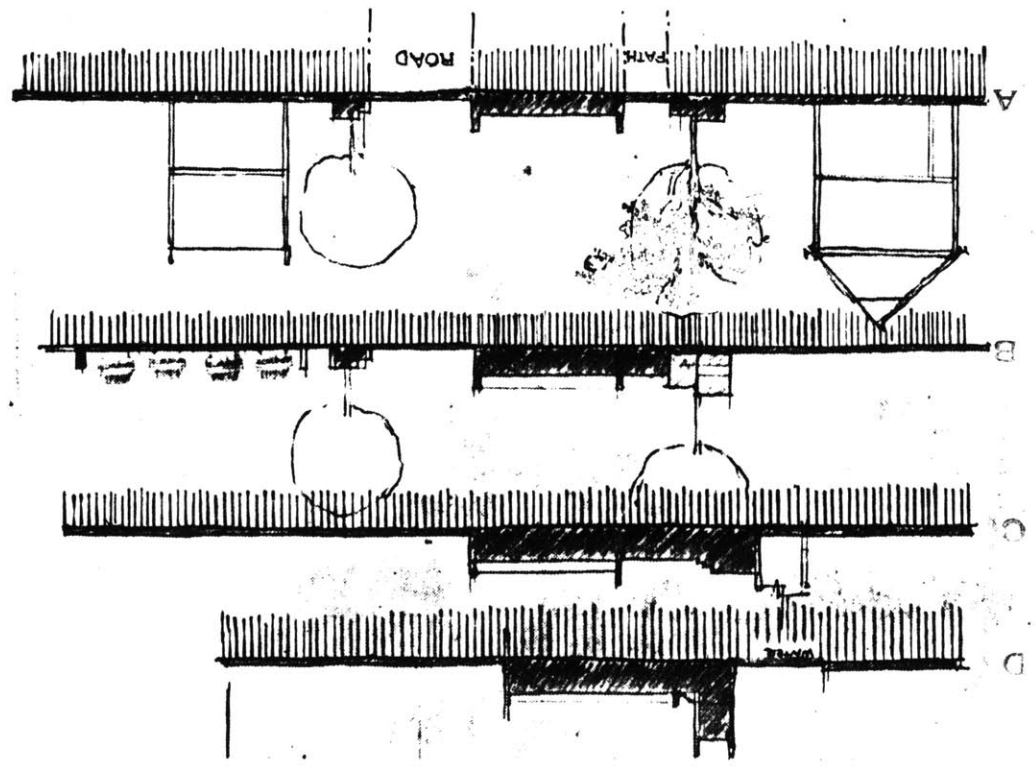
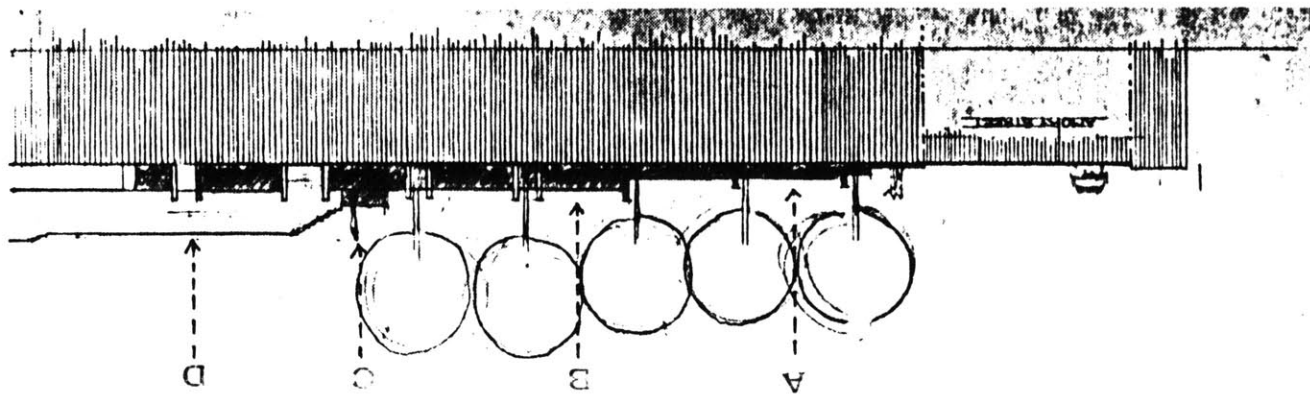


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PATHS IN A FIELD

The paths, again, are given identity and tempo not only by their own form, or by their nodal junctions, but by the regions they pass through, the edges they move along, and the landmarks distributed along their length.

Kevin Lynch
The Image of the City p.84

ORGANIC ORDER IN THE NATURAL LANDSCAPE

When I was 11 years old I was sent to a Wisconsin farm to learn how to really work. So all this I saw around me seemed affectation, nonsense, or profane. The first feeling was hunger for reality, for sincerity. A desire for simplicity that would yield a broader, deeper comfort was natural, too, to this first feeling. A growing idea of simplicity as organic, as I had been born into it and trained in it, was new as a quality of thought, able to strengthen and refresh the spirit in any circumstances. Organic simplicity might everywhere be seen producing significant character in the ruthless but harmonious order I was taught to call nature. I was more than familiar with it on the farm.

Frank Lloyd Wright on Architecture
(Gutheim, ed.) p.178

*ACCOUNTING FOR PRESENT 'LOOSENESS'
IN BUILT LANDSCAPE*

a coherent effect does not come about in our streets. A modern street is made up primarily of corner buildings. A row of isolated blocks of buildings is going to look bad under any circumstances, even if placed in a curved line.

These considerations bring us close to the crux of the matter. In modern city planning the ratio between the built-up and the open spaces is exactly reversed. Formerly the empty spaces (streets and plazas) were a unified entity of shapes calculated for their impact; today building lots are laid out as regularly-shaped closed forms, and what is left over between them become streets or plazas.

Streets should be for staying in, and not just for moving through, the way they are today.

From an environmental standpoint, the essence of the problem is this: streets are “centrifugal” not “centripetal”: they drive people out instead of attracting them in. In order to combat this effect, the pedestrian world outside houses must be made into the kind of place where you stay, rather than the kind of place you move through. It must, in short, be made like a kind of outside public room, with a greater sense of enclosure than a street.

This can be accomplished if we make residential pedestrian streets subtly convex in plan with seats and galleries around the edges, and even sometimes roof the streets with beams or trellis-work.

Christopher Alexander
A Pattern Language p.589

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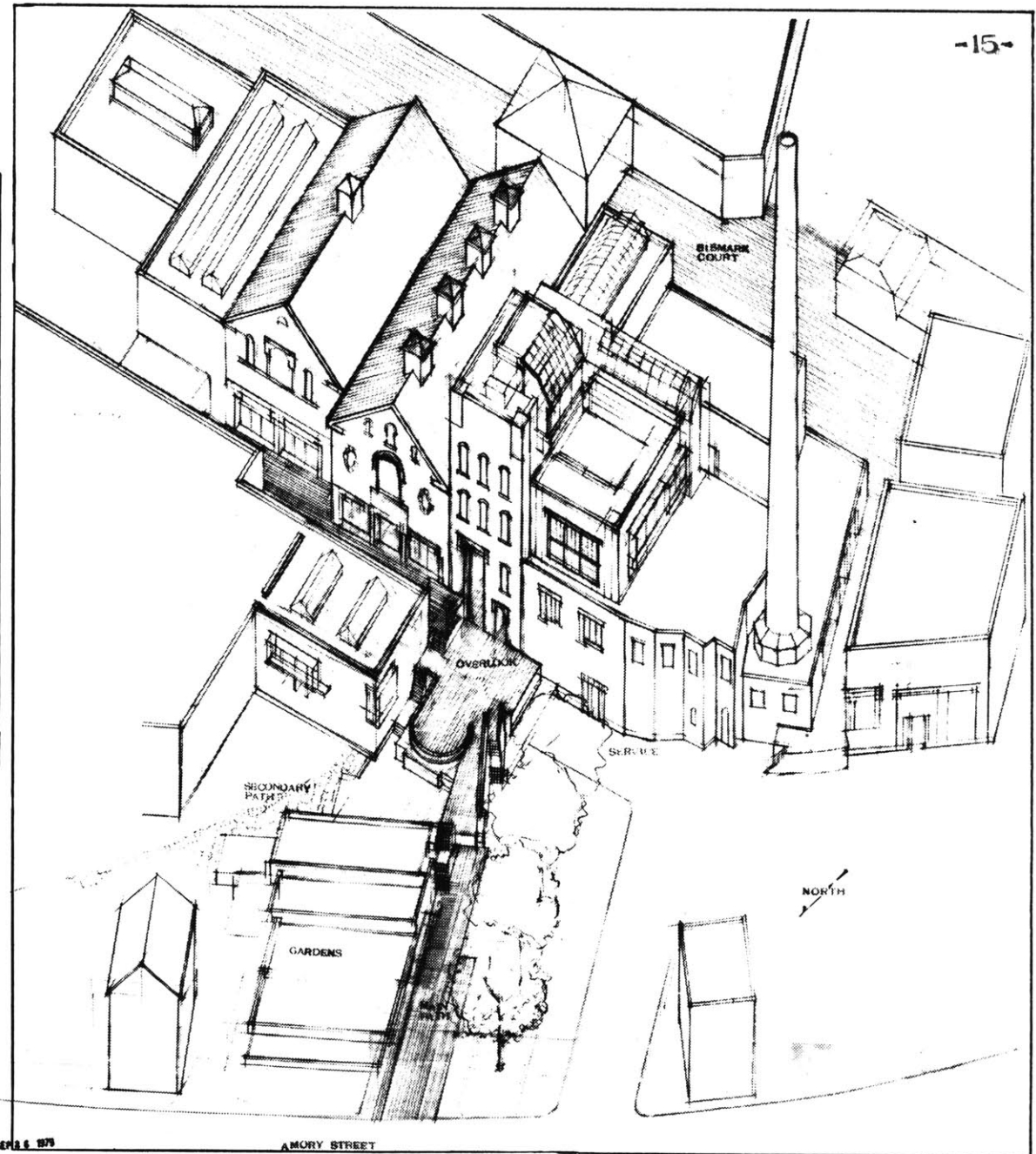
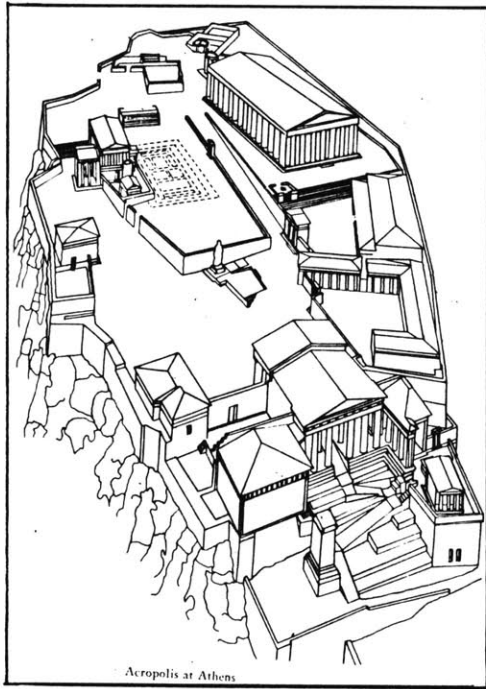
SECTION SEQUENCE: Progression from the street level to the building edge shows the path acquiring more land and privacy as it ascends. At this stage, the intention was to have a fairly even rise to the highest terrace so that the gradual terracing would work as a kind of plinth for the building. This notion was discarded at a later stage because it diluted a positive quality of the way buildings met the ground. The terracing was kept but with a more subtle grade change.

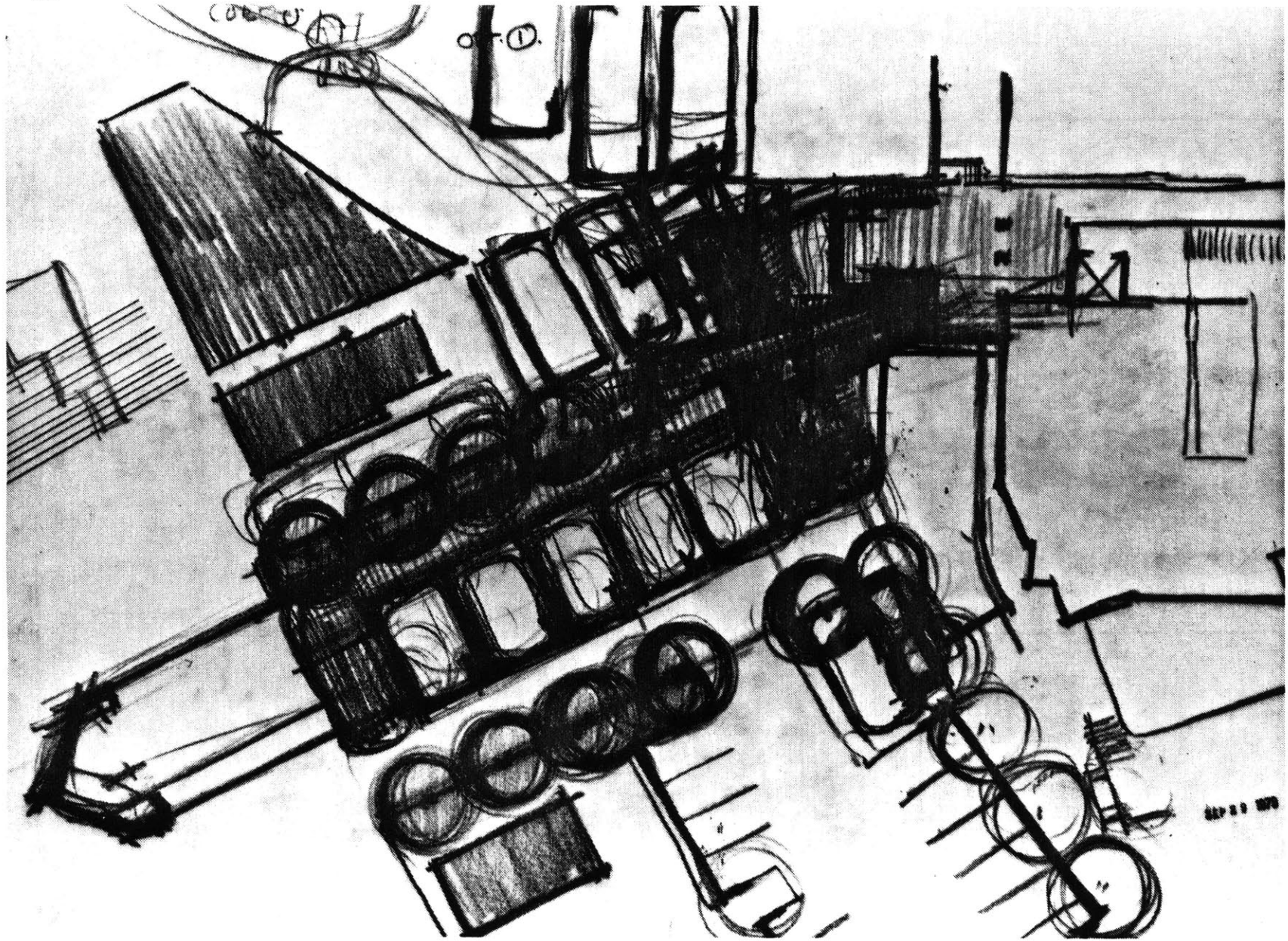
-0-

URBAN AND OTHER IN-BETWEENS: In our society, the space between buildings becomes an un-inhabitable gap. With a spirit of optimism, urban authorities euphemistically call these gaps "plazas." In most cities, we have to look hard to find them, in spite of their preponderance, because they act solely as the backdrop for technologic sculptures passing as places for people. At different scales, the same attitude prevails: the space between rooms becomes a corridor, and the space between towns becomes commercial wasteland. Even the space between individual building materials or surfaces has been violated by new kinds of gimmick joinery or cosmetic coverup.

PATH SHAPE AND REFERENCE FOR PATH ASCENDING TO COURTYARD: At the early stages in design the overall path shape was seen as having two major junctions (at the road and courtyard), a major node at the place where it exited the building to the garden terraces. This configuration gave the journey two roughly straight stretches of equal length with a joint holding them together. The exterior stretch was articulated by room-size gardens. The interior stretch used a series of partial walls and columns to articulate room and table size definition as part of a restaurant on one side and offices on the other.

MAJOR ARTICULATION ON FIRST PASSES: The primary ingredients of the articulations begin at Amory Street with some special marking within the road pavement signifying movement in a new direction. At this location there would also be a kind of collective (c) low wall on the opposite side of the street to sufficiently stop the momentum of the path's steep angle to the street. Terraced gardens provide the largest privacy articulations in the size range of adjacent houses. Passage over a moat-like brook and onto an overlooking terrace is the largest public place, and finally, narrow passages between the high walls of some partially removed buildings provides entry into the court.





ORGANIC NATURE/ORGANIZATION

all life is an urge towards harmony.
growing means
striving after the harmonious enjoyment of
oxygen + carbon + sugar + starch + protein.
work means
our search for the harmonious form of existence.
we are not seeking
a bauhaus style or a bauhaus fashion.
no modishly-flat plane-surface ornamentation
divided horizontally and vertically and all done up
in neoplastic style.
we are not seeking
geometric or stereometric constructions,
alien to life and inimical to function.
we are not in Timbuctoo:
ritual and hierarchy
are not dictators of our creative designing.
we despise every form
which is prostituted into a formula.
thus the ultimate aim of all bauhaus work is
to bring together all vitally creative forces
so as to give harmonious shape to our
society.

Hannes Meyer
(Claude Schnaidt, ed.) p.99

NATURAL ORDER

Some lofty concepts, like space and number, involve truths remote from the category of causation; and here we must be content, as Aristotle says, if the mere facts be known. But natural history deals with ephemeral and accidental, not eternal nor universal things; their causes and effects thrust themselves on our curiosity, and become the ultimate relations to which our contemplation extends.

D'Arcy Thompson
On Growth and Form p. 3

-16-

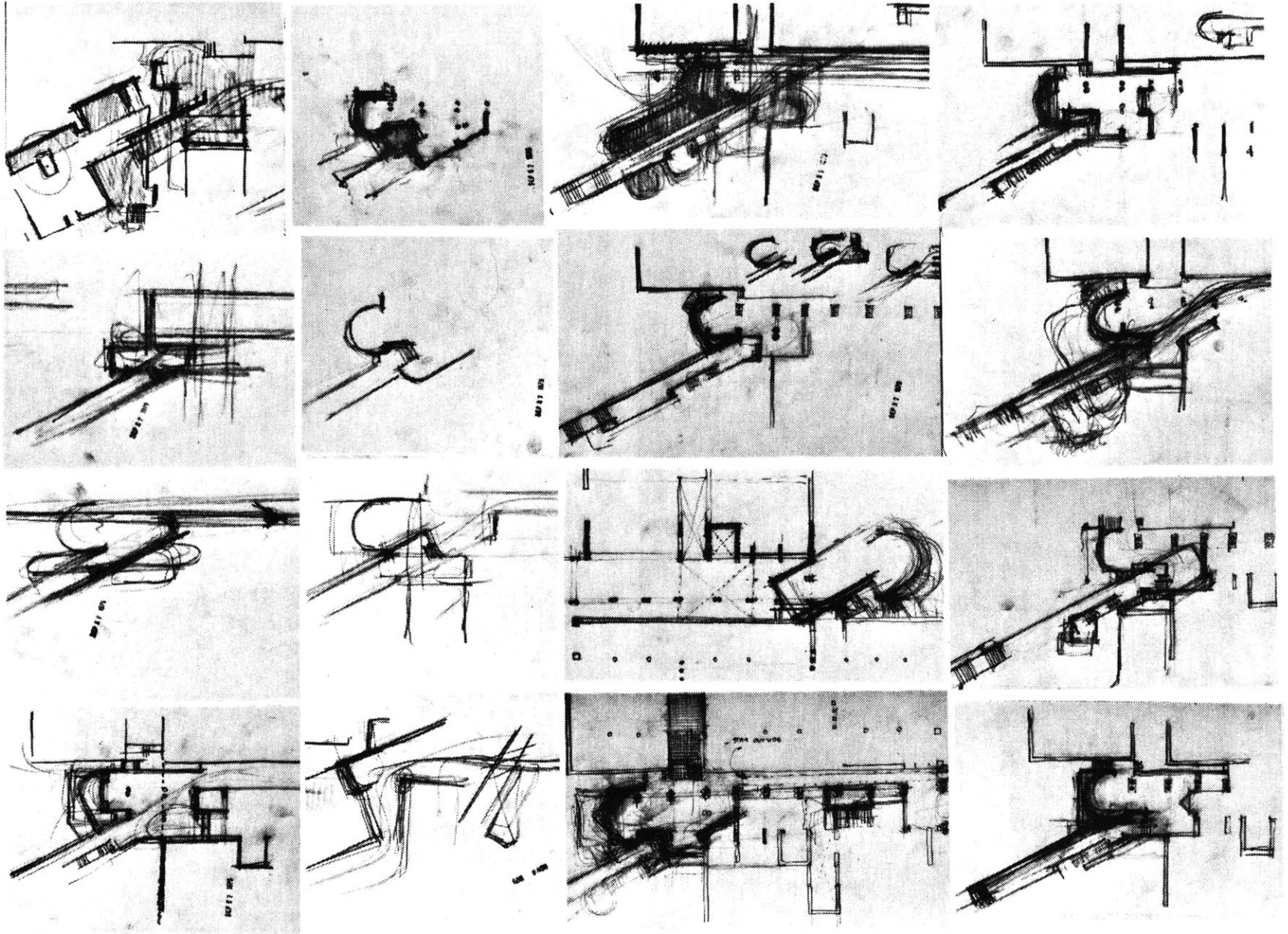
ARTICULATION OF EXTERIOR PATH: This sketch shows the beginning stages of ordering an area between the pedestrian and vehicular paths as structured land. The order was based on a regular interval of room-size retaining walls providing place definition along the path. Places for trees were established at regular intervals on parallel edges. They overlap with the terraces and make a counterpoint with the low walls perpendicular to the path.

- 17 -

PLAN OF EARLY SCHEME: This drawing shows the path with paving, low walls and tree placement. At this stage the path is separate from the car access and has the series of garden terraces in-between. From Amory Street it proceeds in a straight line until reaching a node where entry from parking and approach to the bridge are collected. The bridge has outlook to a parallel water channel and the approach of a secondary path. It lands at an overlooking terrace. The terrace landing has access to a new spine which parallels the Bismark court and presents the option of continuing through to the secondary path. The way through the building is straight but changes level and edge conditions as it approaches the court. At the junction with the court it widens to accommodate an arcade which structures the edge of the court.

ARCADE OF TREES: Trees are used along the path as spot continuities to help modulate the directionality of low walls and paving. They provide the main rhythm, as the sequence of their vertical punctuation follows the path until it is interrupted by the buildings. They are meant to be more intensified at the entry to the path (near Amory Street) so that the canopies add up with the directional groundform clues.





CONTINUITY

Why any principle working in the part if not working in the whole?

I promoted plasticity as conceived by Lieber Meister to *continuity* in the concept of the building as a whole. If the dictum, "form follows function," had any bearing at all on building it could take form in architecture only by means of plasticity when seen at work as complete *continuity*.

Frank Lloyd Wright on Architecture
(Gutheim, ed.) p.182

BUILDINGS IN A FIELD/IN-BETWEEN SPACE

Suppose that you have been deceived all this time. Suddenly you realize that your architectural education has provided you not only with a professional skill but also with a screen, restricting your perception, that makes you see only the intermediate object rather than reality. The Modern Movement taught you not just that the new city is machine-like, white, and situated in a vast park, but also that any specific aspects of the city, such as a housing project, should be looked at in a very particular manner. Thus, your view of the housing project is, first, narrowed to exclude the outside context and then focused upon the buildings alone, to the disregard of other aspects. And unexpectedly you see all you have been taught manifested in the real world -- in the new city.

Your immediate reaction is: this is ludicrous, here I design the buildings in a neo-functional manner (using social psychology and the latest technology), while at the same time, when organizing the spaces between buildings, I still follow the ideals of the Beaux Arts. In addition, the buildings are behavioral sinks and the garden, like a diagram of Versailles, remains unused.

Lars Lerup
Analysis of Built Form:
A Collection of Analytical Drawings p.1

-21-

CHANGE OF DIRECTION: The direction of the path changes to accommodate the existing building geometry as it approaches the built edge. Each direction should be built in the construction of the change. In these drawings, some of the possibilities for the dual phenomenon of the direction change are examined. Some of the considerations had to do with the amount of use-territory made available as the overlap between directions changed.

-22-

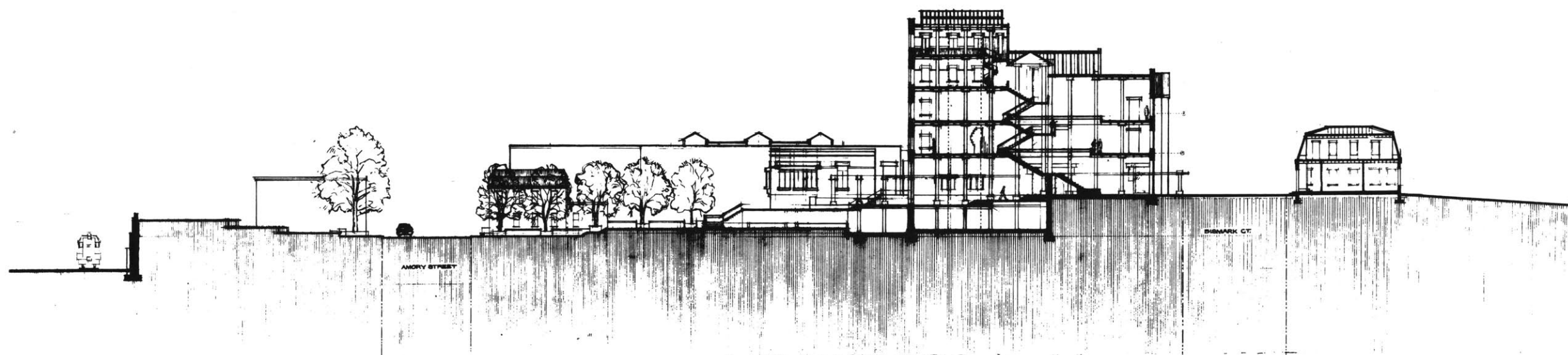
SECTION OF EARLY SCHEME: Although this longitudinal section has changed back and forth through the designs, it has generally remained intact as it is in this drawing. It ascends gradually until reaching the junction at the secondary parking area, after which it rises at a steeper angle to bridge the small gap approaching the overlook. From the overlook it proceeds through the building changing level at two-foot intervals in two places. The interior path bypasses a steel frame, open elevator and the stair landing for the primary circulation to upper floors.

-23-

REFERENCE FOR GENERATIVE PIECE: This drawing by Scarpa uses a privacy "stamp" (i.e. houses) to arrange the space between buildings as a sequence of places. He articulates the path by using the generative piece like a stamp to make a variety of shared territories.

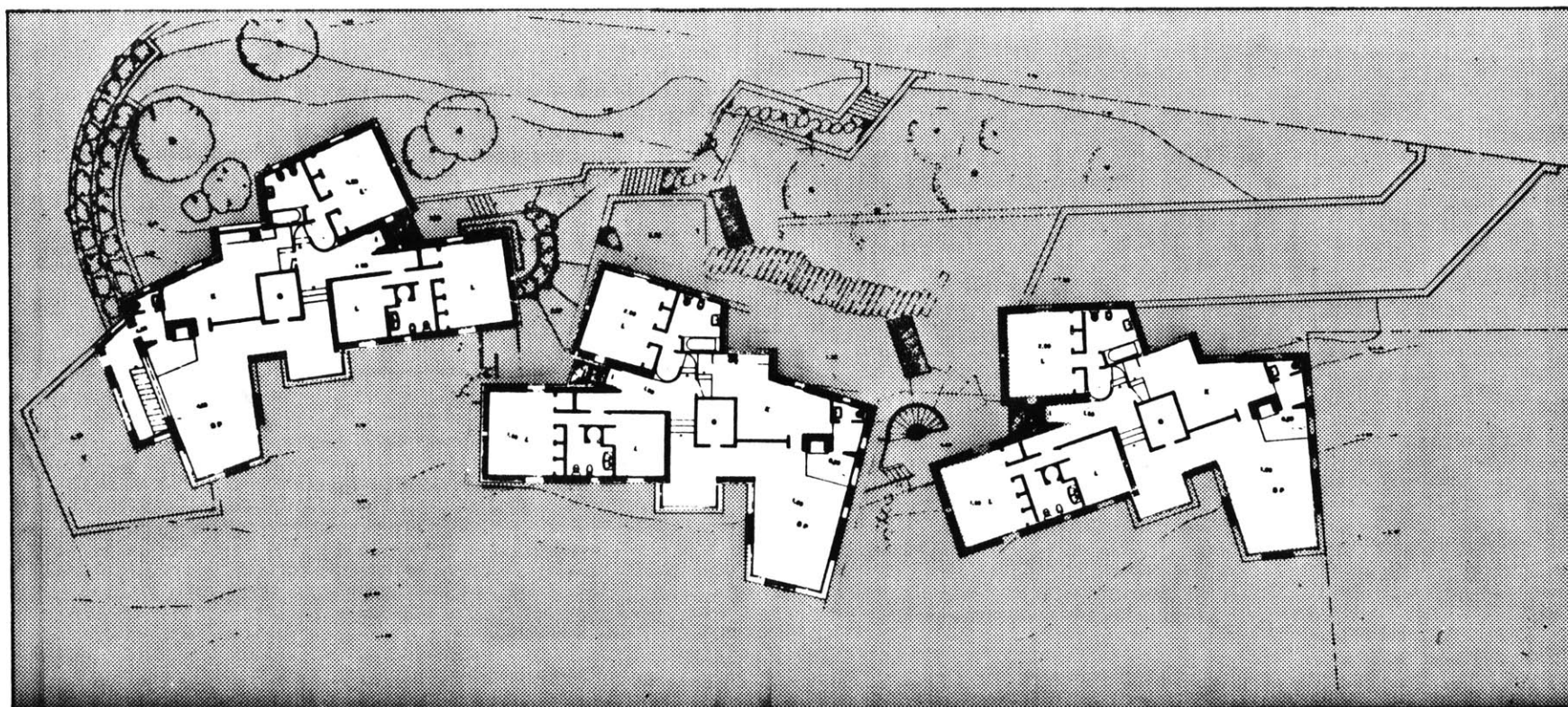
THE GENERATIVE PIECE: A pseudonym for the design of a specific repeatable use area in the program such as an office, meeting area, or table definition. In a new building it is necessary to take an attitude about how these privacies will influence the field and will be formed in the new materials. In my case however, the context is strong and will most likely remain as the primary containment for the privacies. These pieces cannot really be called "generative" in the literal sense, but I have adapted an attitude where identifiable pieces of privacy will play an important part in forming the field and consequently the path. In this light I have briefly explored an office condition as one kind of privacy along the interior part of the path. They are part of the multi-service center which borders the north edge.

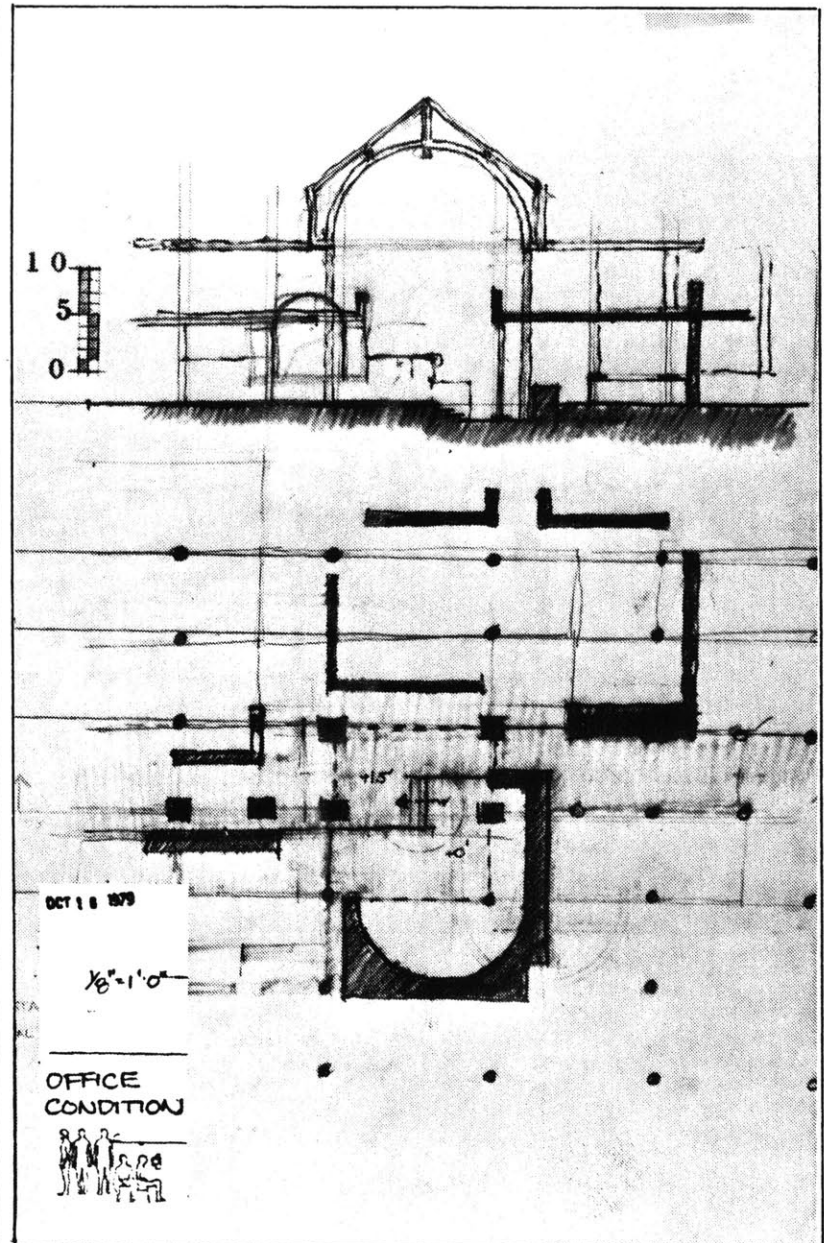
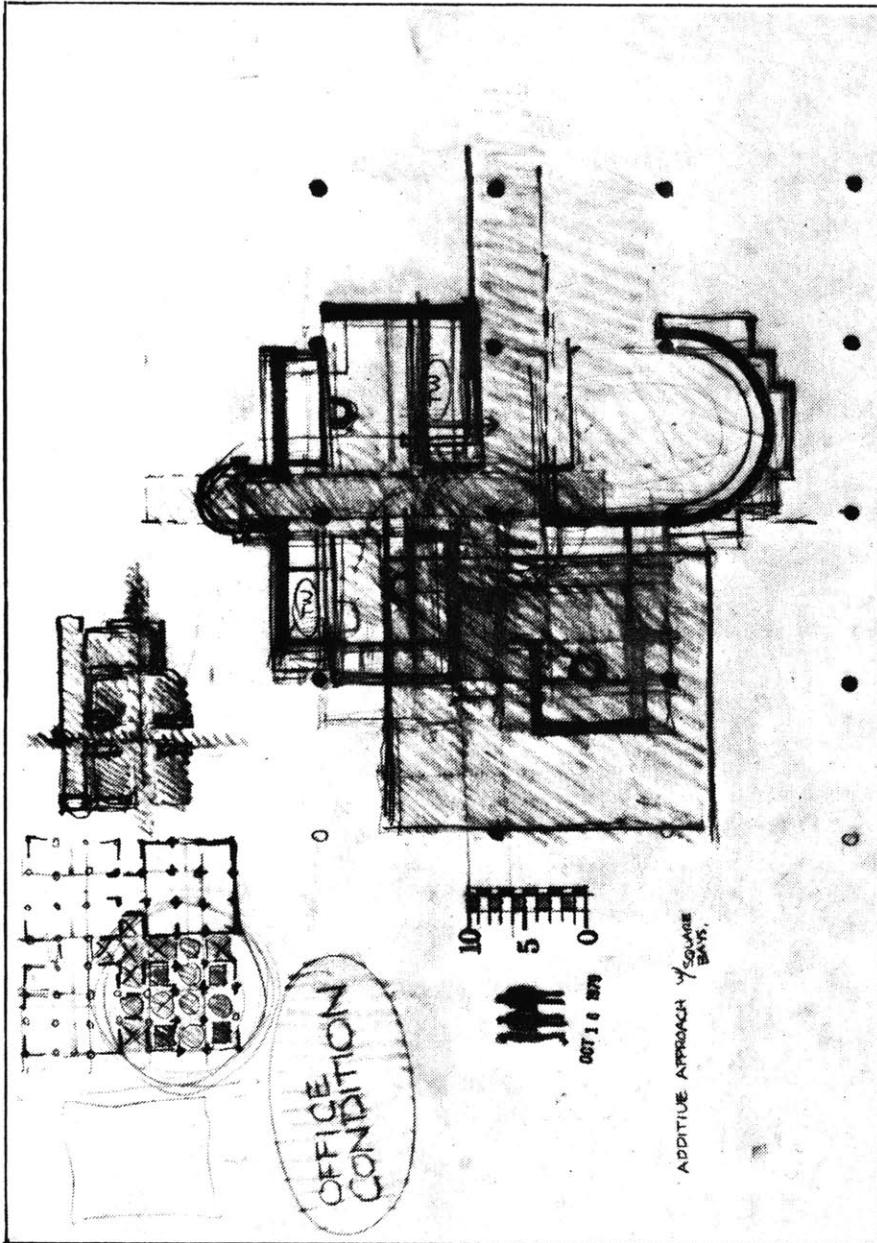
INFLUENCE OF GENERATIVE PIECE ON PATH SHAPE: For a brief time I fantasized that large sections of the existing complex could be dismantled to provide new possibilities for a more permeable edge condition. The actual articulations of the generative office groups would then act as the form which set the rhythm and theme of the pathway in place of the groups of walls and columns already dominating the area. The nicest aspect of using a generative piece was seeing the possibility of making shared territory across the path from the juxtaposition of reciprocal collective walls. It is easy to see that substantial variety in the path is experienced even though the pieces are all the same shape.

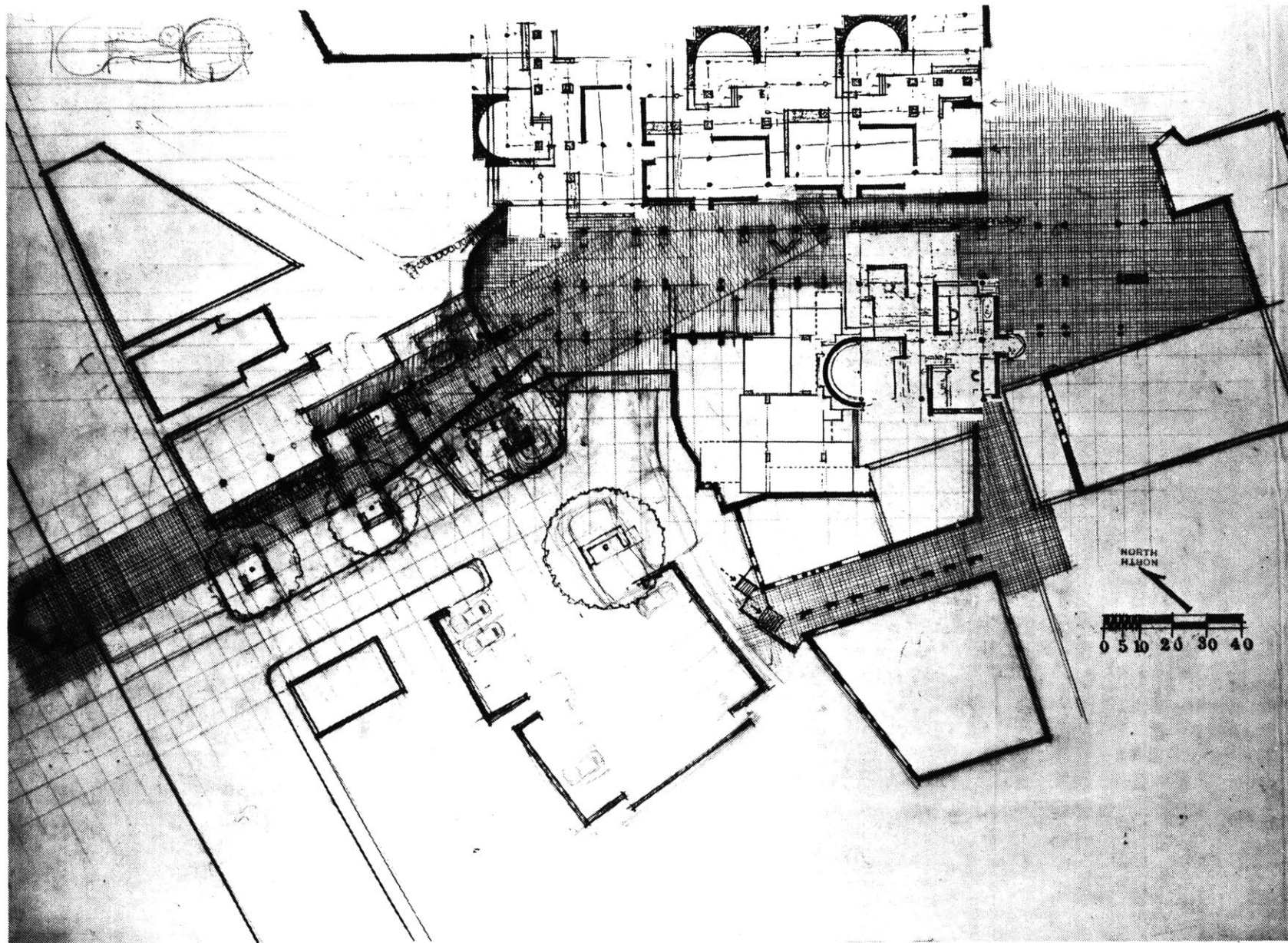


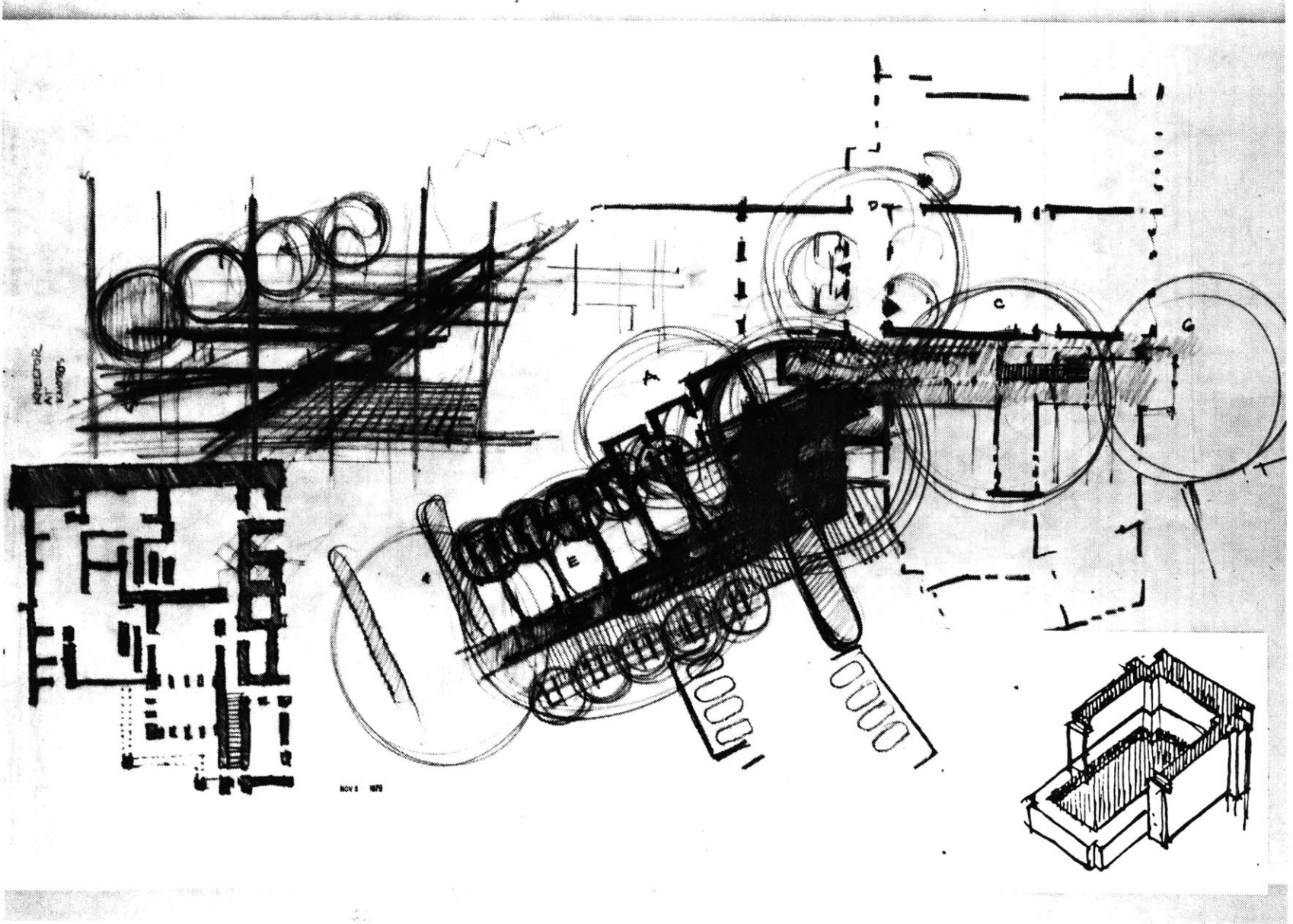
SECTION A

**SECTION
STUDY
JOURNEY 1**









-26-

FINAL SCHEME DEVELOPMENT: In this study of the garden locations, the pedestrian path has been moved next to the vehicular entry. I thought that the strength of the entry could be enhanced by their combination, since it allows a larger area for garden terraces. It also provides a more defined choice between direct entry at grade or the climb to the reference level at sixteen feet above grade.

-27-

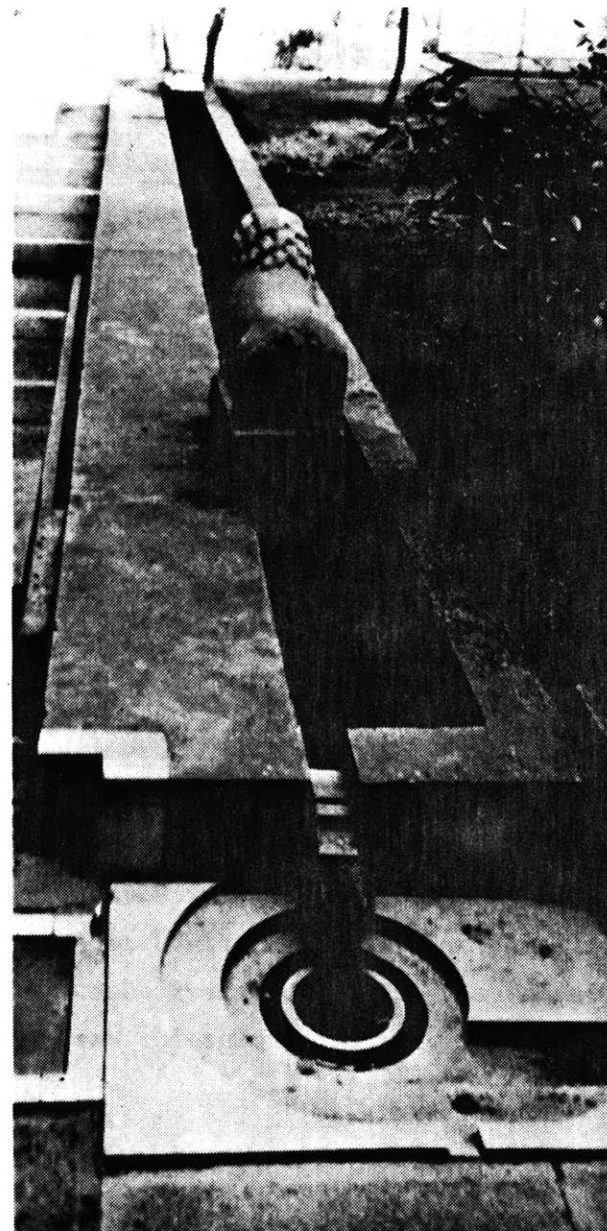
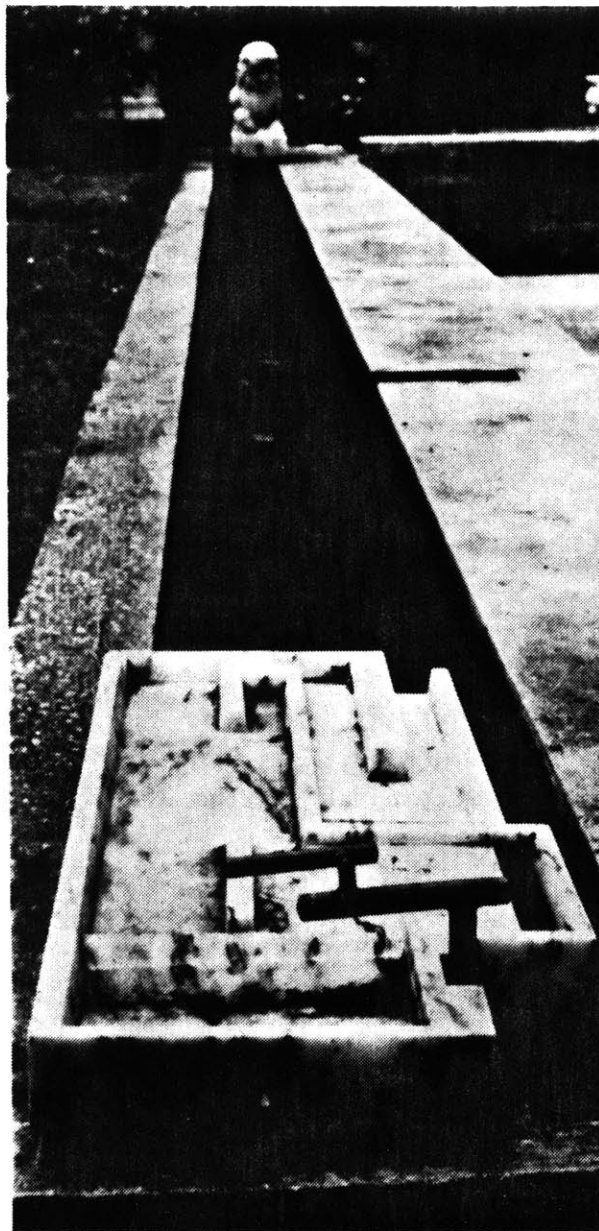
REFERENCE FOR "LINER" AND WATER CONTAINMENT:

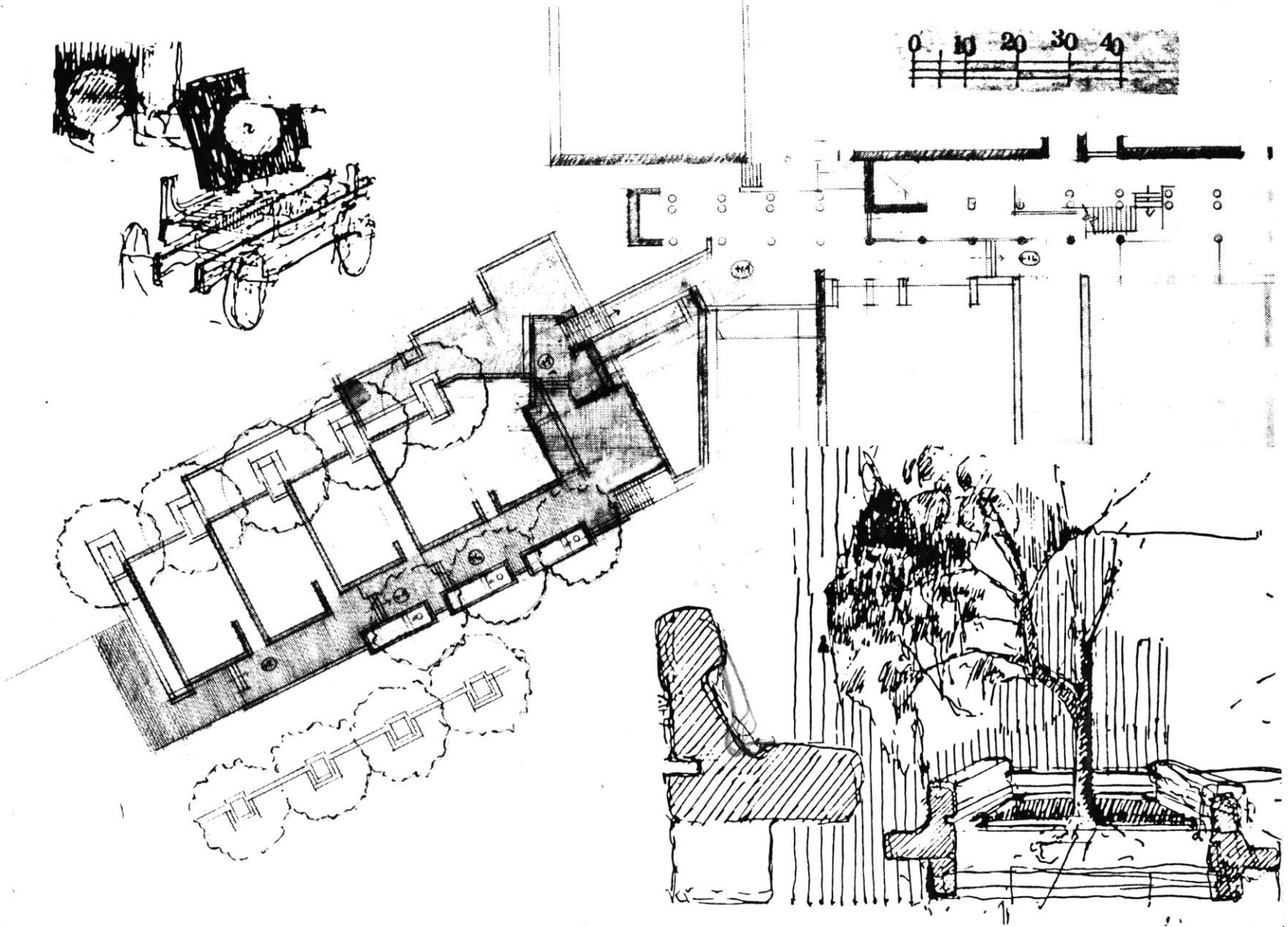
-28-

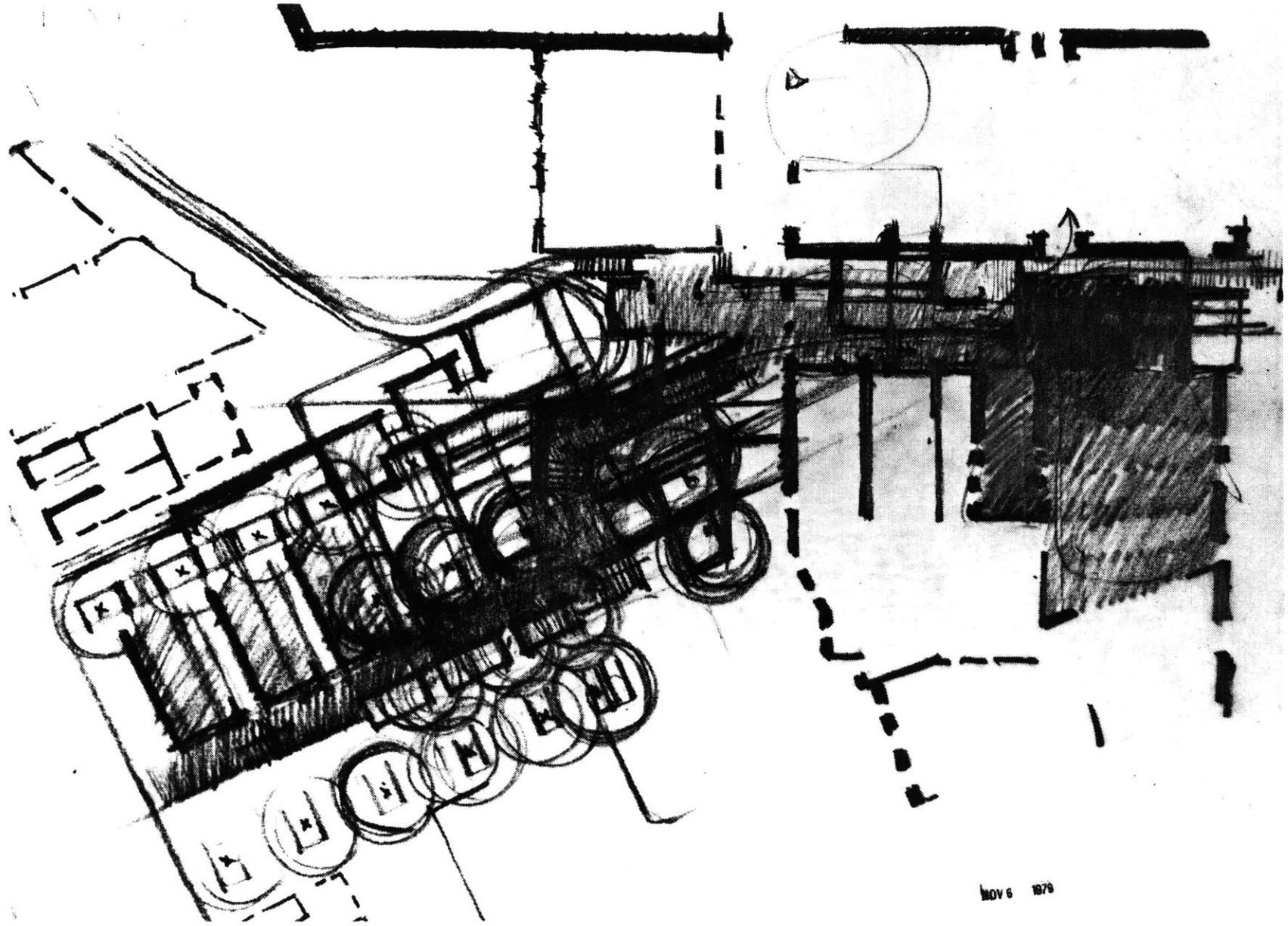
FINAL SCHEME DEVELOPMENT: A study of bridge link articulation and change of path direction at the bridge landing.

-29-

FINAL SCHEME DEVELOPMENT: Assuming that the path and car entry are adjacent, I worked on the modulation of privacies by varying the rhythm of low walls on either side of the path. At times the low walls on the south build up an edge to reinforce the direction of travel. They become "liners" or a tightly defined reference edge off which the other side can play more freely. The liner edge shifts to the north as it approaches the bridge to form containment for water.







NOV 6 1979

'EMPTY SPACE'

*Whoever attempts to meet man
in the abstract will speak with
his echo and call this a dia-
logue.*

*Whoever attempts to solve the
riddle of space in the abstract,
will construct the outline of
emptiness and call it space.*

LECTURE ON NOTHING

I am here , and there is nothing to say . If among you are
those who wish to get somewhere , let them leave at
any moment . What we re-quire is
silence ; but what silence requires
is that I go on talking . Give any one thought
a push ; it falls down easily
; but the pusher and the pushed pro-duce that enter-
tainment called a dis-cussion
Shall we have one later ?
TP
Or , we could simply de-cide not to have a dis-
cussion . What ever you like . But
now there are silences and the
words make help make the
silences . I have nothing to say
poetry and I am sayin' it . and that is
This space of time as I need it
We need not fear these silences, — is organized

John Cage
Silence p.109

- 30 -

STUDY OF ACCESS FROM PARKING TO PATH: Since the vehicular and pedestrian paths enter the site at one point and parallel each other, the parking area can have relatively direct access to the pedestrian path. To accommodate people coming from their cars a second entry was provided at about two-thirds of the distance from the street to the buildings. This entry works as a signal for a change in direction of the overall path. At this entry the path is in the last of a series of side-stepping motions which have gradually shifted the center of gravity of the path toward the building entry point. The articulation of the new entry point provides more place definition for an intermediate overlooking vantage place.

- 0 -

DOUBLE MEANING OF DIRECTIONAL: To direct or organize implies a kind of order. It also means to conduct in a certain direction...having direction instead of being omni-directional.

- 31 -

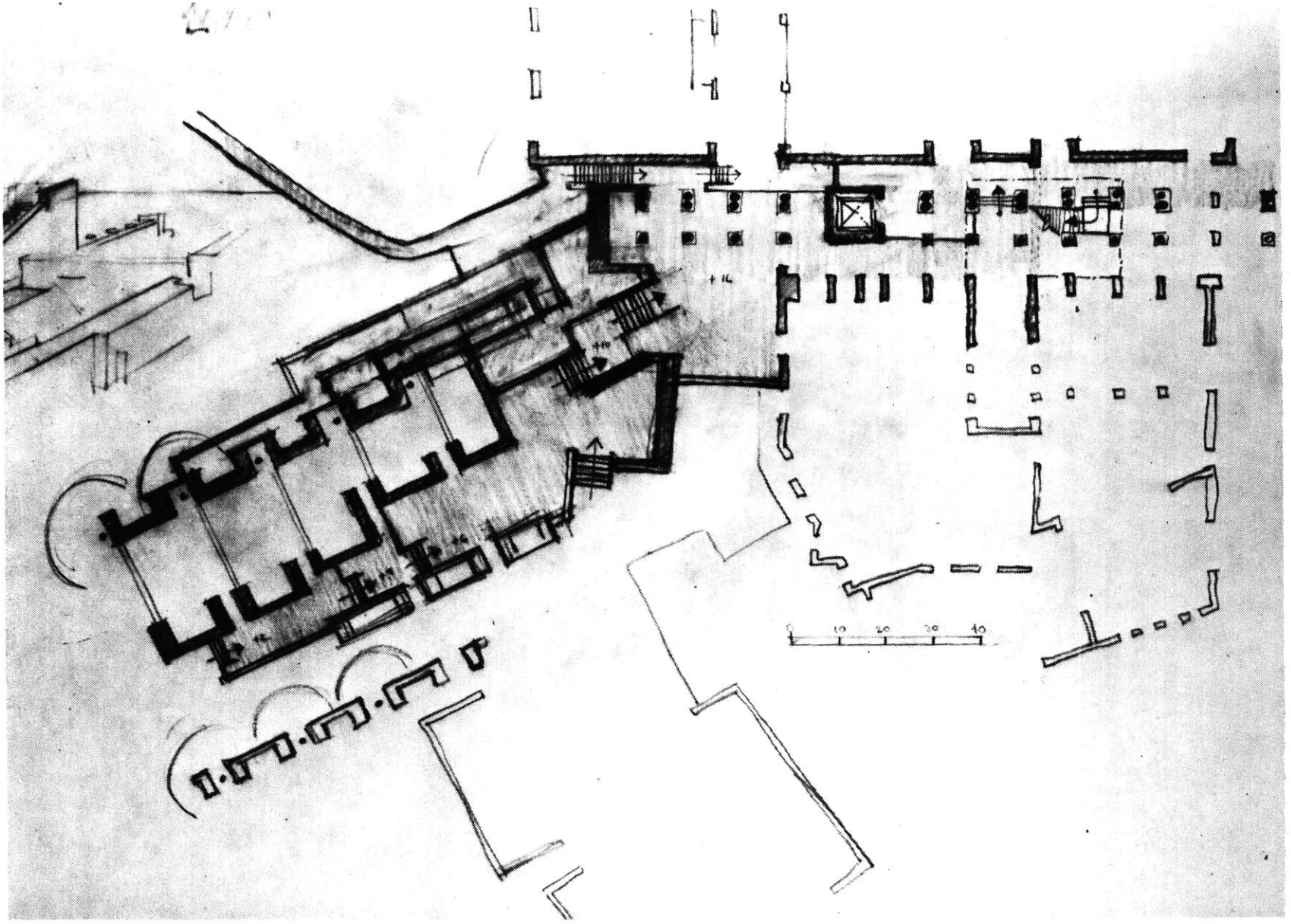
EXTERIOR PATH DEVELOPMENT: This final configuration sketch shows the path in relation to gardens, roadway, secondary entries, loading dock, and junction with interior path.

-0-

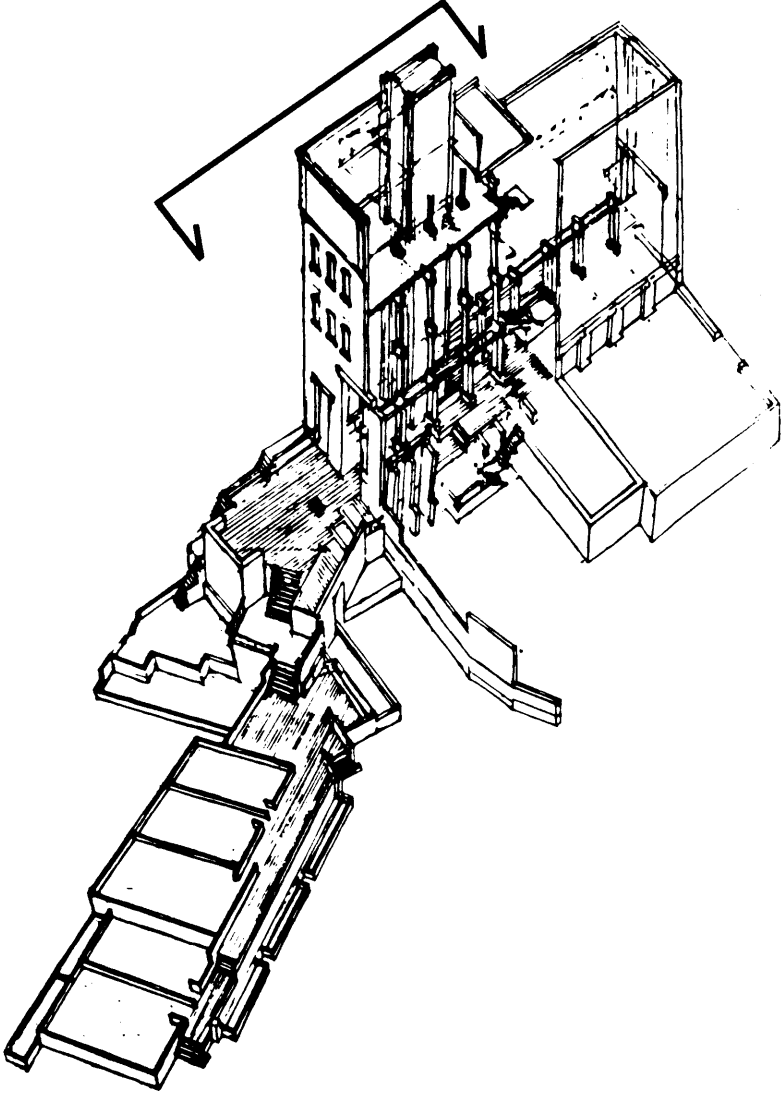
JOURNEY JUSTIFICATION: The journey is a departure for this design investigation because of its implication of "direction." Direction can have many meanings but I use it primarily to imply an organizational quality. To build in the natural landscape with any sensitivity requires this quality, for the continuity of the landscape provides for movement, the life of experience. Building in terms of a journey uses the movement quality as a clue for making form. The physical embodiment of a journey takes form in a pathway or street, its timeframe is an added layer of information which organizes the rhythm or space stimuli along the way.

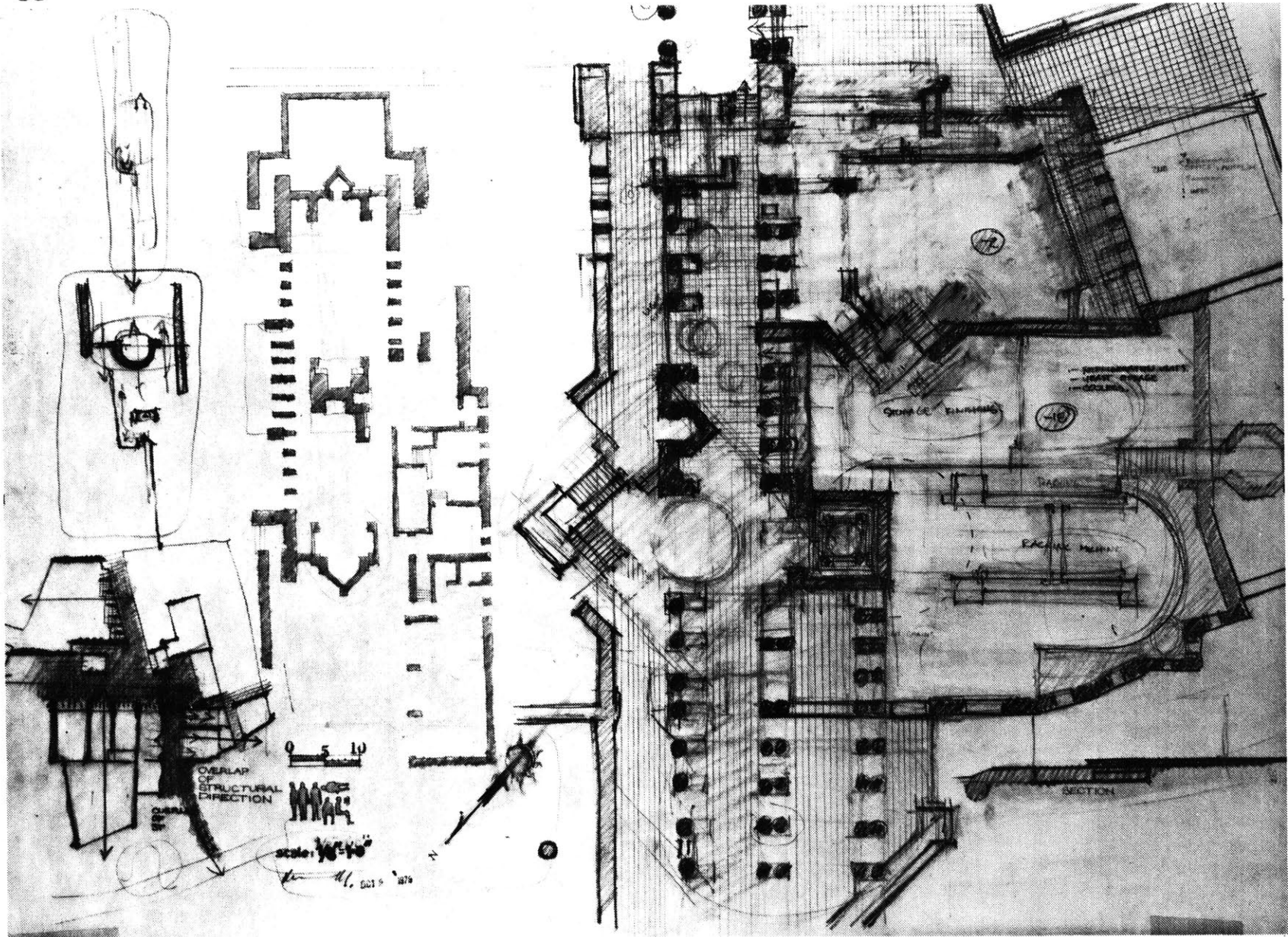
-32-

PLAN OF LAST SCHEME/THE OVERALL JOURNEY: This drawing shows the final configuration of the overall path in its context. It shows all major articulations as well as secondary paths and new distribution points. The design employs terracing gardens to provide the major place definition along the exterior part of the path with column and window places for the articulation along the interior stretch. The plan employs direct reference to aspects of the landscape in all of its direction and level changes.



JOURNEY 2





SIMILARITY AND ORGANIZATION

Experiments have shown that articulation is controlled essentially by the nature of the stimulus configuration itself. Thirty years ago, Max Wertheimer established some "rules of visual grouping". It seems now probable that these rules can be reduced to one, namely, the principle of similarity. The relative degree of similarity in a given perceptual pattern makes for a corresponding degree of connection or fusion. Units which resemble each other in shape, size, direction, colour, brightness, or location will be seen together.

The principle of similarity organises stimulus elements in time as well as in space.

ORGANIZATION AND ART

art?!

all art is organization.
the organization of the dialogue between this world
and the other,
the organization of the sense impressions of the
human eye,
and accordingly subjective, bound to the person,
and accordingly objective, determined by society.
art is not a beauty aid,
art is not a discharge of affect,
art is only organization.

classical:
in the module of the logical geometry of Euclid,
gothic:
in the acute angle as the pattern of passion,
renaissance:
in the golden section as the rule of balance.
art has always been nothing but organization.
we of today long to obtain through art solely
the knowledge of a new objective organization,
meant for all,
manifesto and mediator of a collective society.
thus a theory of art
becomes a system of organizing principles
and indispensable to every creative designer.
thus being an artist is no longer a profession
but the vocation to become a creator of order.
thus bauhaus art
is also a means of experimenting in objective order.

Hannes Meyer
(Claude Schnaidt, ed.) p.99

ORGANIZATION

building is the deliberate organization of the processes of life.

building as a technical procedure is therefore only a partial process. the function diagram and economic programme are the main guiding principles in a building scheme.

building is no longer an individual task in which architectural ambition is realized.

building is a joint undertaking of craftsmen and inventors, only he who can himself master the living process in working jointly with others . . . is a master builder.

building has grown from being an individual affair of individuals (promoted through unemployment and housing shortage) to a collective affair of the nation.

building is only organization:
social, technical, economic, psychological
organization.

Hannes Meyer
(Claude Schnaidt, ed.) p.99



- 0 -

CONTINUING ON A SECOND JOURNEY: The second journey retraces a few of the steps in the overall path to provide a closer look at the section which passes through the buildings. With closer scrutiny focussed on interior issues, the second journey locates the passage which channels through the old brewhouse to reach the court. It includes several joints where circulation changes back to the predominant direction of Amory Street and Bismark court. This path also provides the major public access for vertical circulation with the location of an elevator and major stairway. The path is "inhabited" by the edges of a restaurant, some offices of a multi-service center and a new small scale, historical brewery.

- 33 -

FORM ORGANIZATION FOR PRIVACIES: A key issue at the beginning of this stage concerned the formal language for making privacies. The exterior privacies could be defined by a series of low retaining walls and curb definition, whereas the interior was already controlled largely by thick bearing walls. To articulate the places where one could get off of the path a new component had to set up the places for the direction change. To do this I developed a series of grouped columns which sat on short pieces of collective walls. The new elements were added within the existing shell of the building for the intermediate support of new floor levels. I thought that the density of columns could provide a rhythmic spot continuity (similar to the trees) which would continue through the building. The actual density of the columns was decreased in later passes to make way for new walls since they virtually added up to walls anyway.

-34-

REFERENCE FOR WALL OPENING:

-35-

RELATION OF THE EXTERNAL PATH DIRECTION TO THE NEW INTERNAL ORDER: In this sketch I studied the possibility of carrying the path through the building on an angle to the existing wall system. The angle was eventually discarded because the parallel walls bordering the path controlled too much of the movement through the building. To resolve the angle would require more than the available space.

-36-

PATH LOCATION AND VERTICAL CIRCULATION STUDY: This sketch investigates the relation of a direction change in the path to the elevator and stairway to the second floor.

-37-

REFERENCE PLAN FOR STAIRWAY BY CARLO SCARPA:

-38-

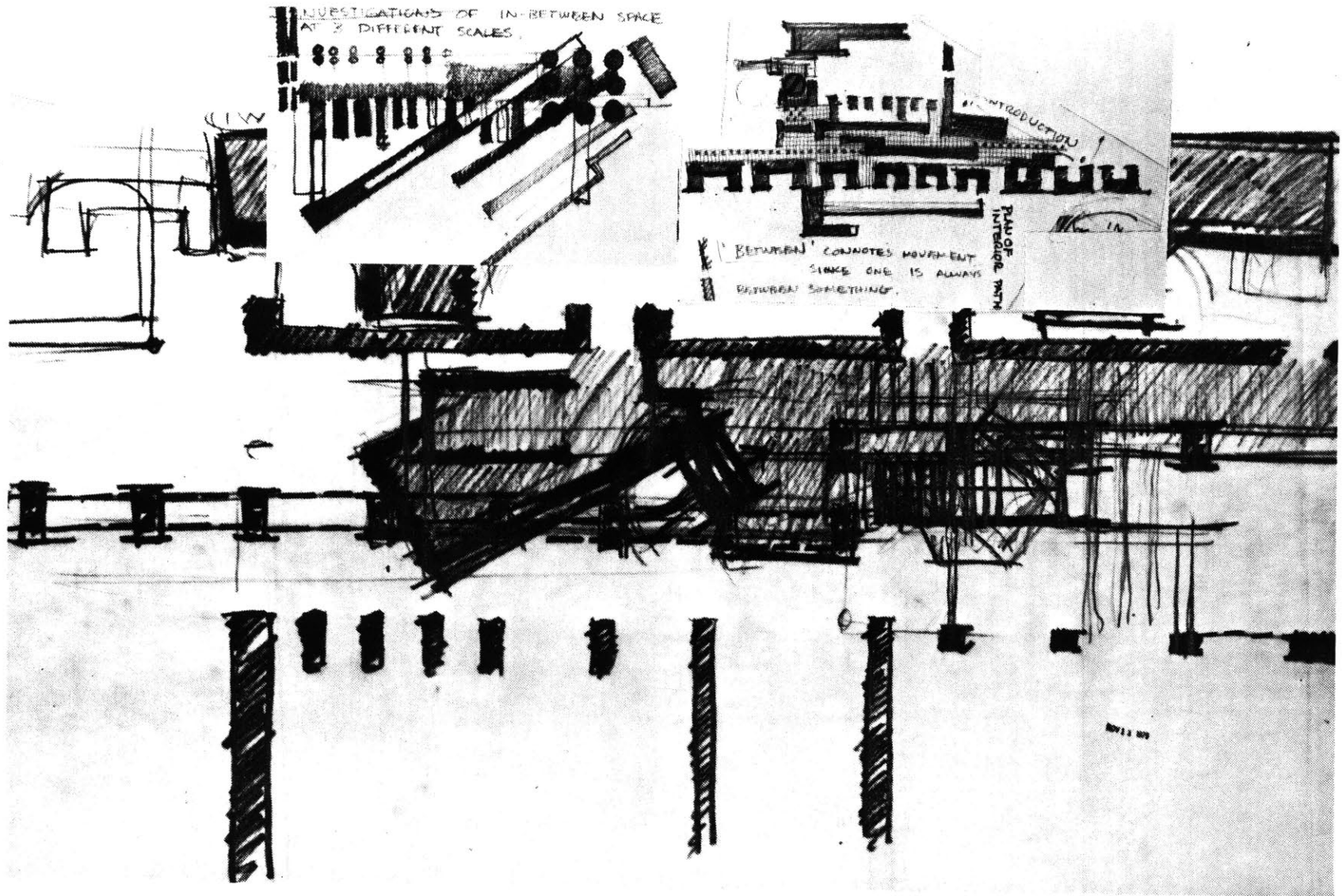
SKETCH SHOWING FINAL LOCATION OF VERTICAL DISTRIBUTION POINTS:

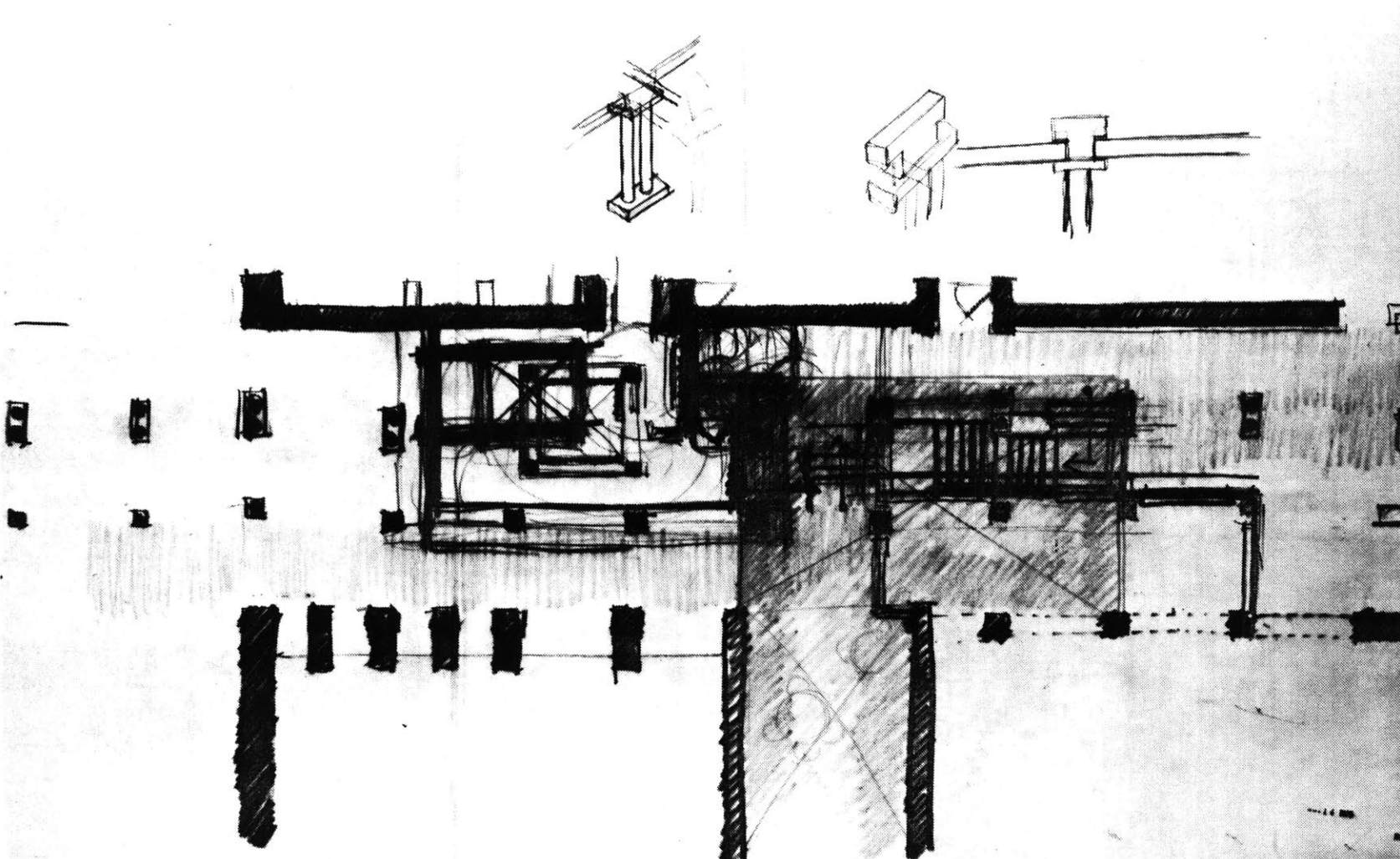
-39-

OLIVETTI STEPS BY SCARPA:

-40-

REFERENCE FOR STRUCTURE:





ORGANIZATION

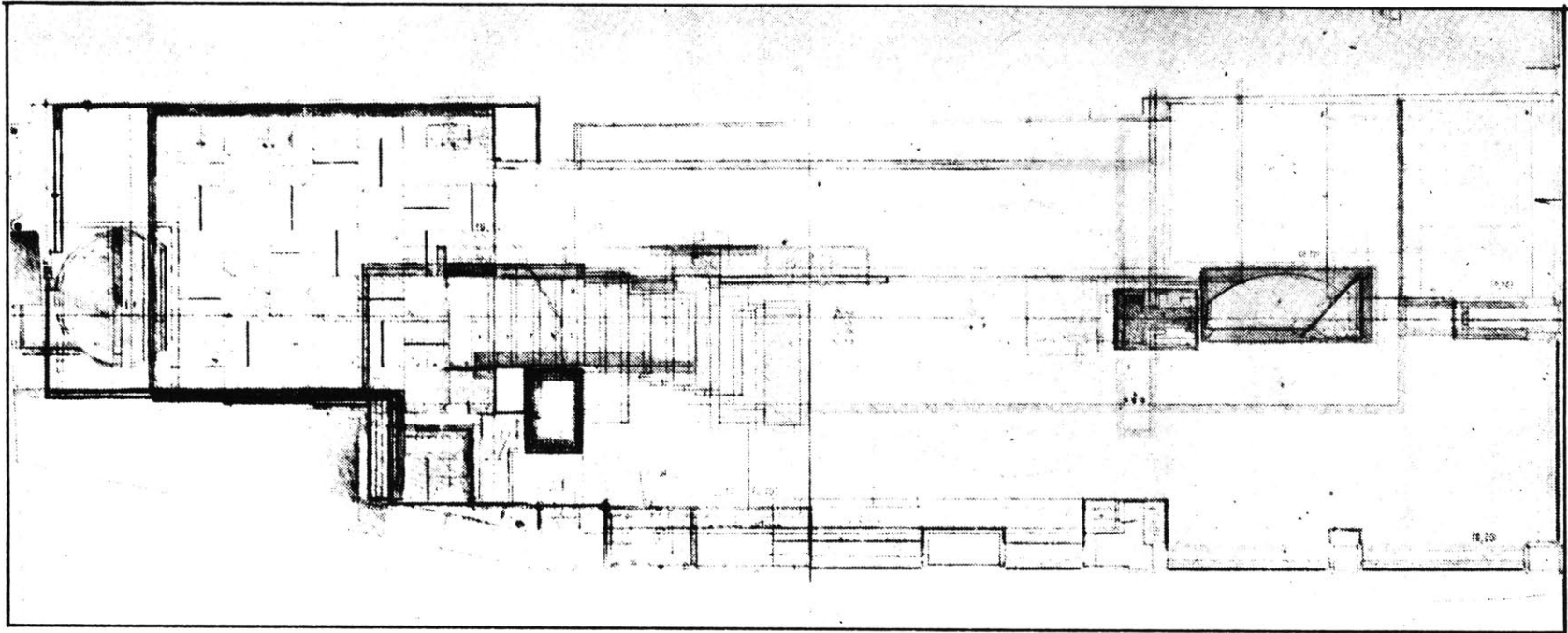
Thus the architect is an organizer.
He is an organizer of the specialists without being a
specialist himself! . . .
The architect is an artist, for all art is a matter of
organization; that is, of reality shaped according to a
new system . . .

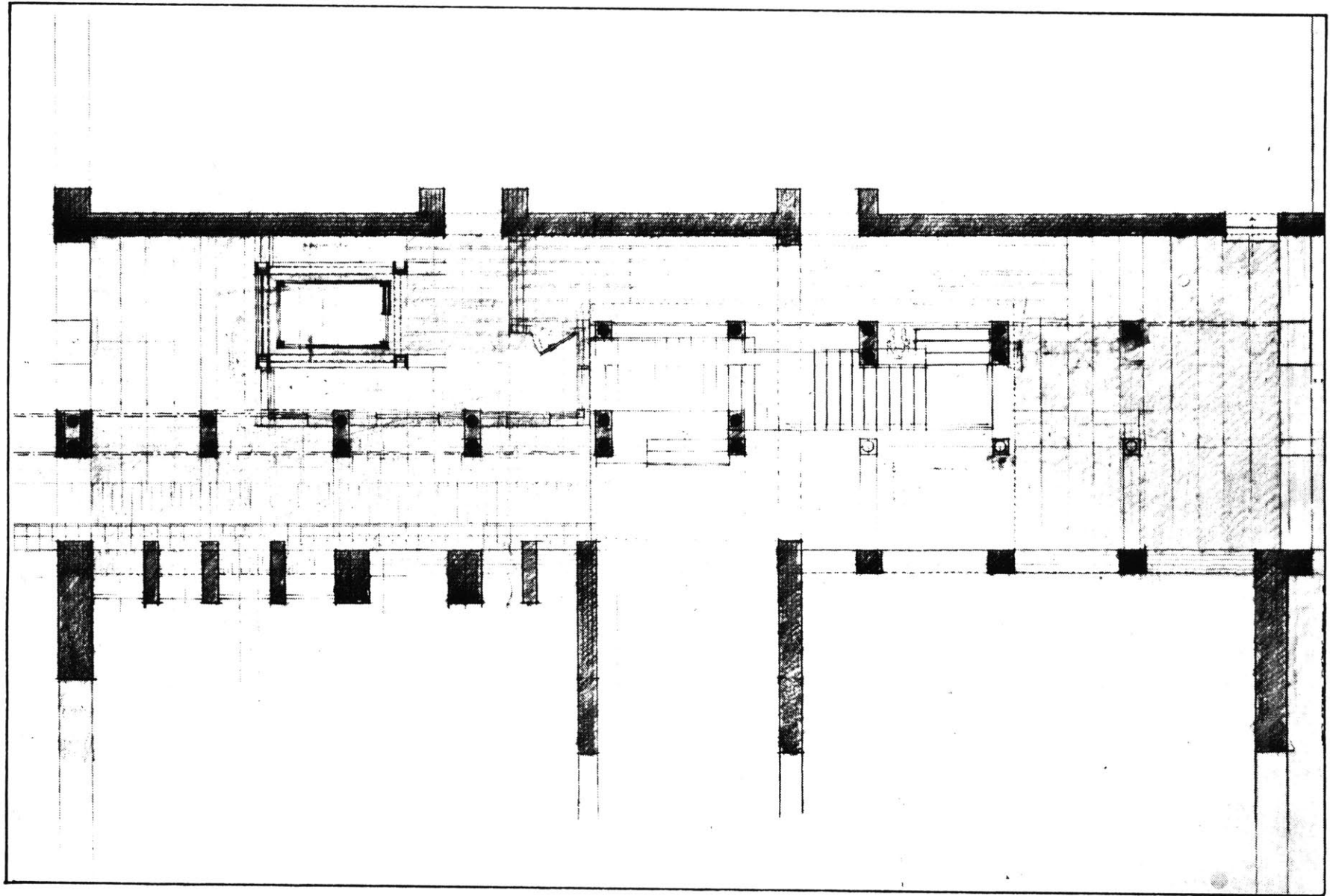
Hannes Meyer
(*Claude Schnaidt, ed.*)

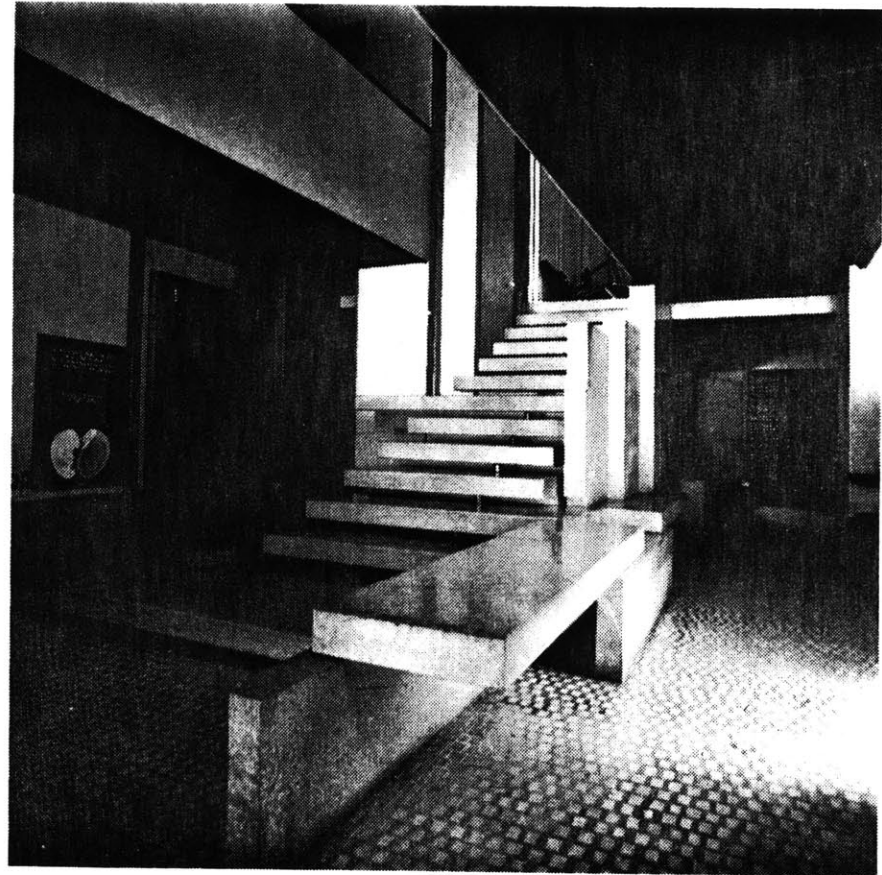
ART/POEM

The wonderful thing about architecture is that it is an art – just that. The terrible thing about architects is that they are not always artists.

Aldo Van Eyck
C.I.A.M. '59 in Otterlo p.216









ORGANIC ORDER

Let us begin with the idea of organic order. Everyone is aware that most of the built environment today lacks a natural order, an order which presents itself very strongly in places that were built centuries ago. This natural or organic order emerges when there is perfect balance between the needs of the individual parts of the environment, and the needs of the whole. In an organic environment, every place is unique, and the different places also cooperate, with no parts left over, to create a global whole—a whole which can be identified by everyone who is a part of it.

Christopher Alexander
The Oregon Experiment p.10

ORGANIC ORDER

The University of Cambridge is a perfect example of organic order. One of the most beautiful features of this university is the way that the colleges—St. Johns, Trinity, Trinity Hall, Clare, Kings, Peterhouse, Queens—lie between the main street of the town and the river. Each college is a system of residential courts, each college has its entrance on the street, and opens onto the river; each college has its own small bridge that crosses the river, and leads to the meadows beyond; each college has its own boathouse and its own walks along the river. But while each college repeats the same system, each one has its own unique character. The individual courts, entrances, bridges, boathouses, and walks are all different. The overall organization of all the colleges together and the individual characteristics of each college is perhaps the most wonderful thing about Cambridge. It is a perfect example of organic order.

Christopher Alexander
The Oregon Experiment p.11

-41-

SECTION SHOWING MAIN SKYLIGHT WITH OVERLAP BAY TO SOUTH:

-42-

SOUTH WALL ELEVATION: This elevation shows a window bank area which overlooks the brewery on the first floor and a high vertical opening where the small skylight joins the large.

-43-

NORTH ELEVATION VIEWED FROM INSIDE:

-44-

LONGITUDINAL SECTION STUDY:

-45-

REFERENCE AFTER FRANK LLOYD WRIGHT:

-46-

EAST WALL ELEVATION AND STUDIES FOR NEW WINDOW OPENINGS:

-47-

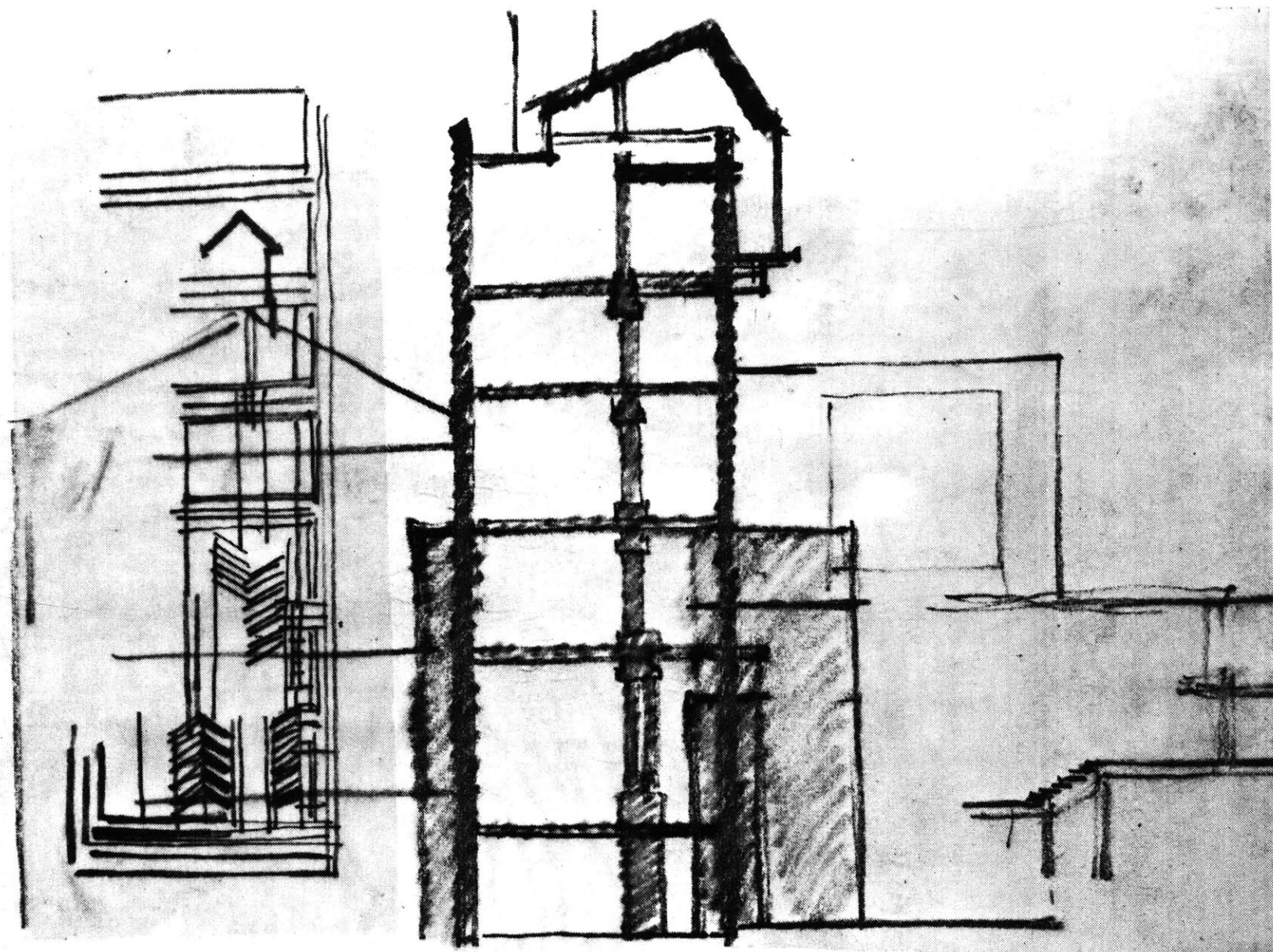
STUDY OF ENTRY CLOSURE/WEST ELEVATION:

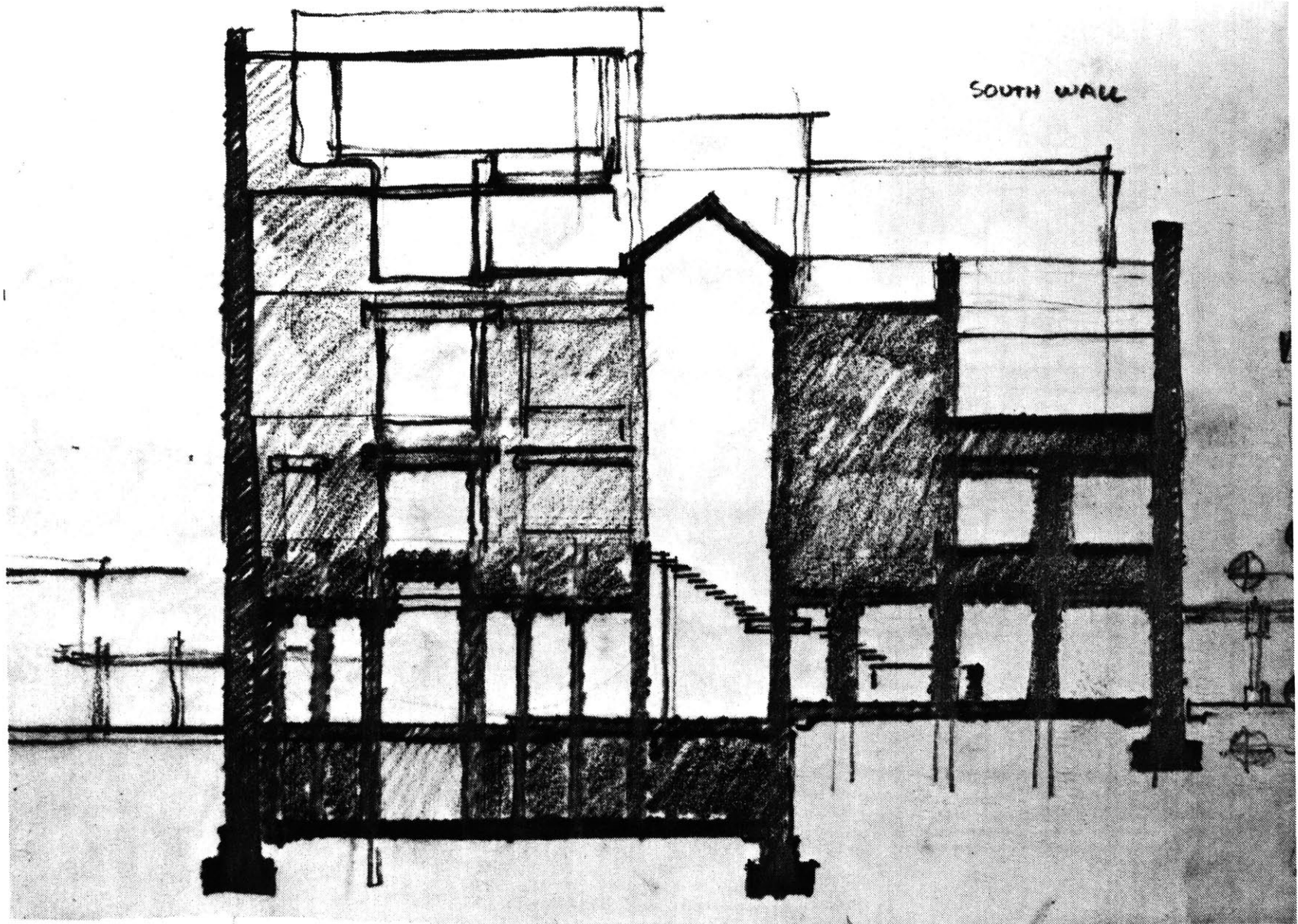
-48-

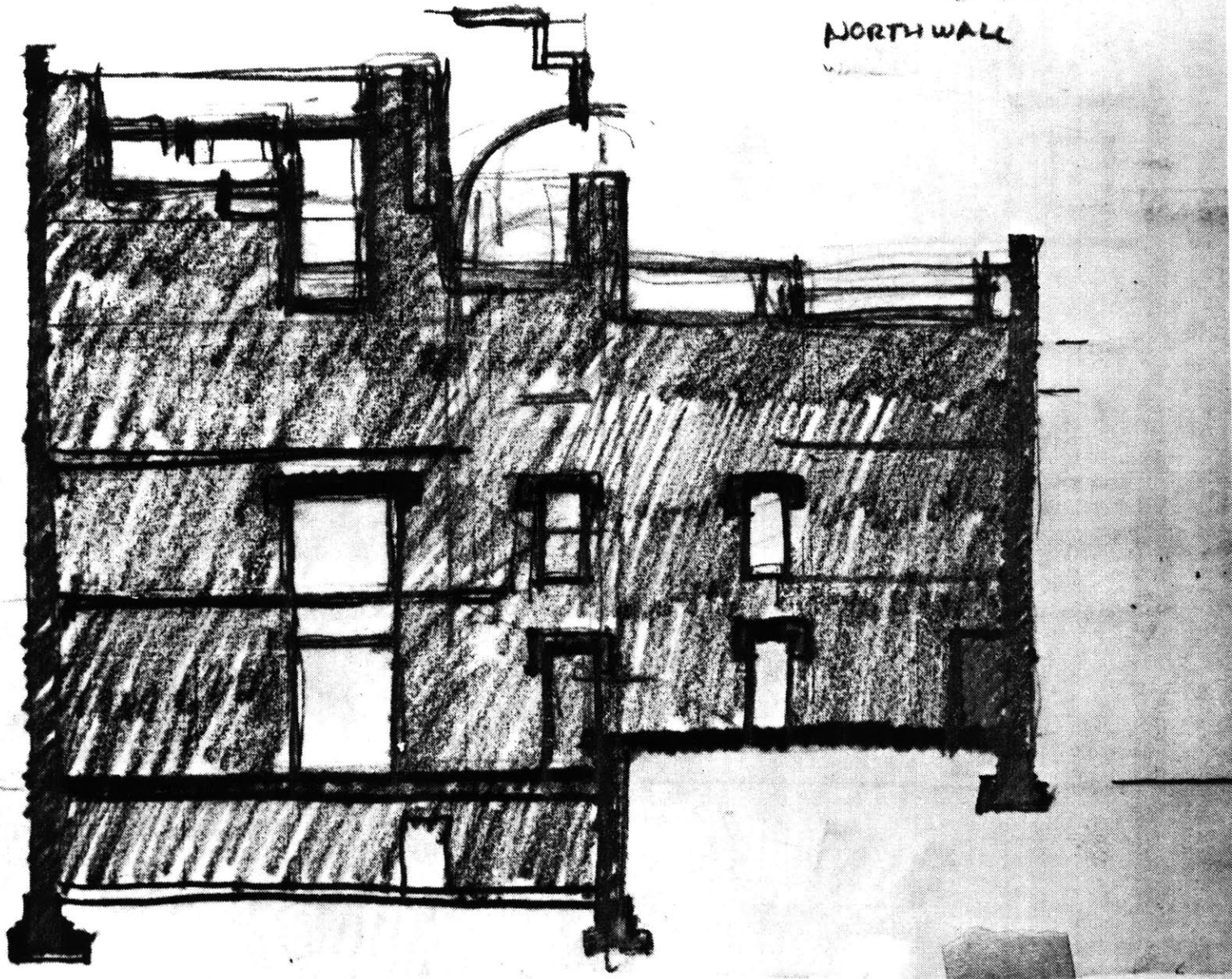
SECTION SHOWING NEW FLOOR LEVEL IN RELATION TO WEST SKYLIGHT WALL:

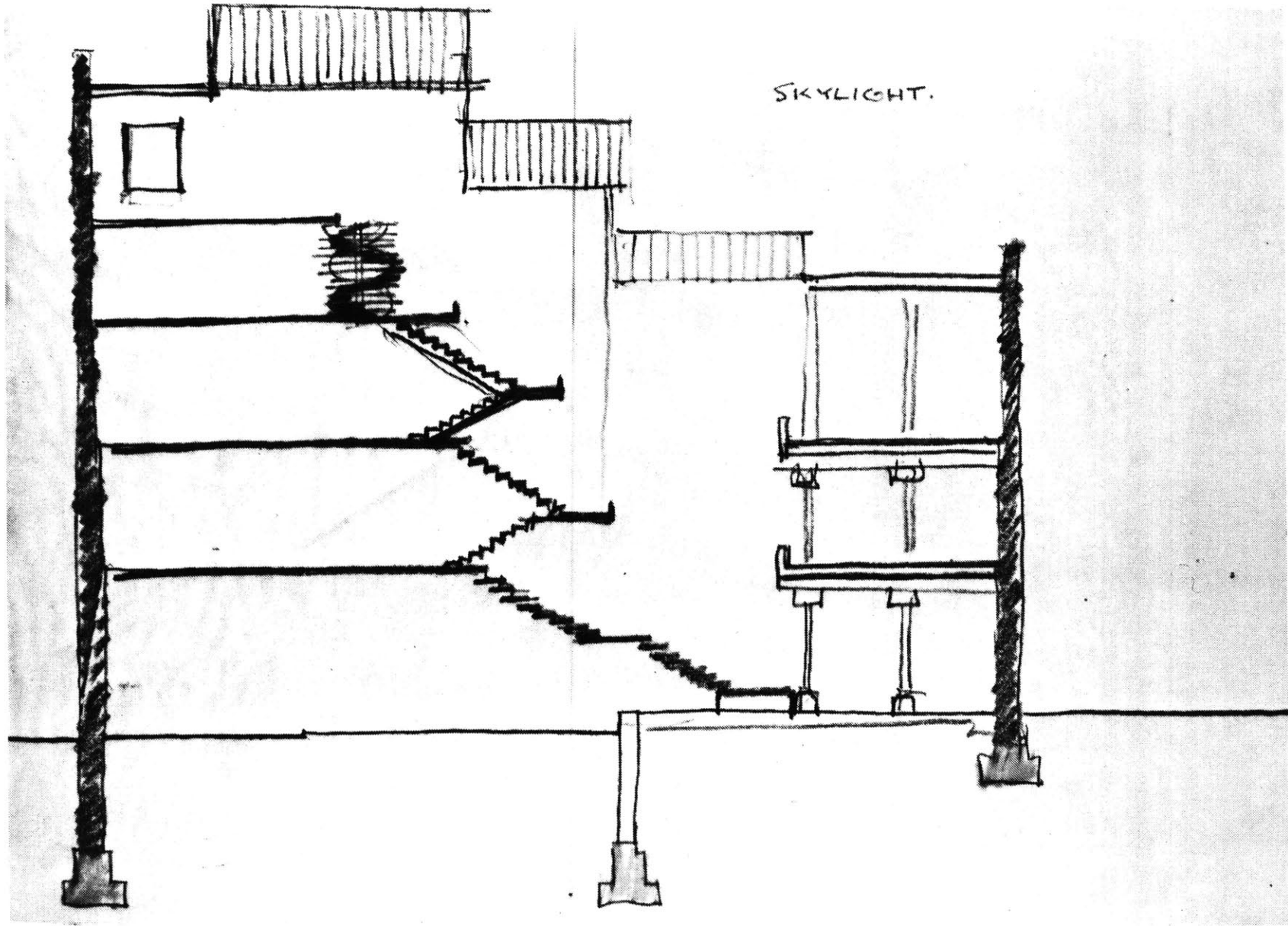
CROSS-SECTION PERSPECTIVE: This drawing shows one version of a structural assemblage as it grows from heavy granite and concrete at the reference level to tubular steel at the uppermost level. The study begins to examine the quality of branching (vertical direction change) as it reaches the skylight structure.

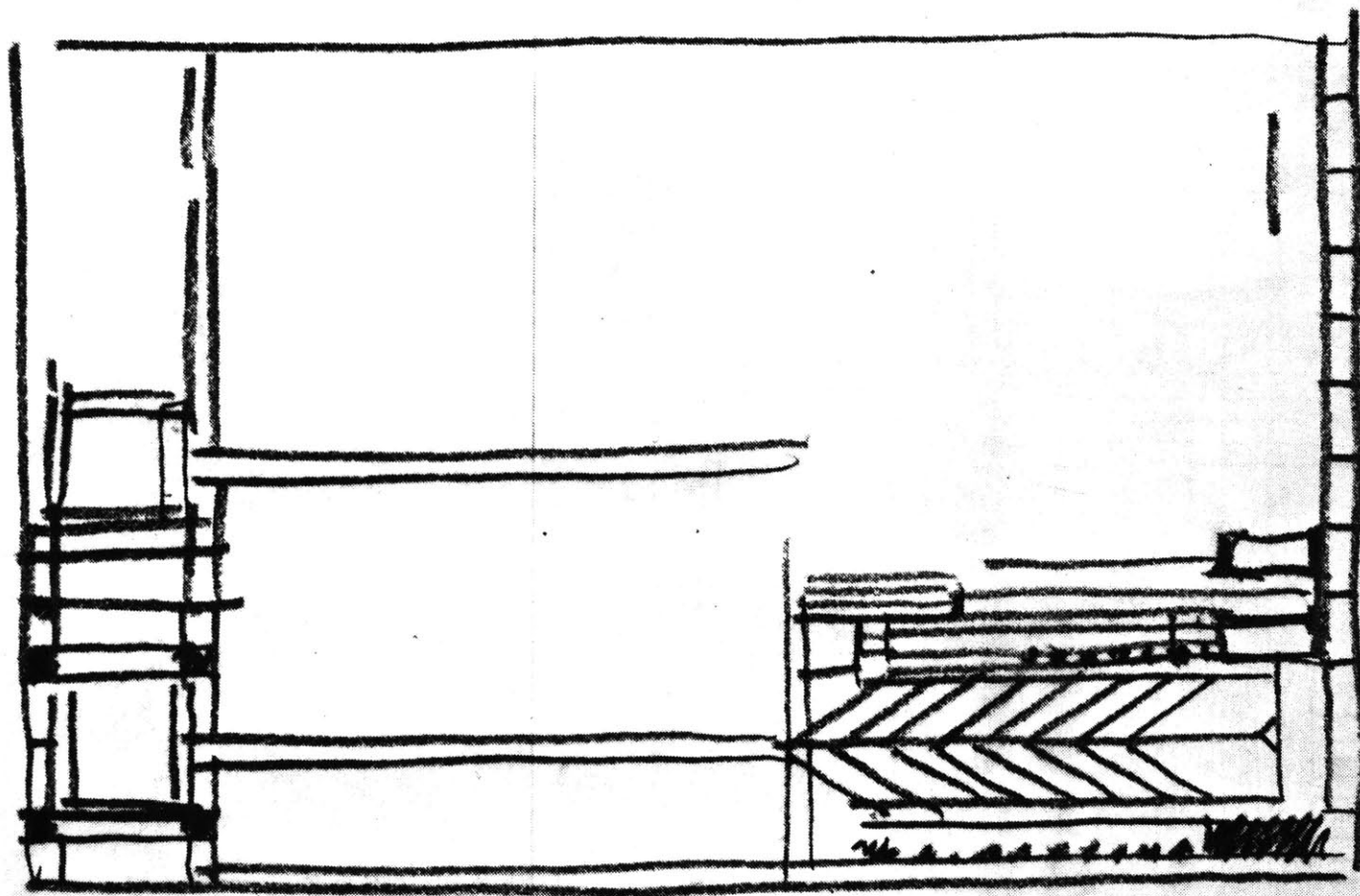
INTRODUCTION TO WRITING: While the design investigation of this thesis was carried out in a systematic way, the written descriptions have followed a more laissez-faire structure. This occurs partially because of the subject matter at hand, but also because one cannot do everything. In this light I have come to appreciate more than ever a statement by Istvan Meszaros concerning Georg Lukacs' concept of dialectic. He stated that Lukacs had set out to find solutions to partial problems but found none. Nevertheless he emerged victorious from the defeat because: "What he achieves is the metamorphosis of his original problems into a qualitatively higher complex of more concrete questions," and "Armed with the graphic awareness that the concreteness of the 'trees and flowers devoid of landscape' is a meaningless concreteness, he is now in a position to attack the all-important issue of 'totality.'" I have been painfully aware of investigating partial problems in this study, and not the gritty issues that sometimes form the ultimate principles of design. Yet the explanation of built interstices seems to be a fitting step in evolving any understanding of a "totality" or "complete building."

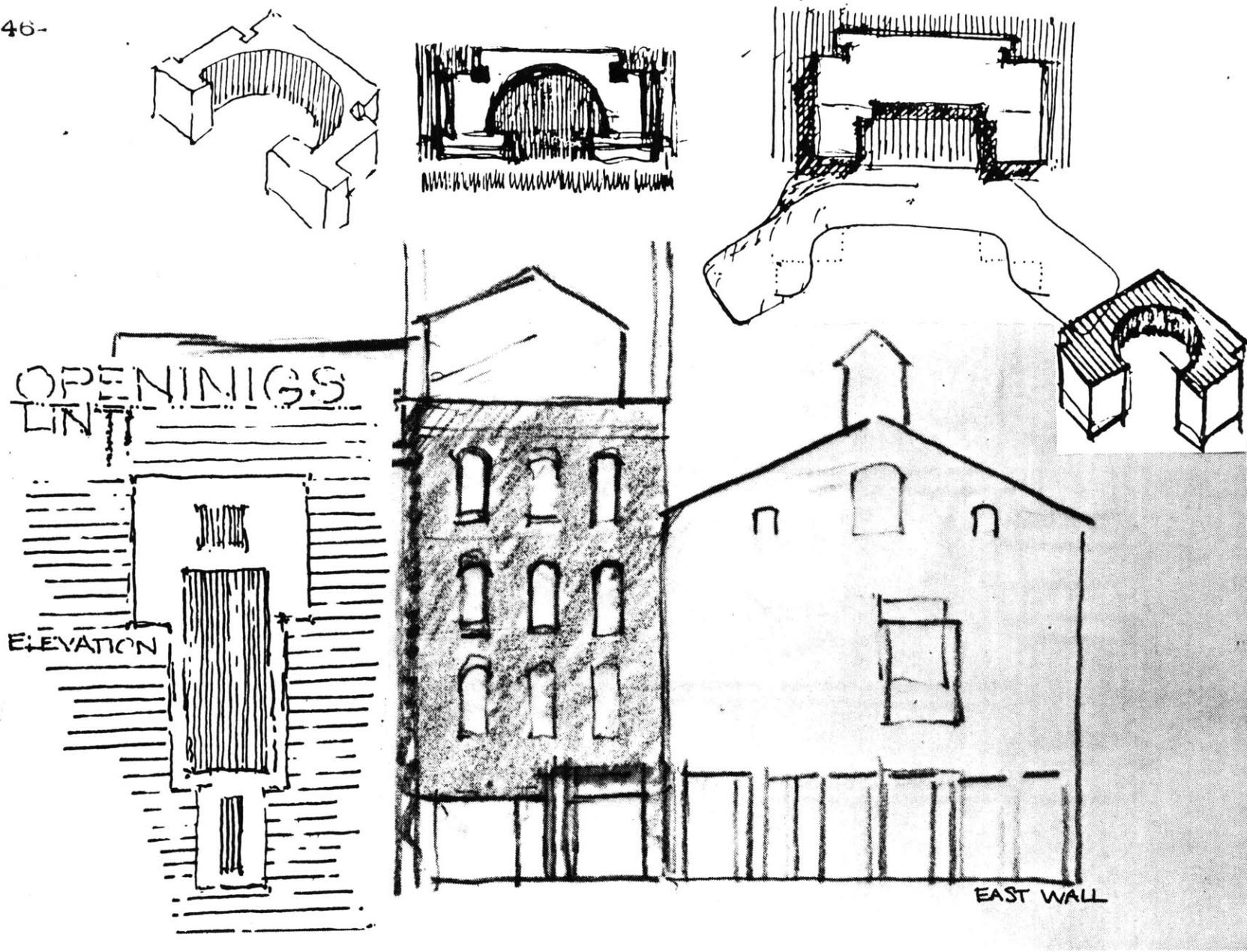


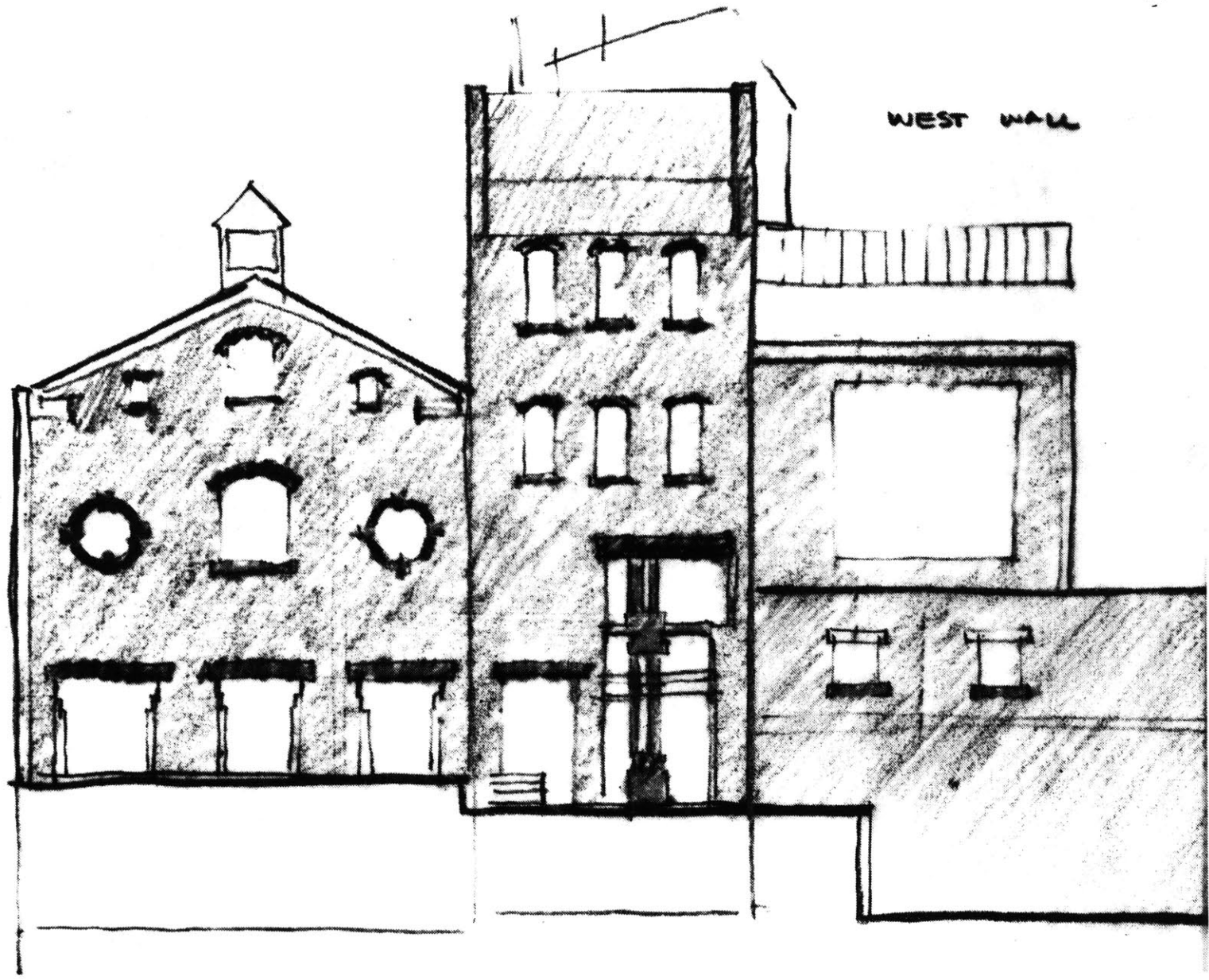


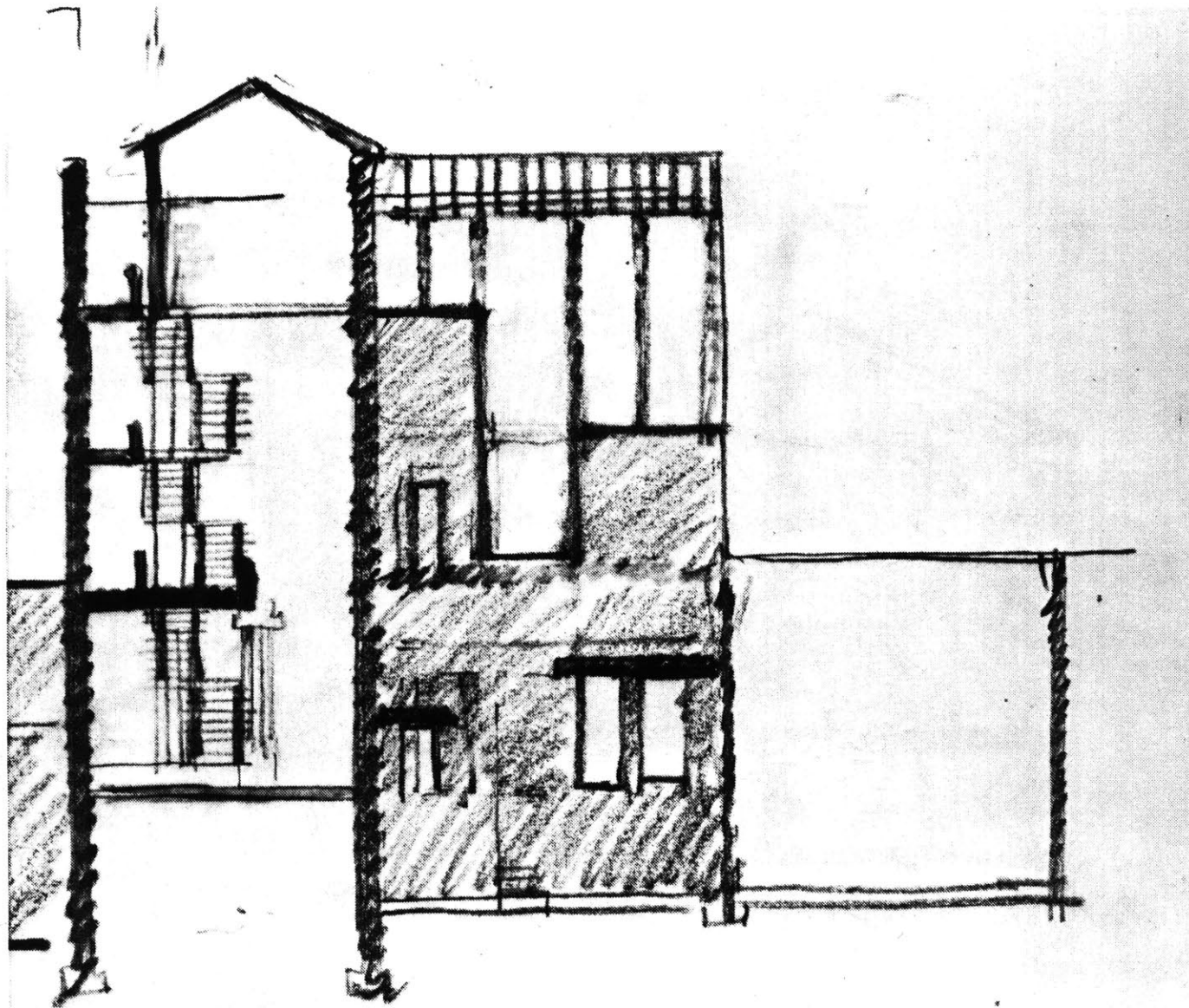


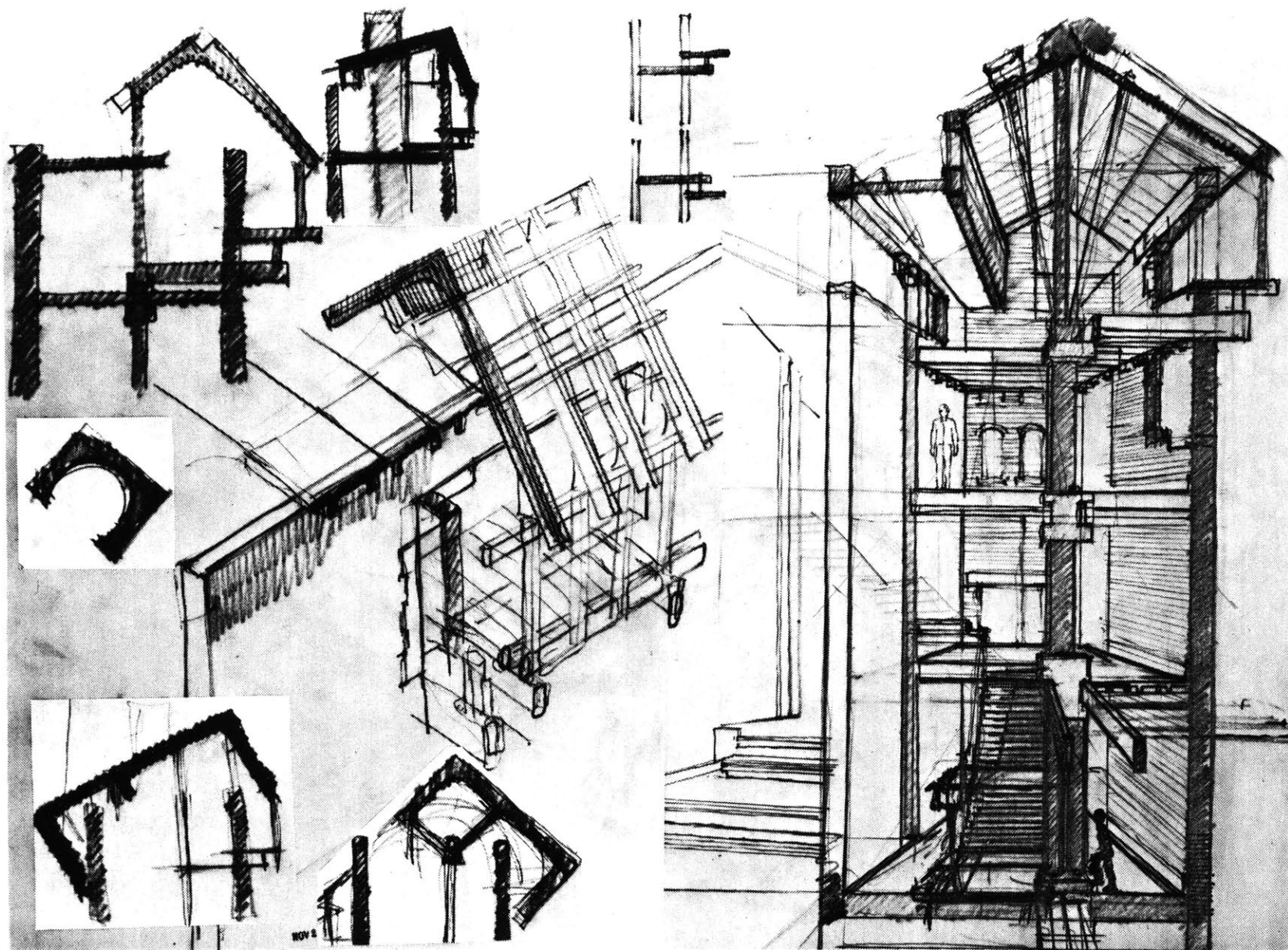


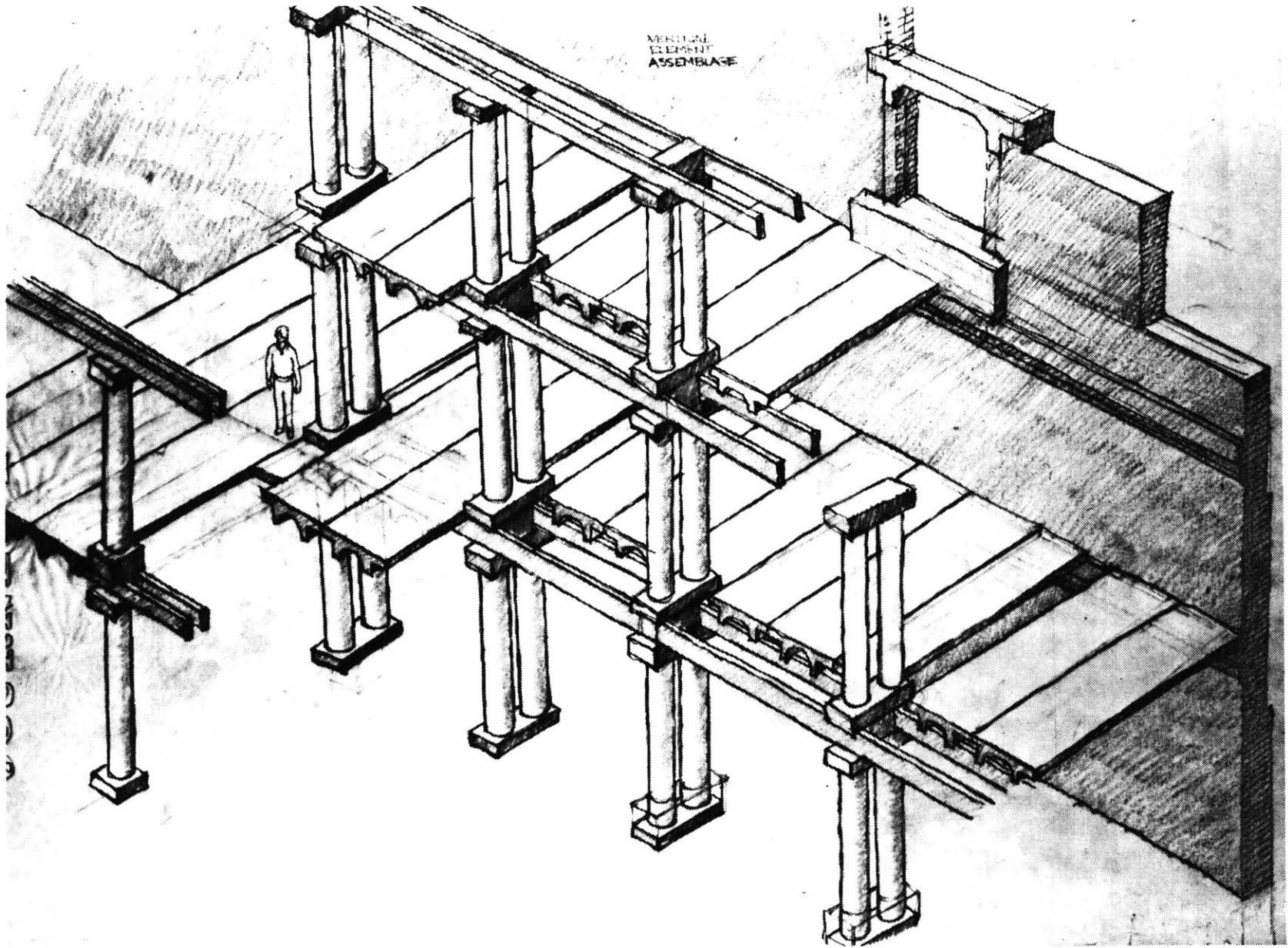








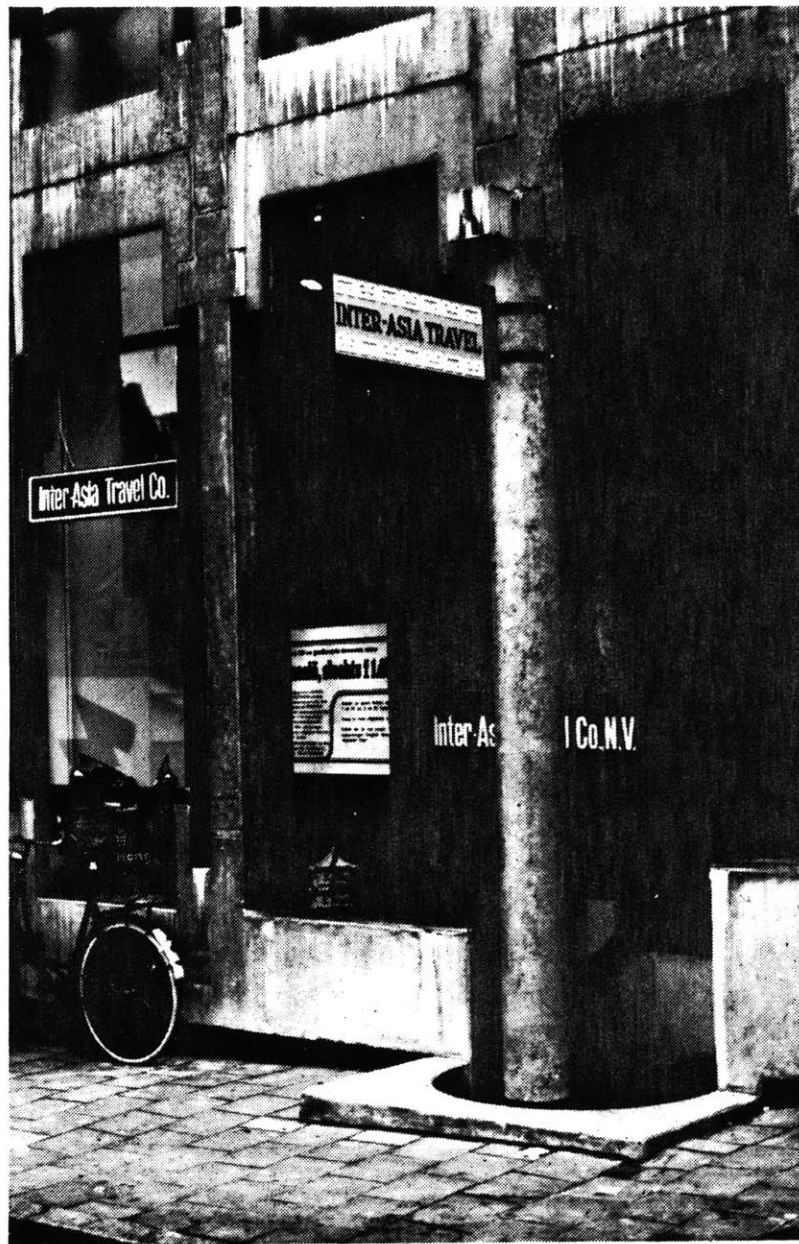




IN-BETWEENS AT SMALL SCALE

*Awareness of the inbetween
creeps into the technology of
construction. It will transform
not only our idea as to what we
should make, but also as to
how we shall make it—
Including our technological
approach. It will be there in
the body, the members and
the joints of whatever we
make.*

*Aldo Van Eyck
Team 10 Primer p.103*



-50-

FIRST STUDY FOR ARTICULATION OF A STRUCTURAL ASSEMBLAGE: This is the first pass at using the double column to help provide some place definition for the path. The columns are normal to the path on a directional base. The capital is similar to the base but indents to carry the main beams in the long direction of the building. Double tee or vaulted planks would be used across the beams. Columns could be poured in place, whereas column bases, capitals, double tees and planks could be precast concrete.

-51-

STRUCTURAL REFERENCE:

-52-

STRUCTURAL ASSEMBLAGE: These sketches show the transition from a round to a rectangular concrete section and eventually to tubular steel.

-53-

RELATION OF STRUCTURE TO REFERENCE LEVEL: A study of variations on joist configuration on planks and relation of column to wall and floor.

-54-

FINAL PASS AT STRUCTURAL ASSEMBLAGE: This study includes the double round column and the rectangular column at upper floors. It finishes at the skylight with tubular steel, returning to the double configuration. After some analysis about how the steel would meet the roof I would probably branch the tubes out to provide a more funicular canopy for the skylight structure.

- O -

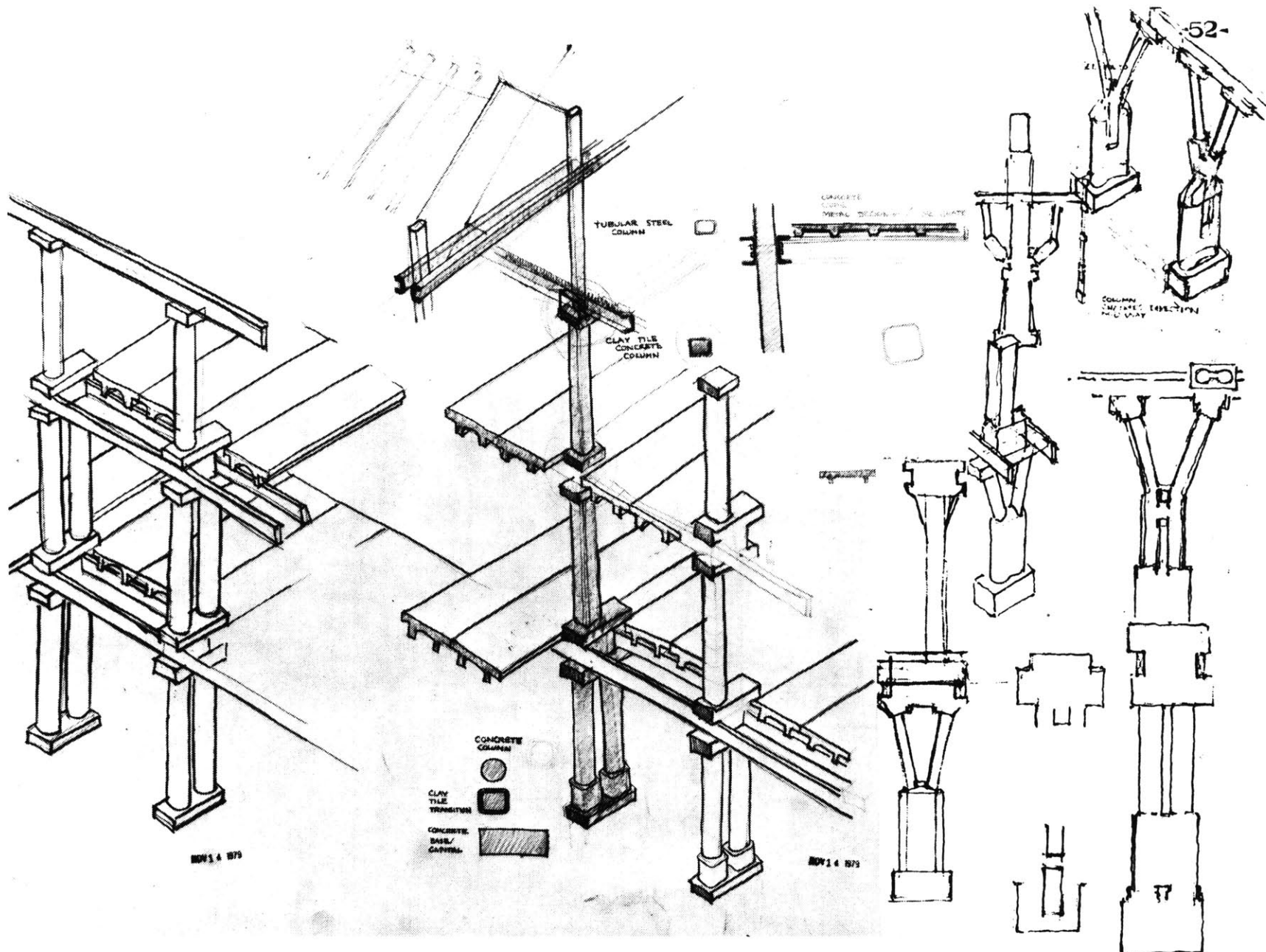
WHERE DOES ONE BEGIN AND ANOTHER END?: Endings and beginnings are the key aspects of the dual phenomena of transitions or in-betweens, as I refer to them. In order to allow an in-between to be articulated, there has to be room. Two physical elements should relate in an overlap or a complete miss, to facilitate the room for articulation. Abutment and tangency of elements are two conditions to avoid for the opposite reason.

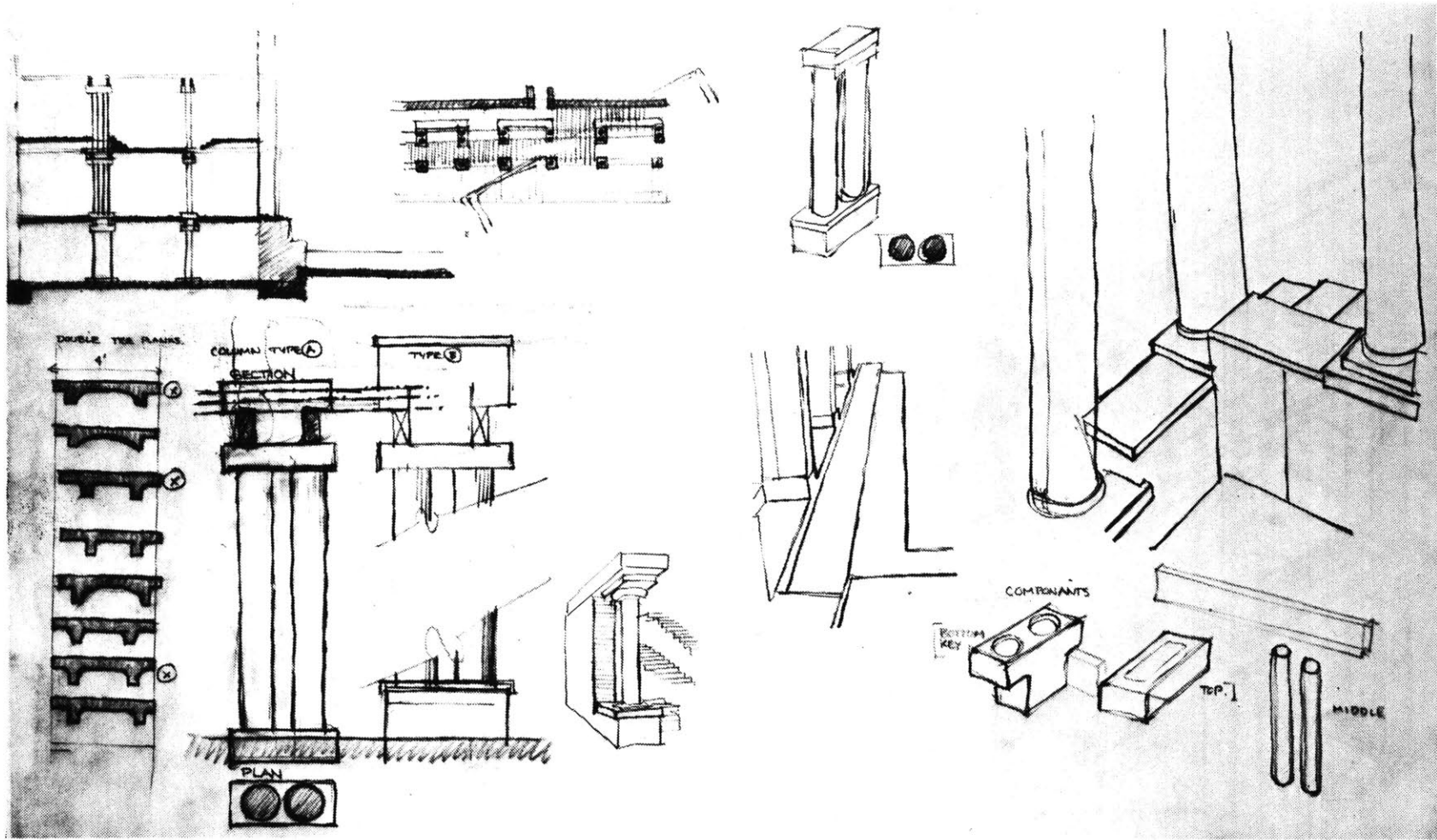
- O -

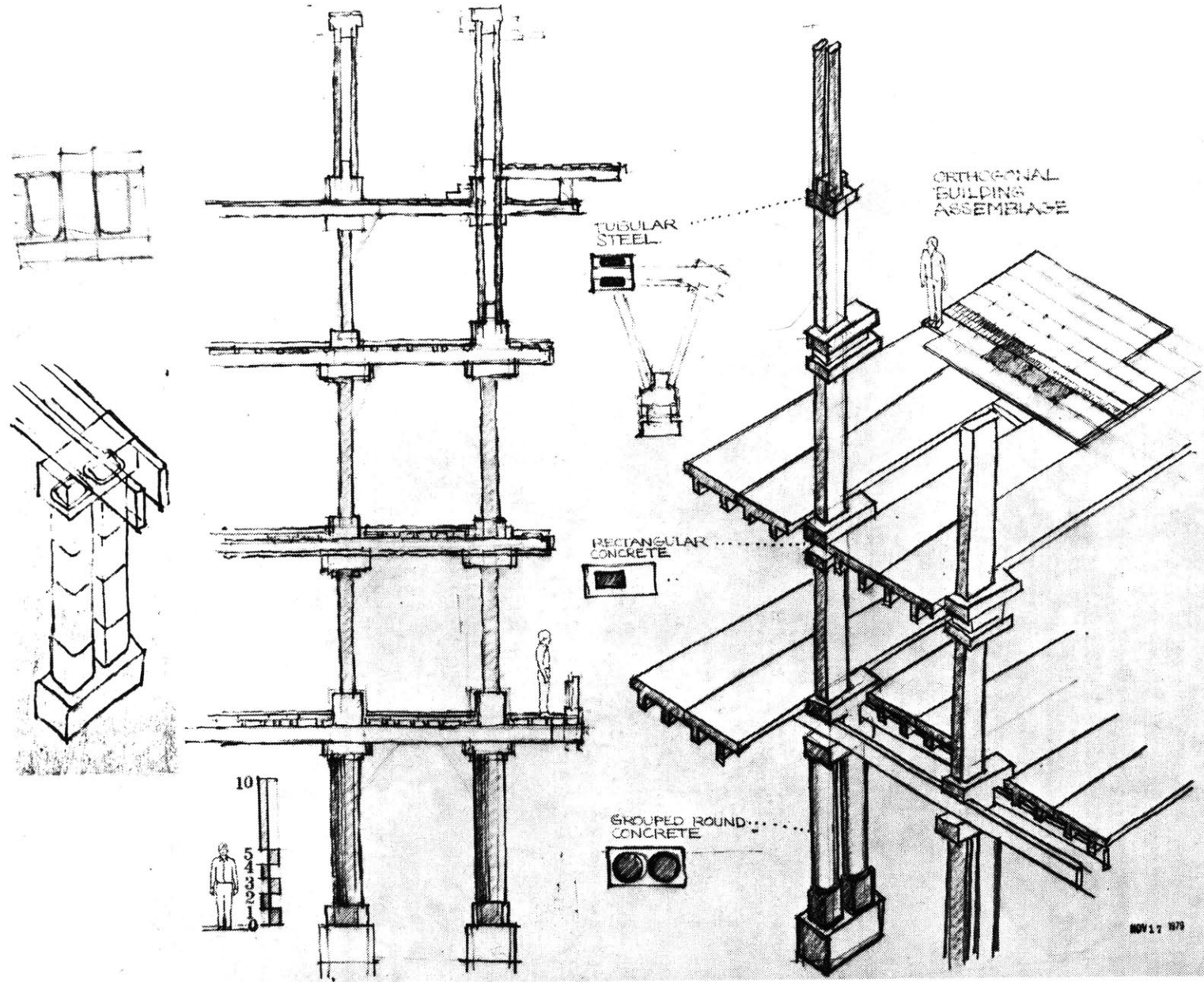
HOW MUCH IS TOO MUCH?: All is too much. In the natural landscape, there does not seem to be a precedent for one phenomenon controlling one hundred percent of any one form. Natural form usually provides the structure for variation at different levels and is comprised of a complex structural mix. Nothing should control any building or even building element one hundred percent of the time.

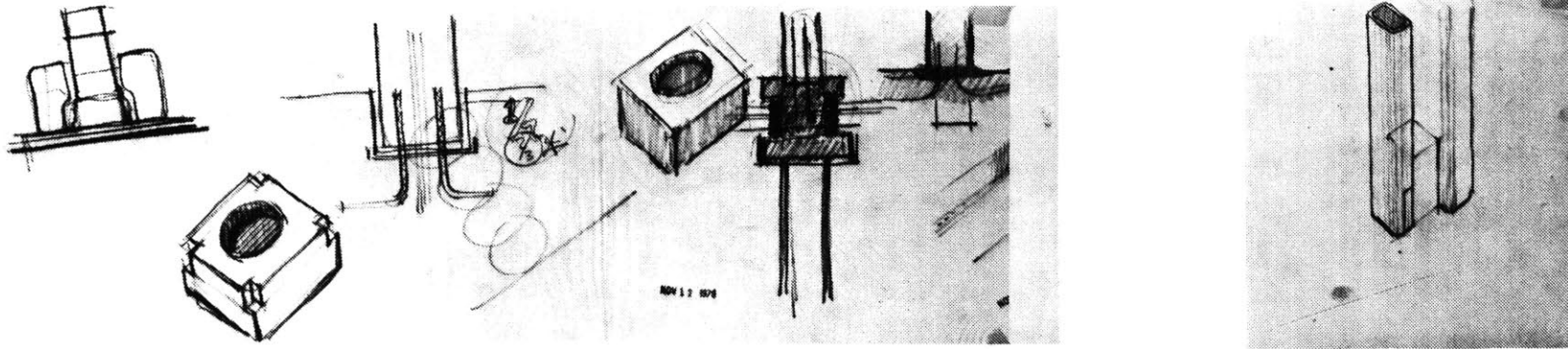
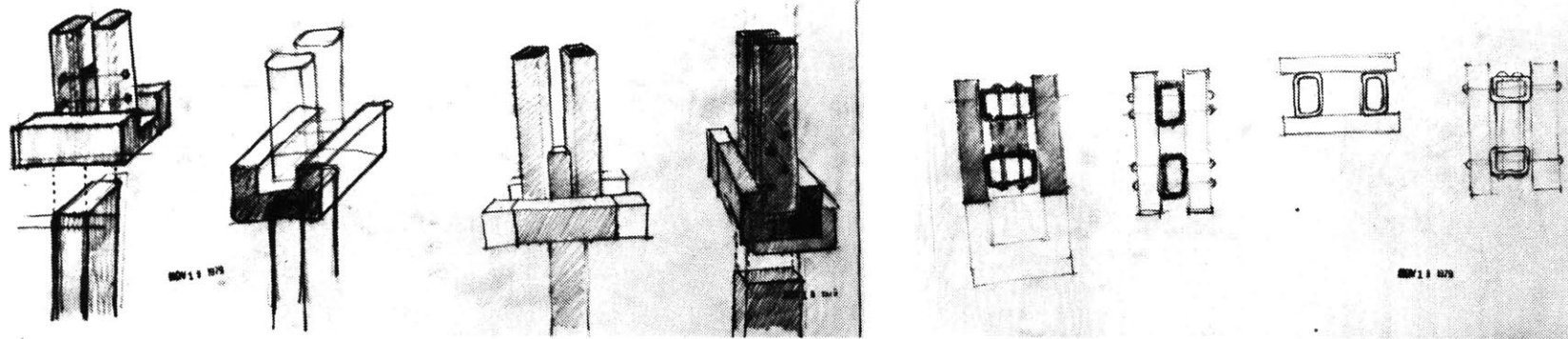
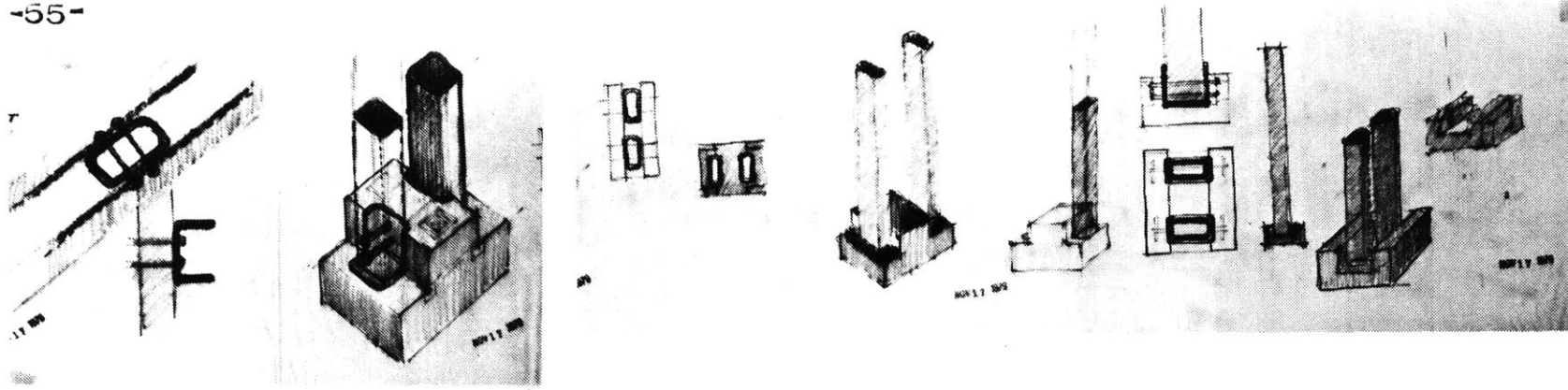
- O -

THIRD INTRODUCTION: The process of articulating this investigation leaves me with questions rather than answers or principles. In one way the questions can be seen as the articulations between the larger expanse of graphic work.









POSITIVE SPACE

When Westerners think and talk about space, they mean the distance between objects. In the West, we are taught to perceive and to react to the arrangements of objects and to think of space as "empty." The meaning of this becomes clear only when it is contrasted with the Japanese, who are trained to give *meaning* to spaces—to perceive the shape and arrangement of spaces; for this they have a word, *ma*. The *ma*, or interval, is a basic building block in all Japanese spatial experience.

Edward T. Hall
The Hidden Dimension p.153

EMPTYNESS, VOID, SPACE

Without references for position and extension, the shock and impact of the vast realm of the incomprehensible, infinitely large will negate space and activate the experience of "nothing", accompanied by anxiety, fear and dread, because what is experienced is a "void" or a "vacuum".

I. Rice Pereira
The Nature of Space

-55-

STUDIES FOR CONNECTION OF TUBULAR STEEL TO CONCRETE

-56

FINAL CROSS SECTION

-57-

REFERENCE FOR THE WALL WHERE THE PATH PENETRATES THE BUILDING

-58-

WEST ELEVATION

-59-

LONGITUDINAL SECTION: This section shows the progression of vertical circulation and internal court.

-60-

FINAL PLAN CONFIGURATION OF JOURNEY 2

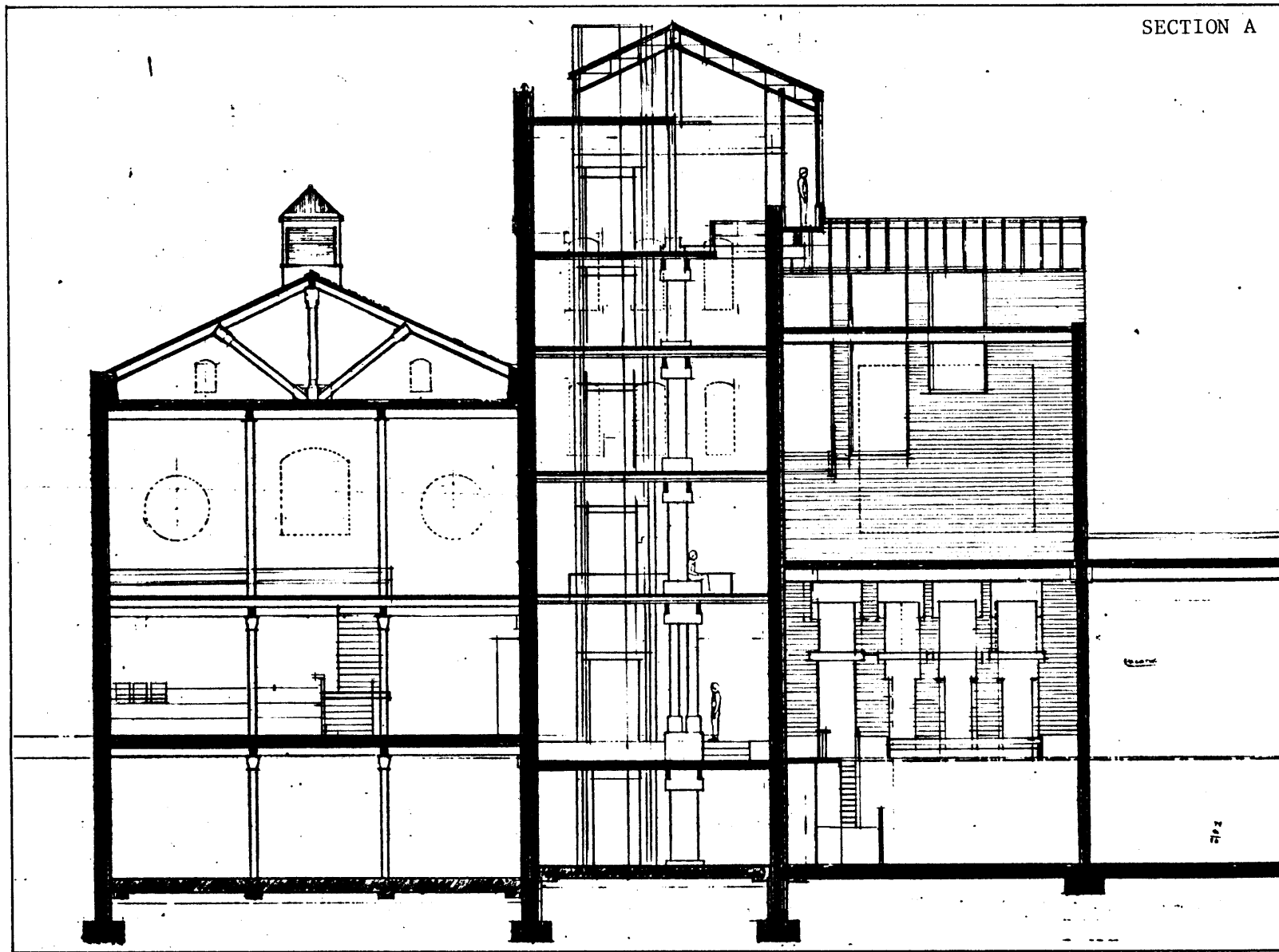
-O-

MA: In Japanese culture there is a more encompassing word for what I have been calling an articulated in-between. It implies all that I have meant by in-between, with the addition of a time dimension. The word is "Ma" and can be defined as the "natural distance between two or more things existing in a continuity." It is also "the space delineated by posts and screens, or the natural pause or interval between two or more phenomena occurring continuously." For this study, a time dimension is an important addition to the spatial interpretation of in-betweens. Because time provides sequential perception it is the key to providing a framework for the continuity of a journey. Ma implies that intervals form a positive relation between objects as part of a spontaneous composition, "subtle and differentiated."

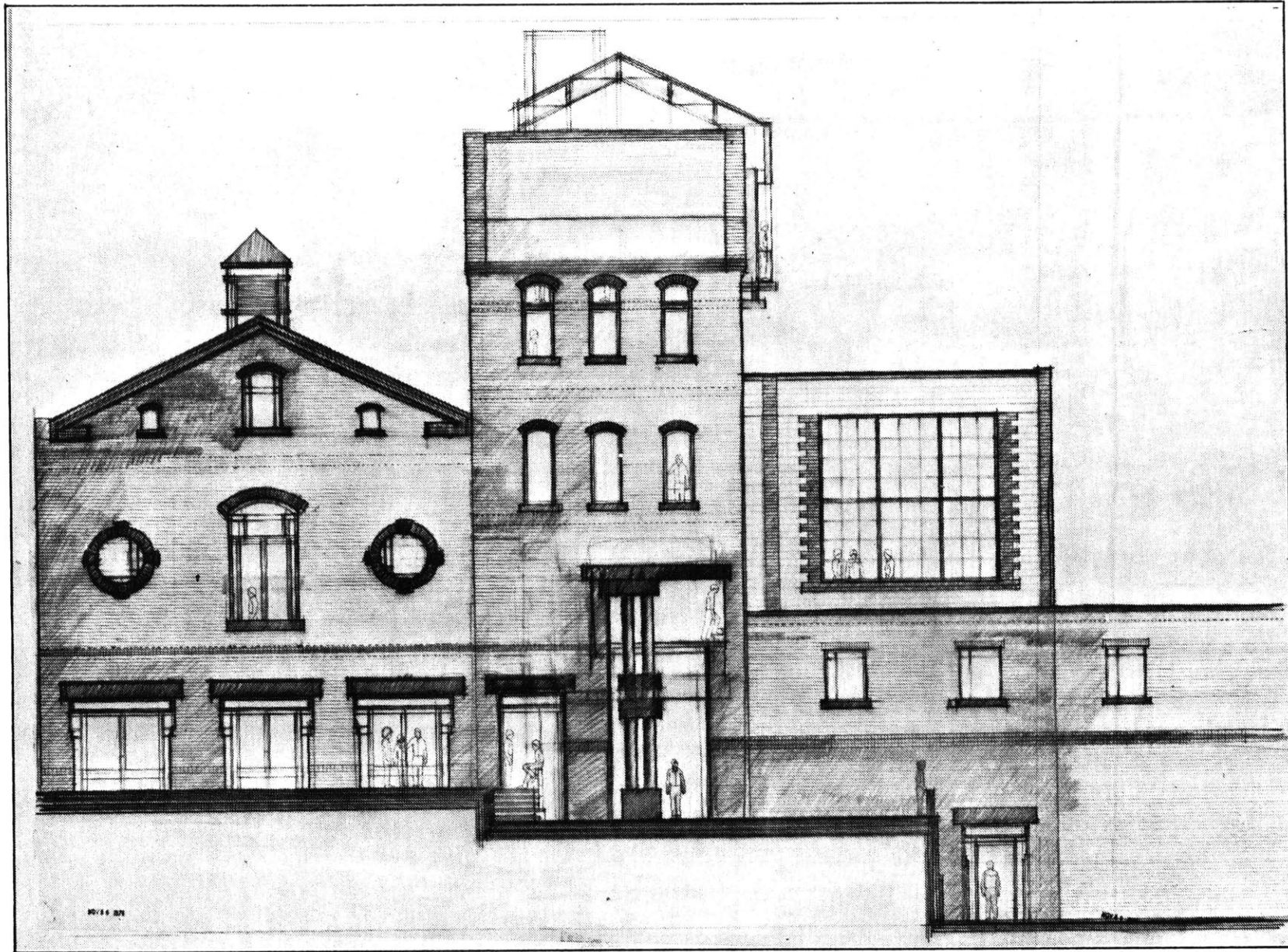
-O-

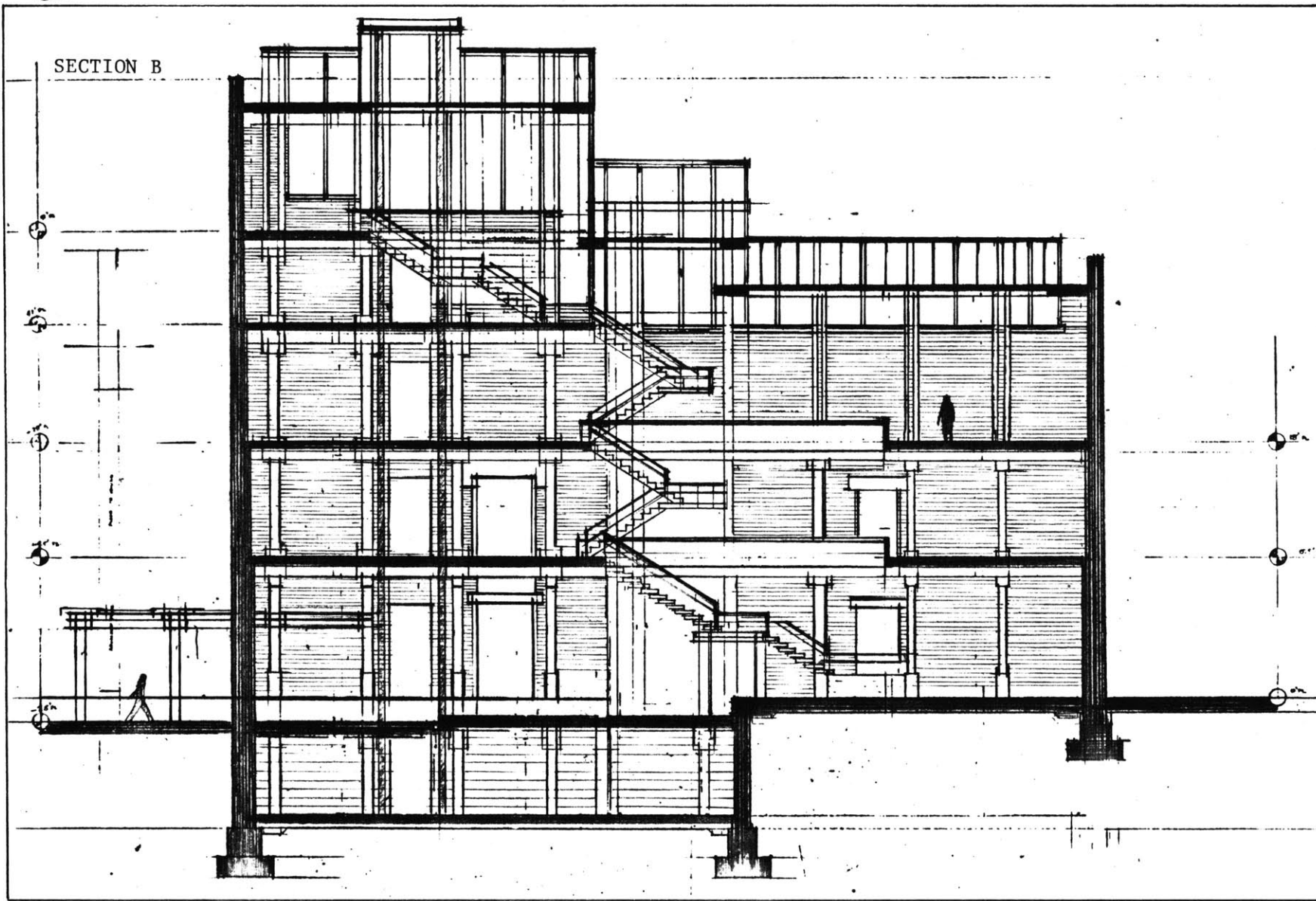
MA IS DIRECTIONAL: Time implies continuity which in turn implies direction. An interval therefore, is dependent on the fact that something precedes it and follows it. Direction should be a discernable quality in the articulation of in-betweens.

SECTION A

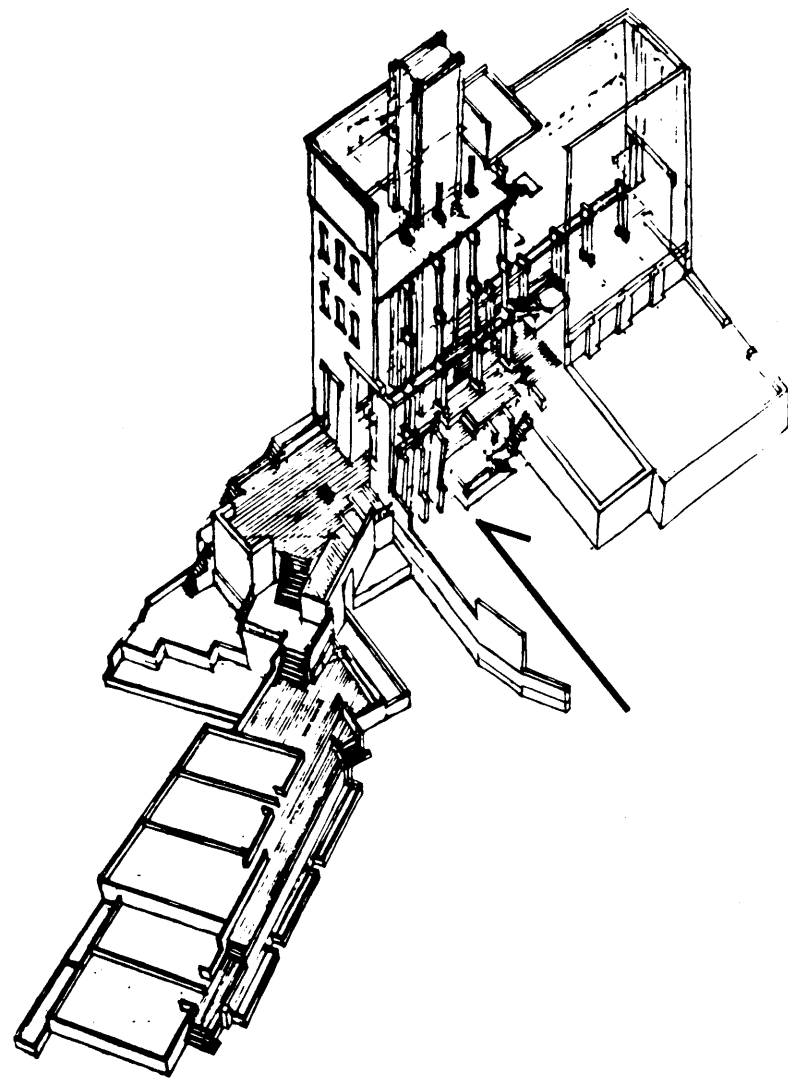


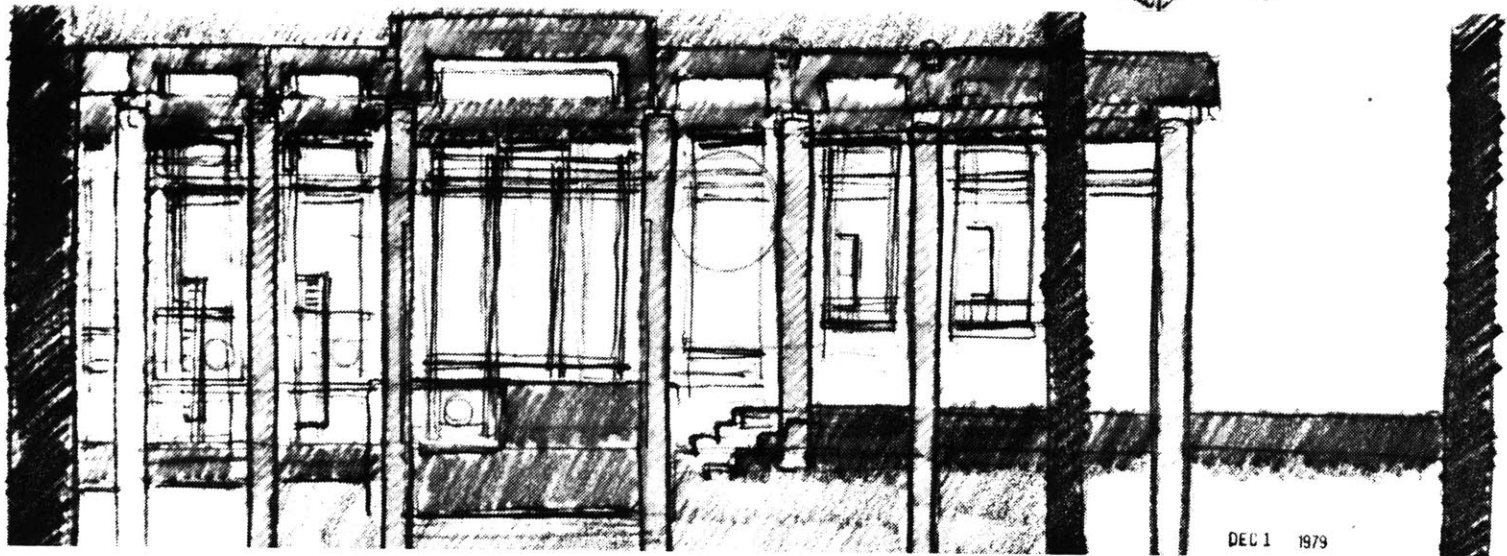
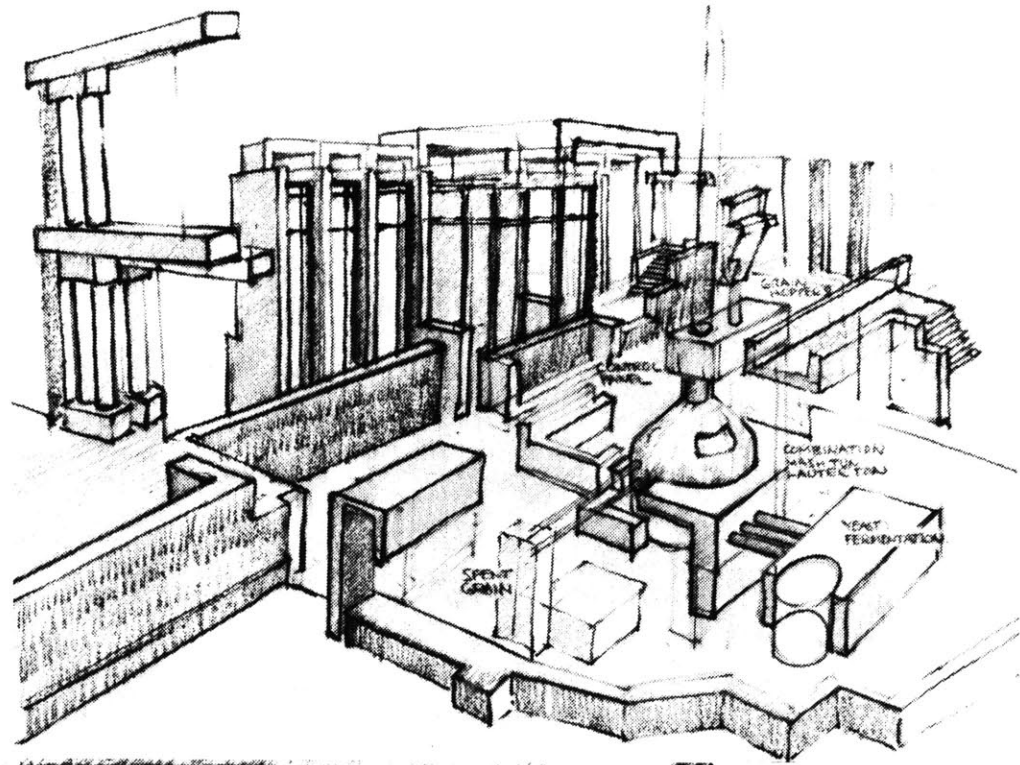






JOURNEY 3





DEC 1 1979

THE PAUSE/'MA'

To linger! If we could but linger again in those places whose beauties never wane; surely we would then be able to endure many difficult hours with a lighter heart, and carry on, thus strengthened, in the eternal struggle of this existence.

Camillo Sitte
City Planning According to
Artistic Principles . p.3

SEQUENCE

Is man able to penetrate the material he organizes into hard shape between one man and another, between what is here and what is there, between this and a following moment? Is he able to find the right place for the right occasion?

*Aldo Van Eyck
Team 10 Primer p.101*

-0-

JOURNEY 3, THE ARTICULATION OF A SMALL OVERLOOK AREA ALONG THE INTERIOR PATH: This sub-journey shows the development of one edge of the interior path which overlooks the new brewery. The study includes a look at the progression of window places and their floor pattern, as well as the design of an individual window.

-61-

SKETCH & ELEVATION OF WINDOW AREA OVERLOOKING BREWERY:

-62-

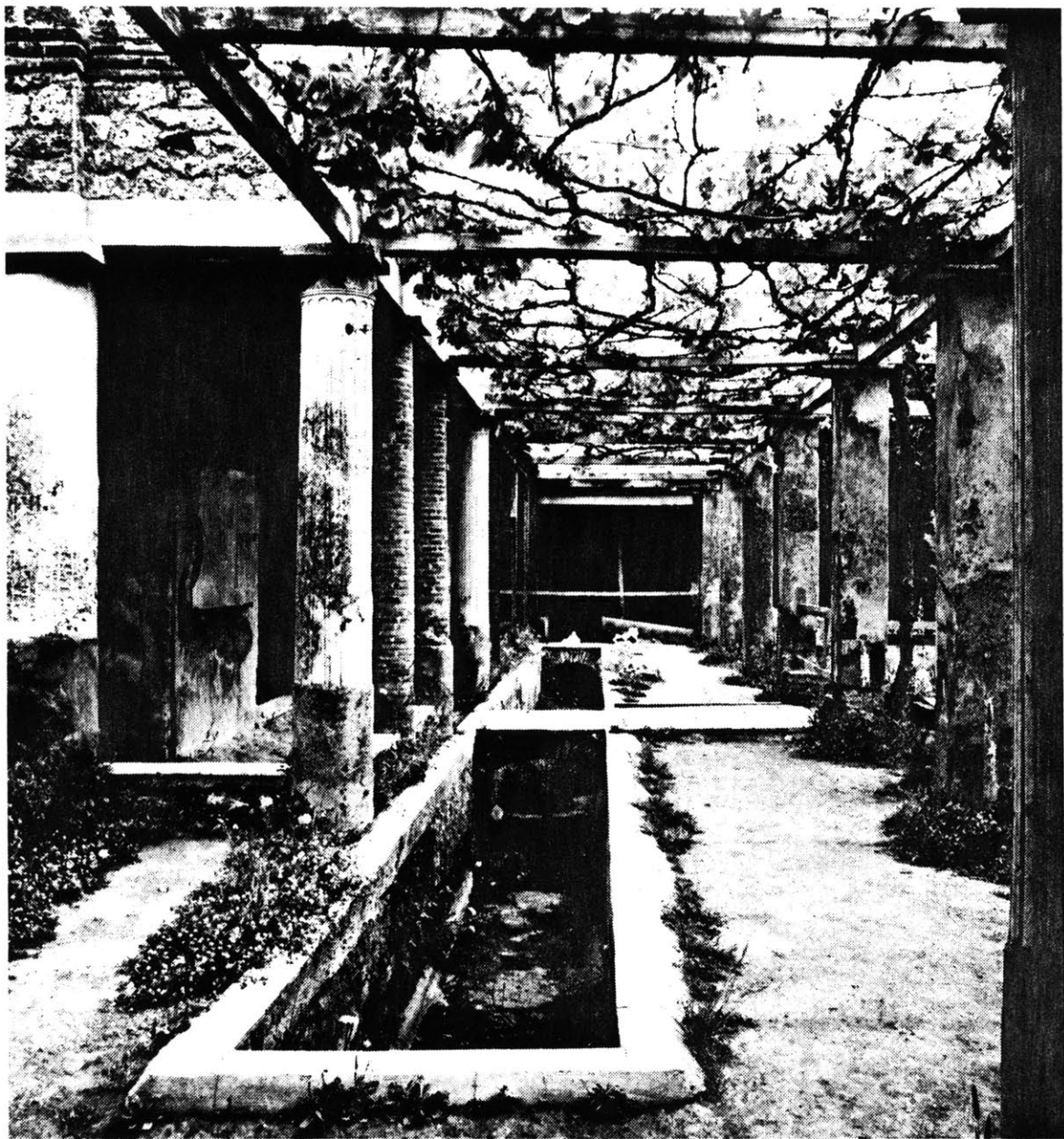
REFERENCE FOR EDGES OF INTERIOR PATH:

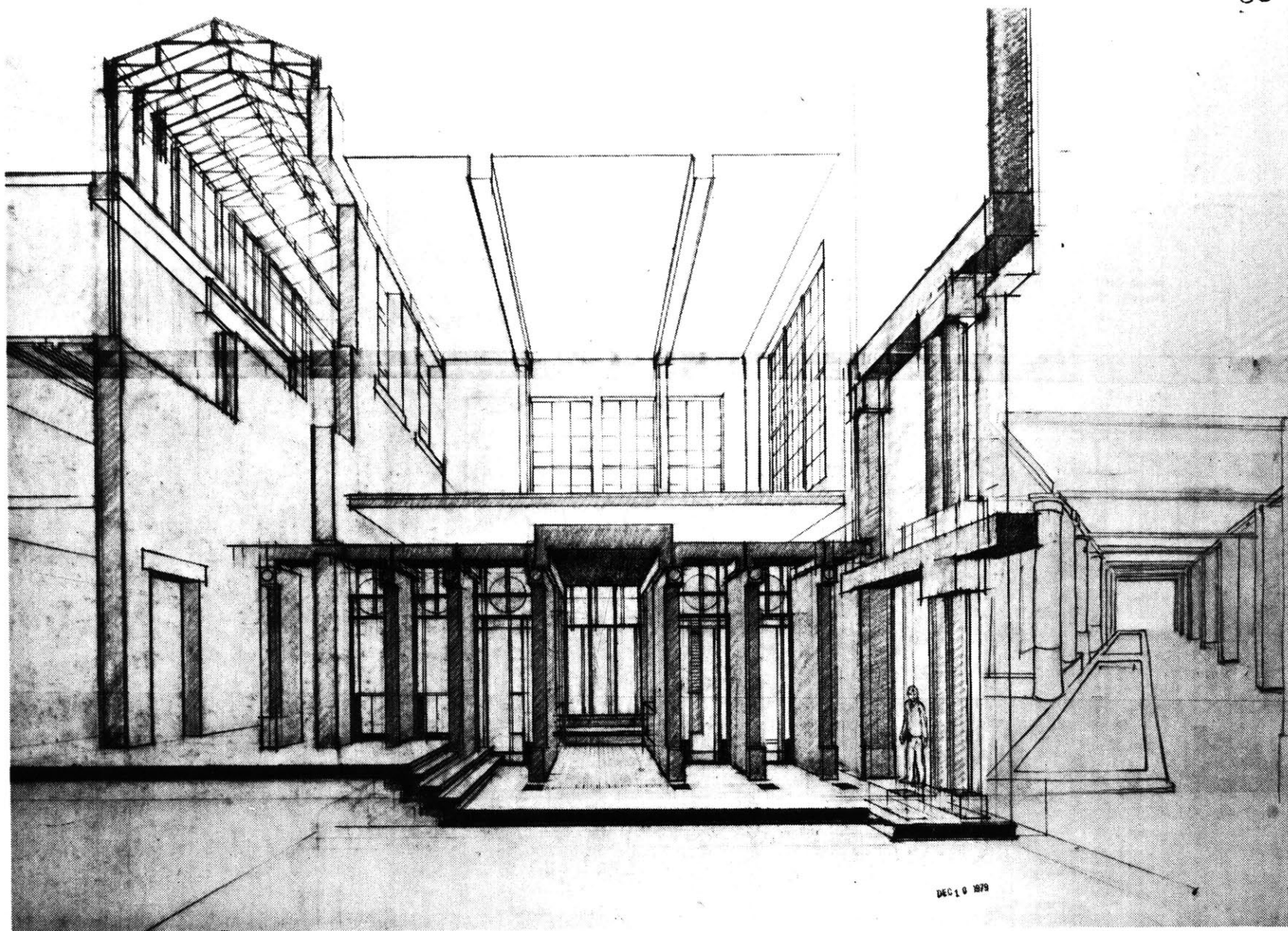
-63-

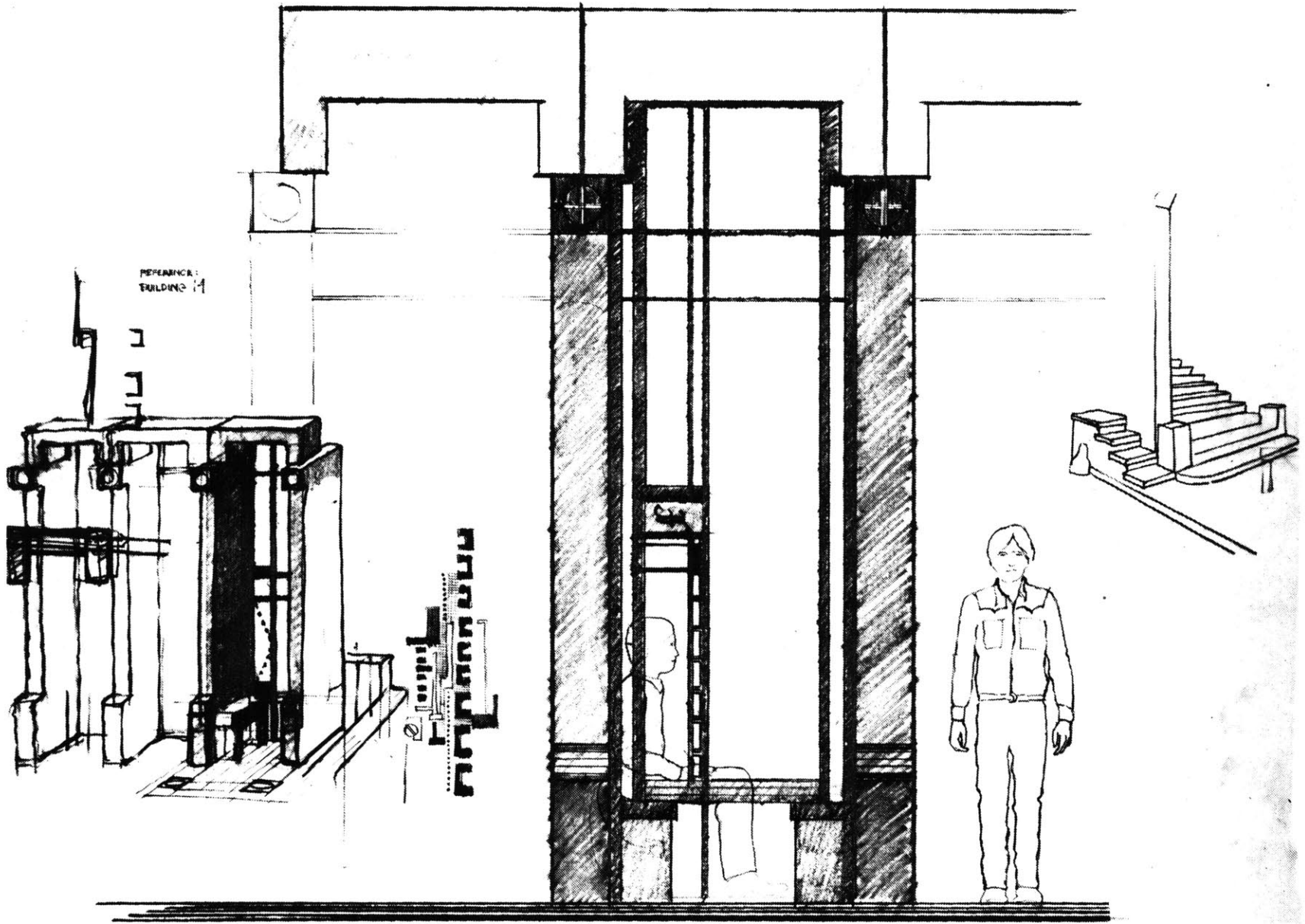
WINDOW AREA IN CONTEXT: This section perspective is cut looking toward the south wall and shows the relation of the overlook to the path.

-0-

THE DIRECTIONAL PAUSE: Comparing the organization of architecture to the structure of music is one way to elaborate on the time element of directionality. A pause in music is really the decisive moment when the nature of passage from one state to another is realized. Similar to a definition of the Japanese Ma (space/time interval), a musical pause provides a way of sensing the moment of movement. In architecture too, the places defined as a result of articulation should be designed in recognition of the directional forces in a pause. The passage from one state to another means that perambulation, as well as place articulation must be made as part of any path.







-64-

INDIVIDUAL WINDOW PLACE:

-65-

WINDOW BY FRANK LLOYD WRIGHT:

-66-

INDIVIDUAL WINDOW PLACE II:

-67-

INDIVIDUAL WINDOW PLACE III: This drawing shows the window place with less articulation in the mullion structure. It also introduces a low lintel to diminish the verticality of each bay.

-68-

ADJACENT FLOOR PATTERN: This drawing shows a paving pattern study for the window place area.

-69-

EDGE REFERENCE FOR WINDOW BANK BY MAYBECK:

-70-

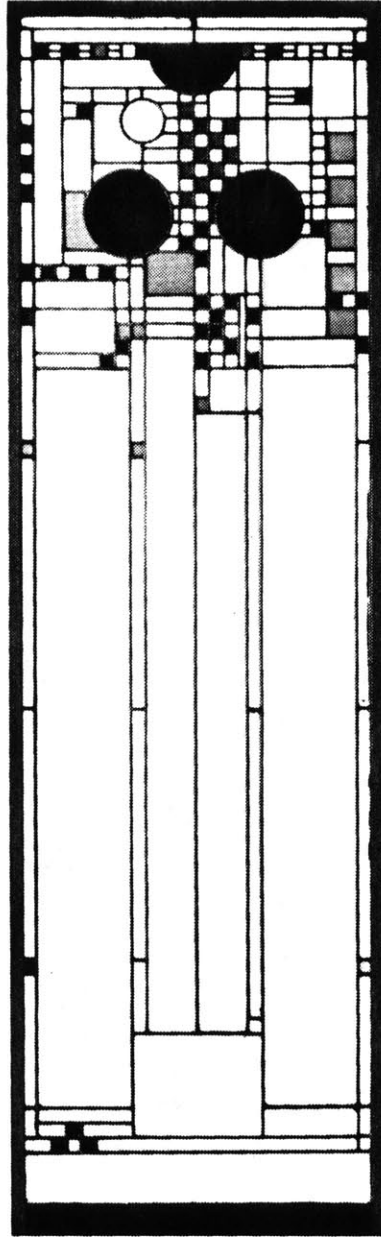
DETAIL OF WINDOW BANK:

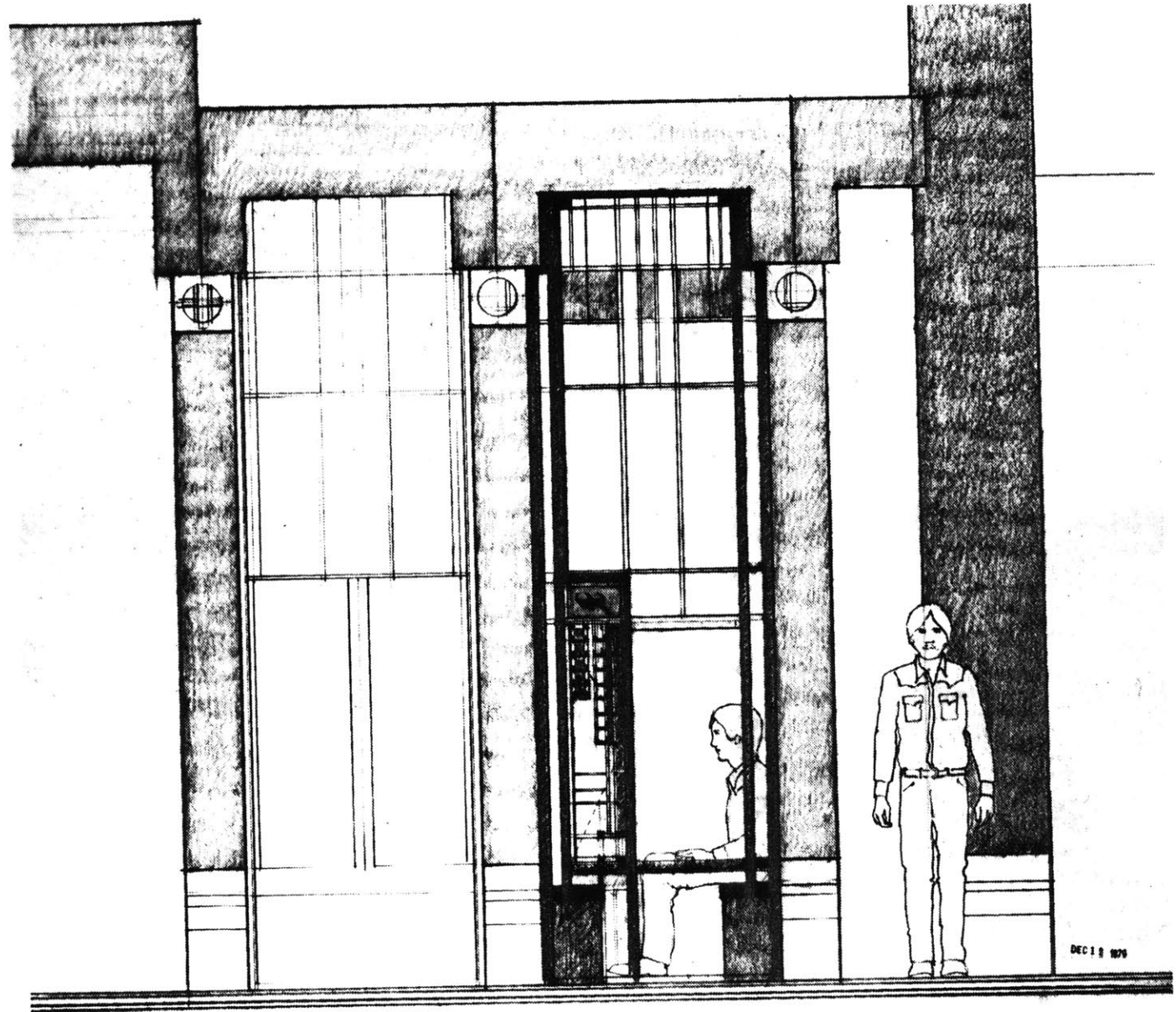
-71-

PLAN OF FLOOR CONFIGURATION IN THE WINDOW OVERLOOK AREA:

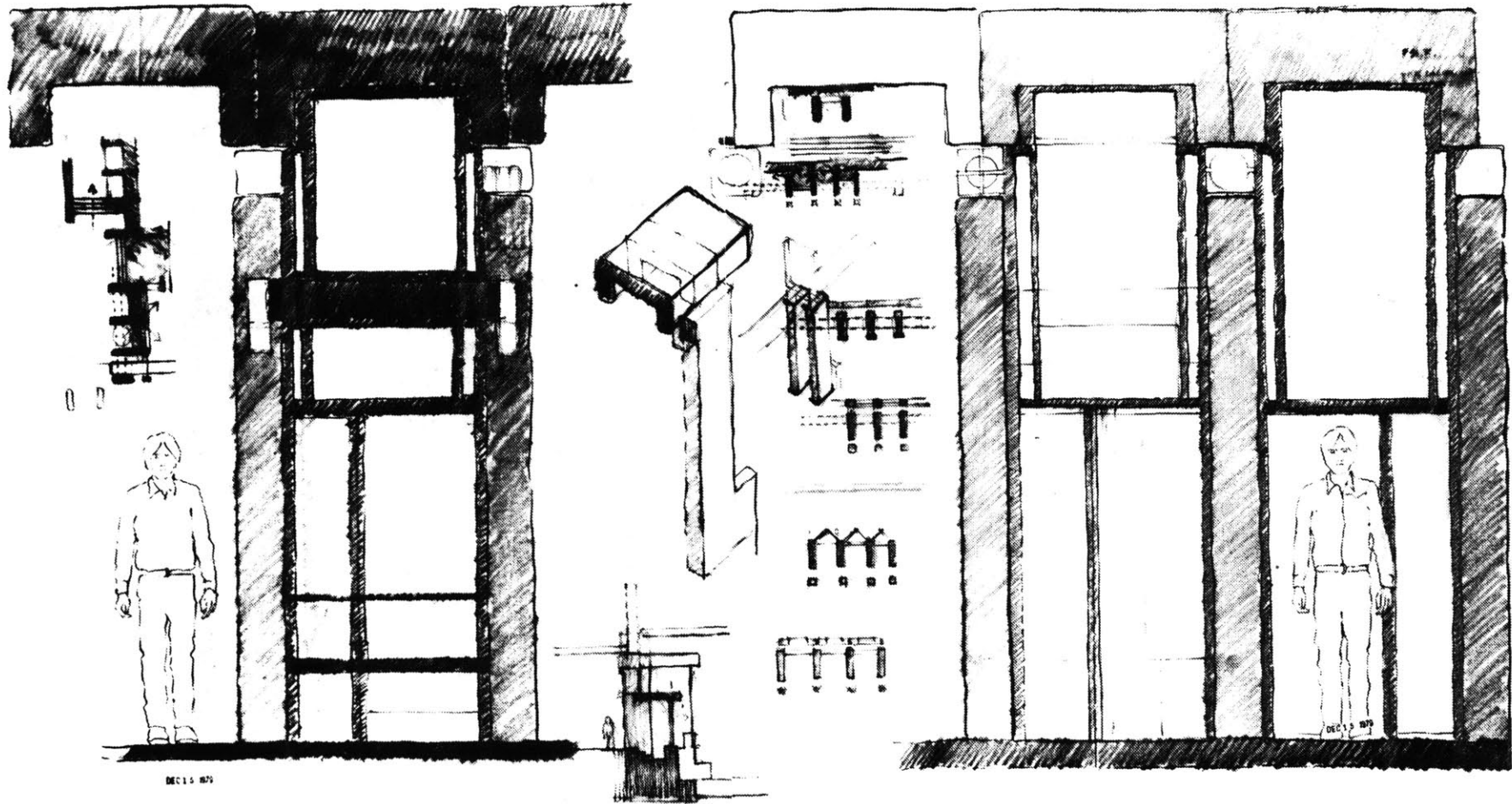
-72-

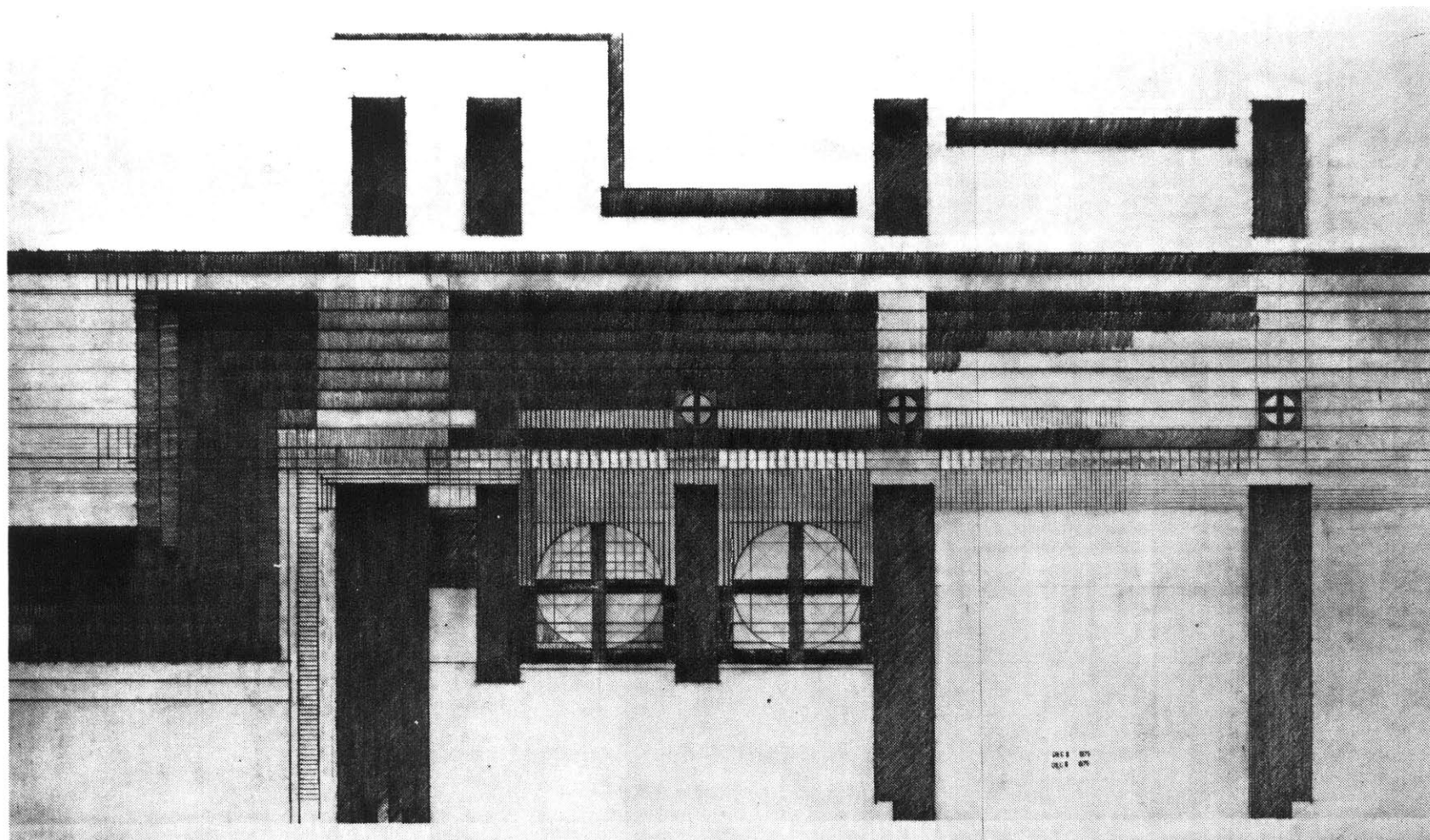
FINAL PARTIAL BIRDS-EYE VIEW OF JOURNEYS:





DEC 1 1979







LINGERING, IN-BETWEEN

Now a man who can tarry is a relaxed man: can encounter himself without anguish, and discover himself well prepared to meet another man: the in-between realm is a frame of mind. The kind of architecture which will ensue from it, presents it and transmits it and transfers what it sees. It is therefore that I identify architecture with the in-between realm—with a frame of mind—I see no other human point of departure than this.

Aldo Van Eyck
'Architectural Design' 11/75 p.679

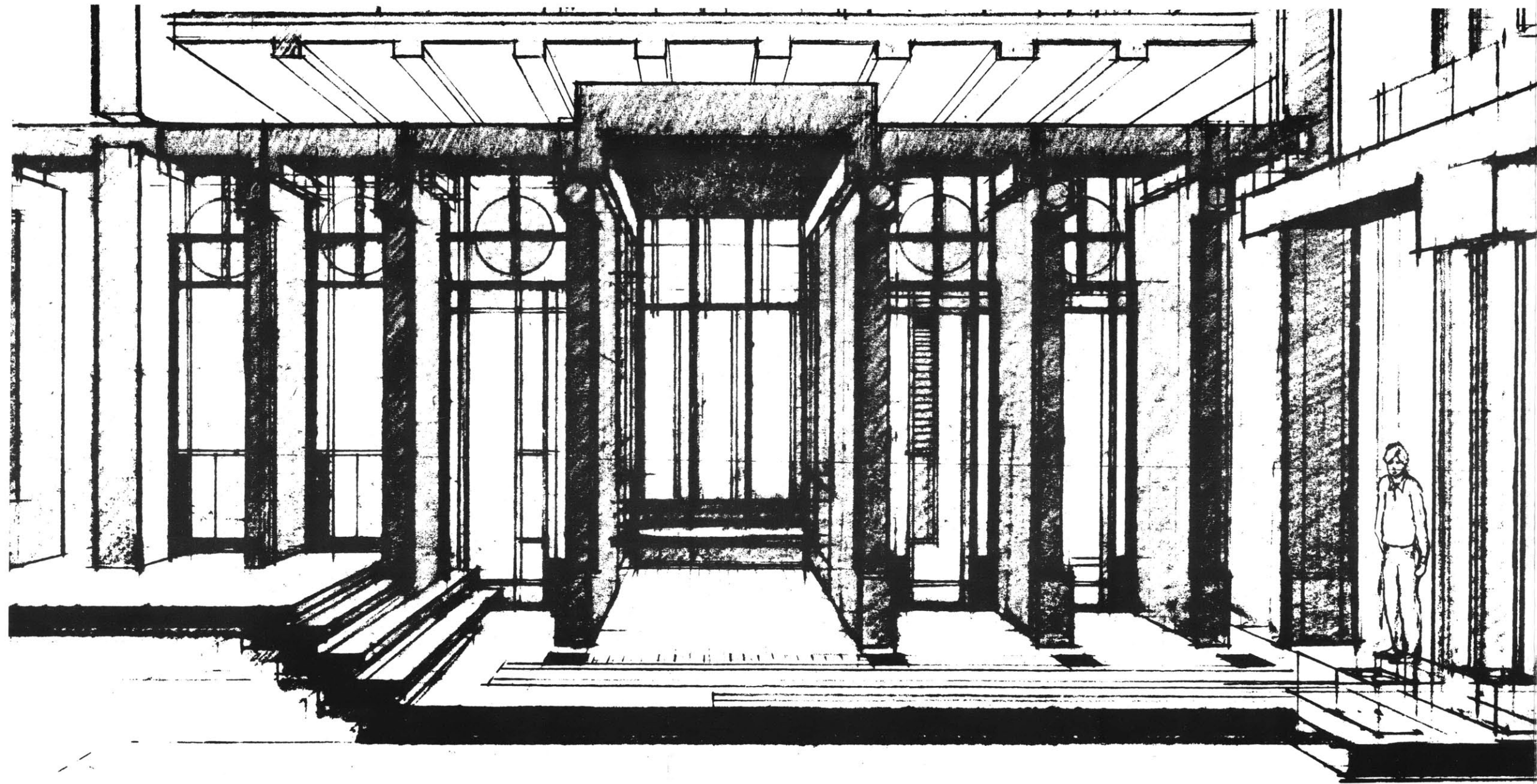
VARIATION AND DIRECTION CHANGE

Each room is a little different according to the view.

Each garden is different according to its relation to the sun; each path differently placed according to the best route from the street; each stair has a slightly different slope, with different steps, to fit just nicely in between the rooms without a waste of space. . . .

Each tile is set a little differently in the ground, according to the settling of the earth.

Christopher Alexander
The Timeless Way of Building p.174




-70-

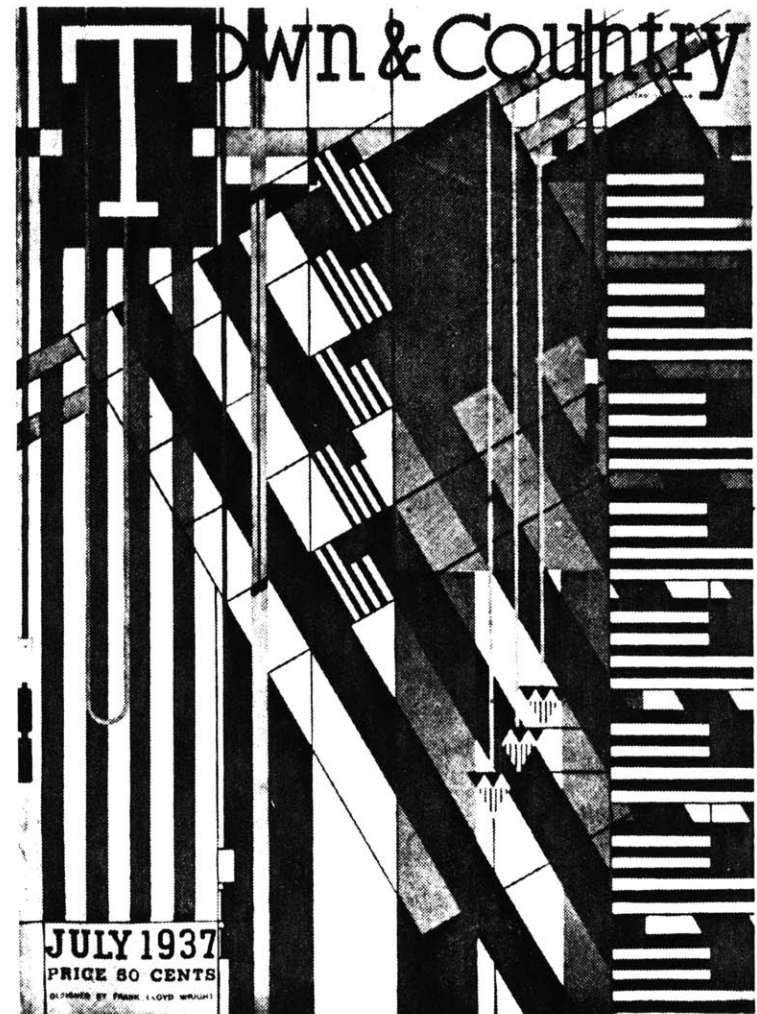
**PLACE
STUDY
JOURNEY 3**

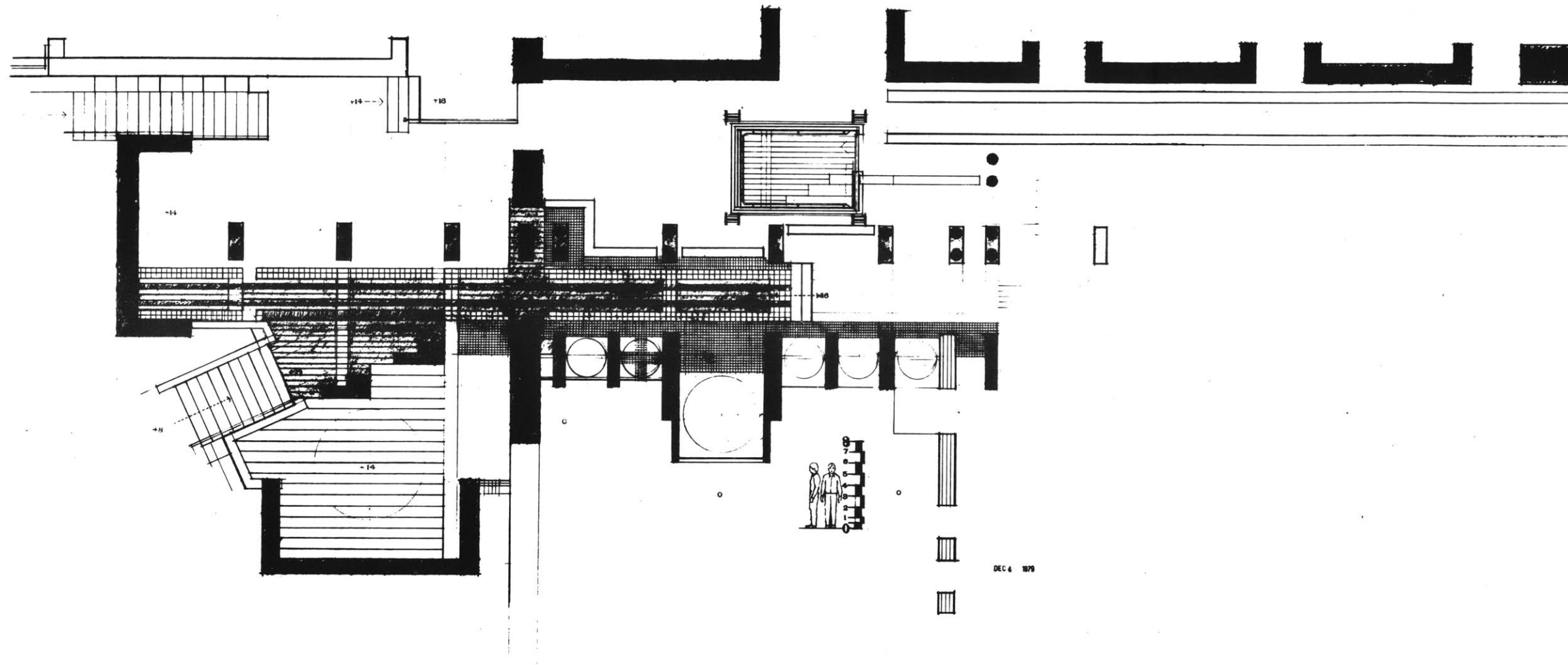
132

STRAIGHTNESS

 VERY special emphasis is placed nowadays on straight thoroughfares of interminable length and particularly on the hairbreadth regularity of public squares. This is, however, quite unimportant, and the whole effort is expended uselessly—at least as far as artistic aims are concerned.

Camillo Sitte
City Planning According to
Artistic Principles p.47





**PAVING
STUDY
JOURNEY 3**

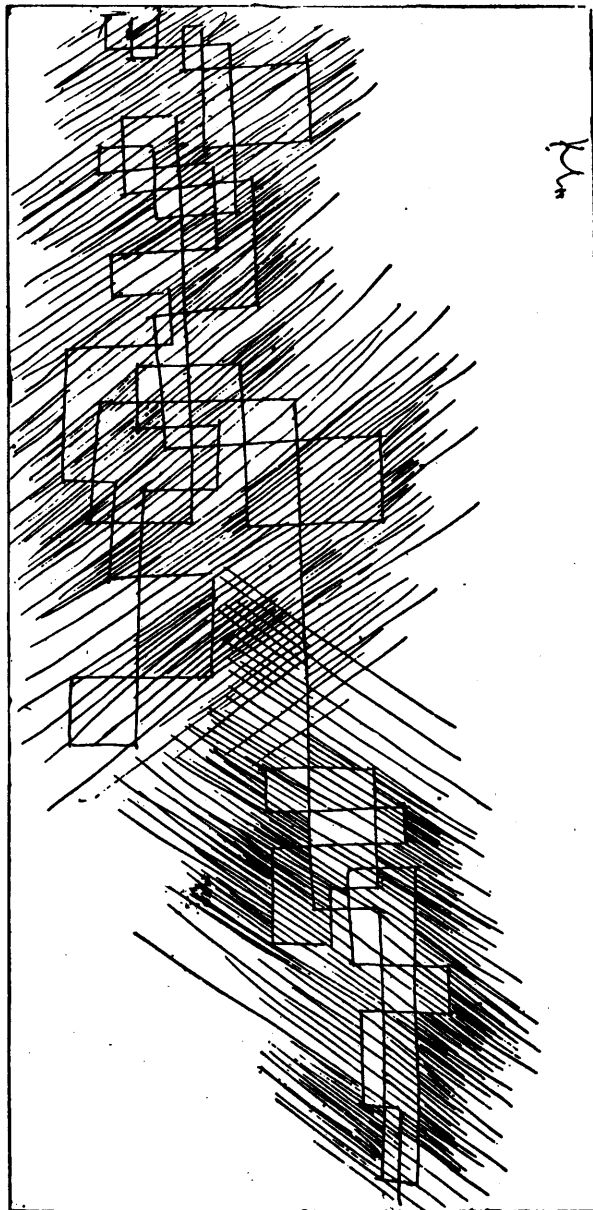
ENDING . . .

Two remarks in conclusion: (1) The completion of a poem may be no matter of addition or excision, or of change in phrasing—though the change of one word may induce very extensive changes in the oppositions and collaborations among the other words. The completion may depend upon questions of sequence among parts otherwise seemingly invariant. Similarly, heightened attention to one word may lead to great changes in the mutual enablements of other words. Meter and rhyme are, of course, a poem's chief controls whereby words can be accorded attention or protected from it: brought forward or distanced.

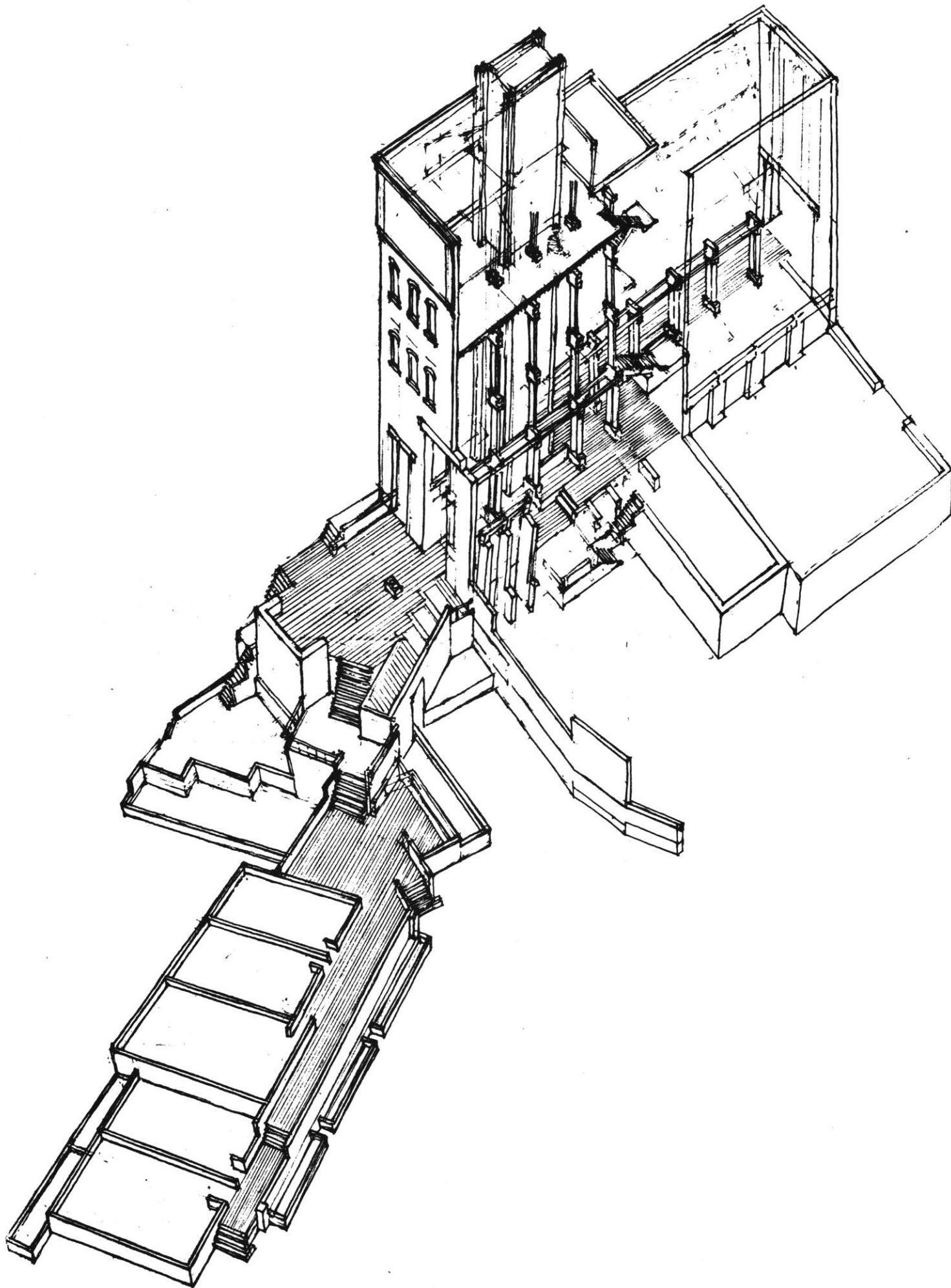
(2) Whatever the author may think himself entitled to do to a poem, the poem itself has the last word. It alone knows its duty. Authors, therefore, in their role as critics, will be wise to pay particular attention to the dangers of misreading their own lines. The poem in its "persuasive continuity"—to use a phrase from Northrop Frye—is one thing. As frozen for critical examination it is another. The examining eye—the descriptive instrument or screen by which it is held stable for observation and appraisal—can and frequently does deform it. The proper moral to draw might be: *Let us not lose the poem in our account of it.* This may free the poem from much interference; but does not deprive it of any help afforded by light reflected from even mistaken critical opinions.

I.A. Richards

'How Does a Poem Know When It's Finished?' p.174



AXONOMETRIC OF THE COMPLETE JOURNEY



IN-BETWEENS

" We put thirty spokes together and
call it a wheel;
But it is on the space where there
is nothing that the utility of
the wheel depends.
We turn clay to make a vessel;
But it is on the space where there
is nothing that the utility of
the vessel depends.
We pierce doors and windows to make
a house; and it is on these spaces
where there is nothing that the
utility of the house depends.
Therefore, just as we take advantage
of what is, we should recognize
the utility of what is not."

Lao Tse
In Architecture: Form, Space and Order
by Francis Ching

BEGINNING AGAIN

Nothing you do is just what you think.

*Maurice Smith
Design Studio at MIT*

LAST INTRODUCTION: There is really not a definitive ending to the process that I have been using, because the investigation constantly focusses on new ideas as the scales of the study area change. Yet the underlying assumptions for making form decisions remain the same at different scales. As an ending, or more accurately, before going on to new territory, I thought it might be appropriate to spell out some of these assumptions.

ASSUMPTIONS: (1) That building is ordering/organizing. (2) That the natural landscape has an organization which is directional and the quality of direction is an important condition for "organic order." (3) That building is part of the landscape and not against or fighting it. Thus, buildings should have qualities which are continuous (directional) with the landscape. (4) That the way we sense directionality is through on-going territory or traces of familiar, similar or related stimuli/form. (5) That built landscape requires the combination of interior and exterior place making (privacies) as well as ambulatory territory; and that this combination is delicately balanced in a field organization. (6) And that spaces in-between elements of the field take on the characteristics of each adjoining element, to form overlapping and interlocking relations.

ENDING: 'None of these ideas are mine', yet they have been carefully chosen to show my inclinations, and their particular arrangement communicates the processes by which I design. Someday, I hope to look upon their development with a smile.

APPENDIX

SITE INFORMATION

The Haffenreffer Brewery site in Jamaica Plain acts as the context for my thesis. It is a complex of eighteen buildings having a total floor area of about 150,000 square feet. The buildings were abandoned by the company in the 1960's and have since been used for storage and small transient business space, but otherwise left vacant. In recent years, the Jamaica Plain Neighborhood Development Corporation has taken an interest in the group of buildings to study the feasibility of their re-use as a mixed-use project including housing, commercial and office space as well as the reintroduction of a small brewery. The program developed thus far by the N.D.C. was the departure point for my thesis. Taking an aspect of the program and developing its design was the main premise.

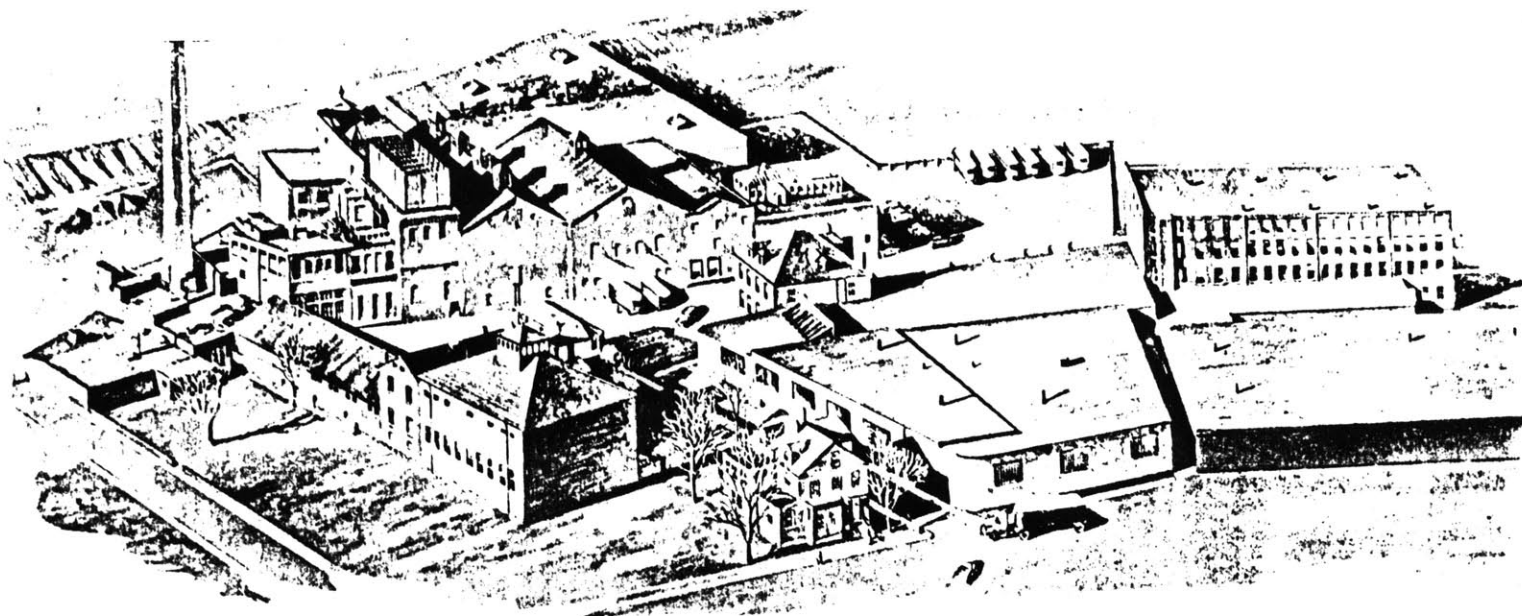
I have developed about 15,000 square feet within that program. Of the 15,000 square feet, about 3,000 square feet is unheated or exterior space. The thesis program includes; a major entry and service access to the whole site, a small brewery combined with educational facilities concerning the brewing process and history in Jamaica Plain, and an associated pub/restaurant.

A rough breakdown of the program and illustrations of the site follow:

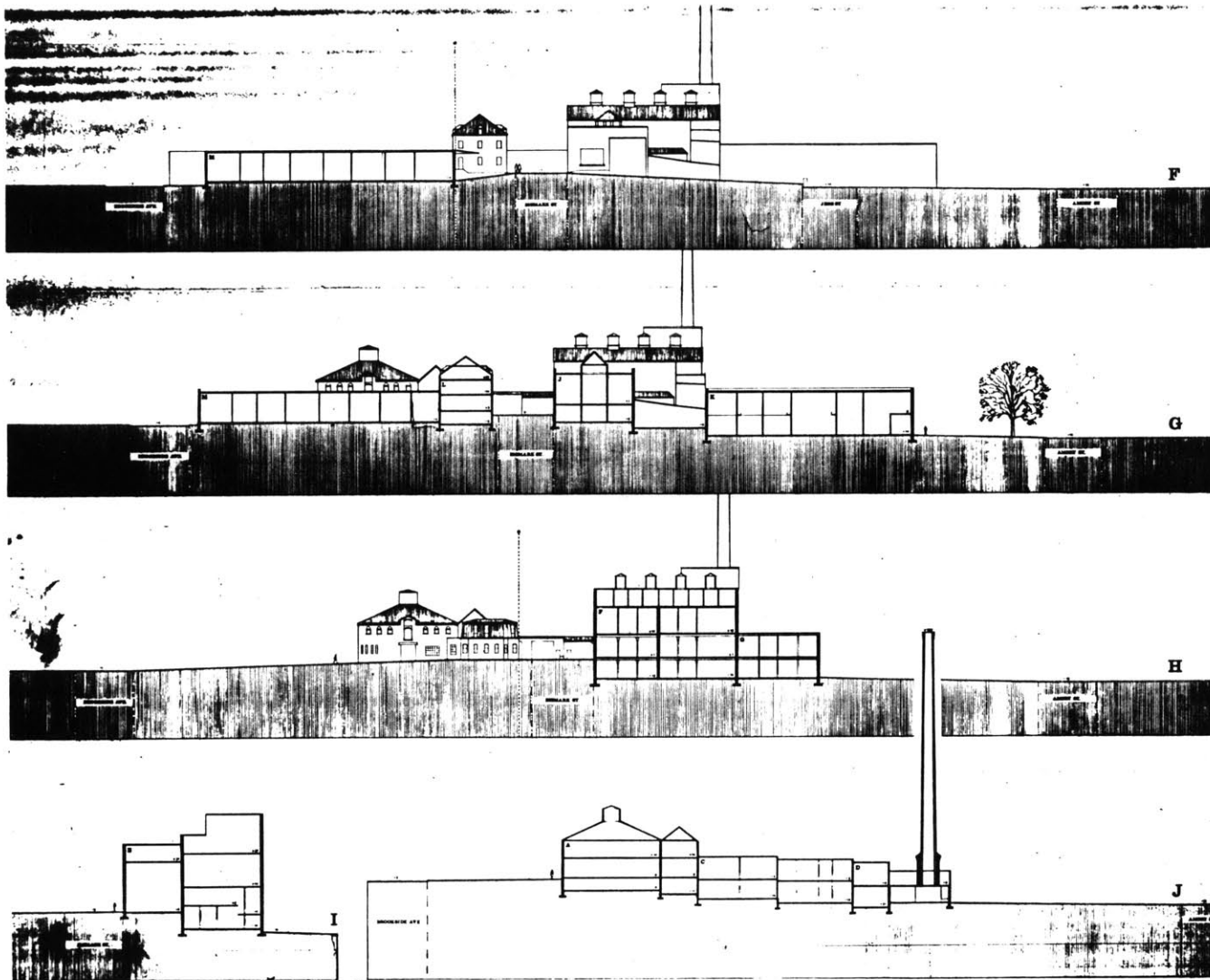
SQUARE FOOTAGE TABLE

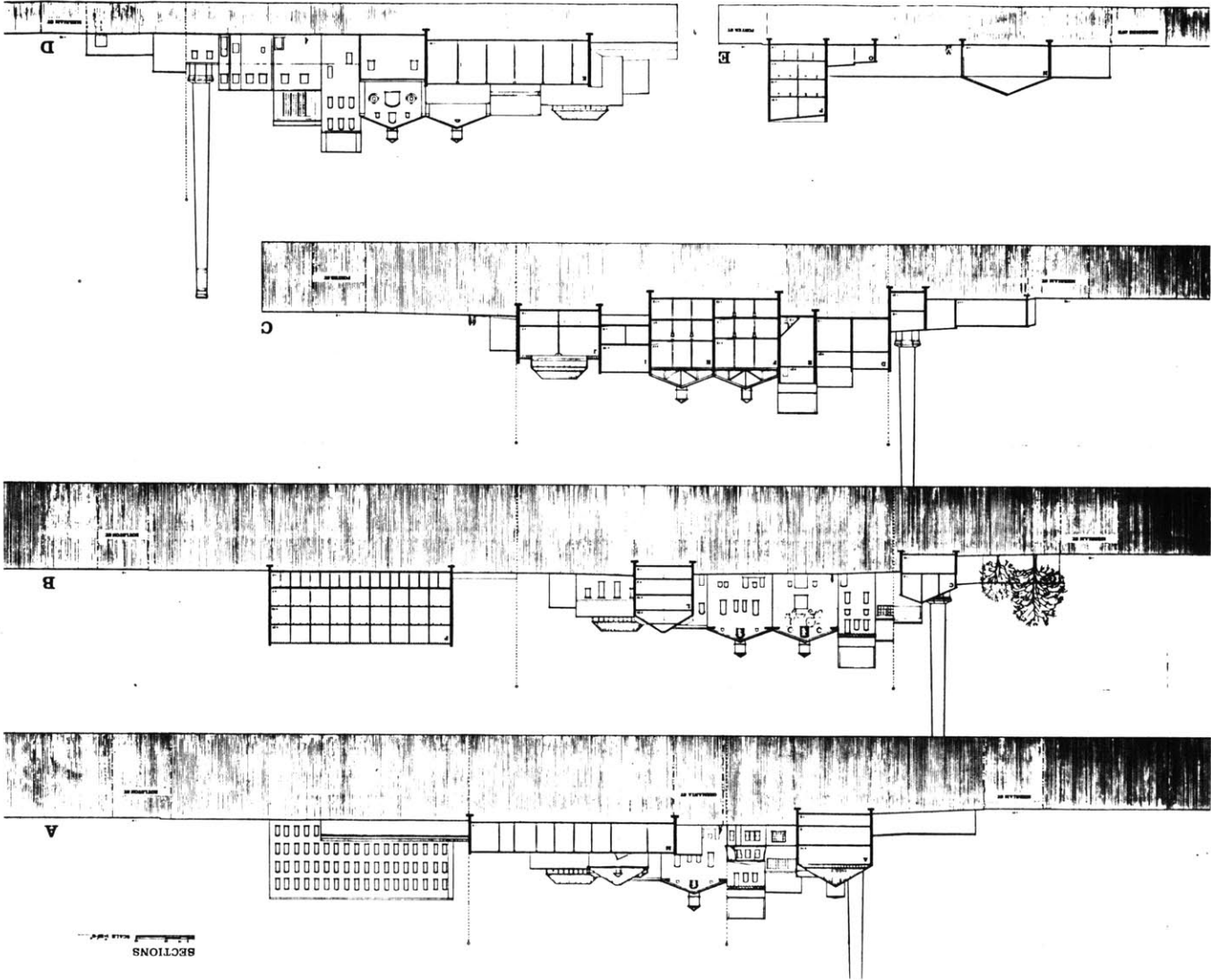
FUNCTION	SQUARE FOOTAGE
<u>Restaurant</u>	<u>2400</u>
kitchen	600
dining	1000
storage	200
office	200
w.c.	400
<u>Pub</u>	<u>1520</u>
bar	300
tables	800
stage	120
storage	100
w.c.	200
<u>Public Commons</u>	<u>9600</u>
victory gardens	7000
public paths	2600
<u>Brewery</u>	<u>5800</u>
malt hoppers	200
storage	400
mash/lauter tub	400
brew kettle	400
spent materials	200
fermentation	600
finishing	600
racking	1800
administrative	800
shop	400
<u>Community Multi-Service Center/ Offices</u>	<u>1800</u>
<u>Living Lofts</u>	<u>1200</u>
	<u>22,320 TOTAL</u>

BREWERY COMPLEX



SECTIONS





AXONOMETRIC

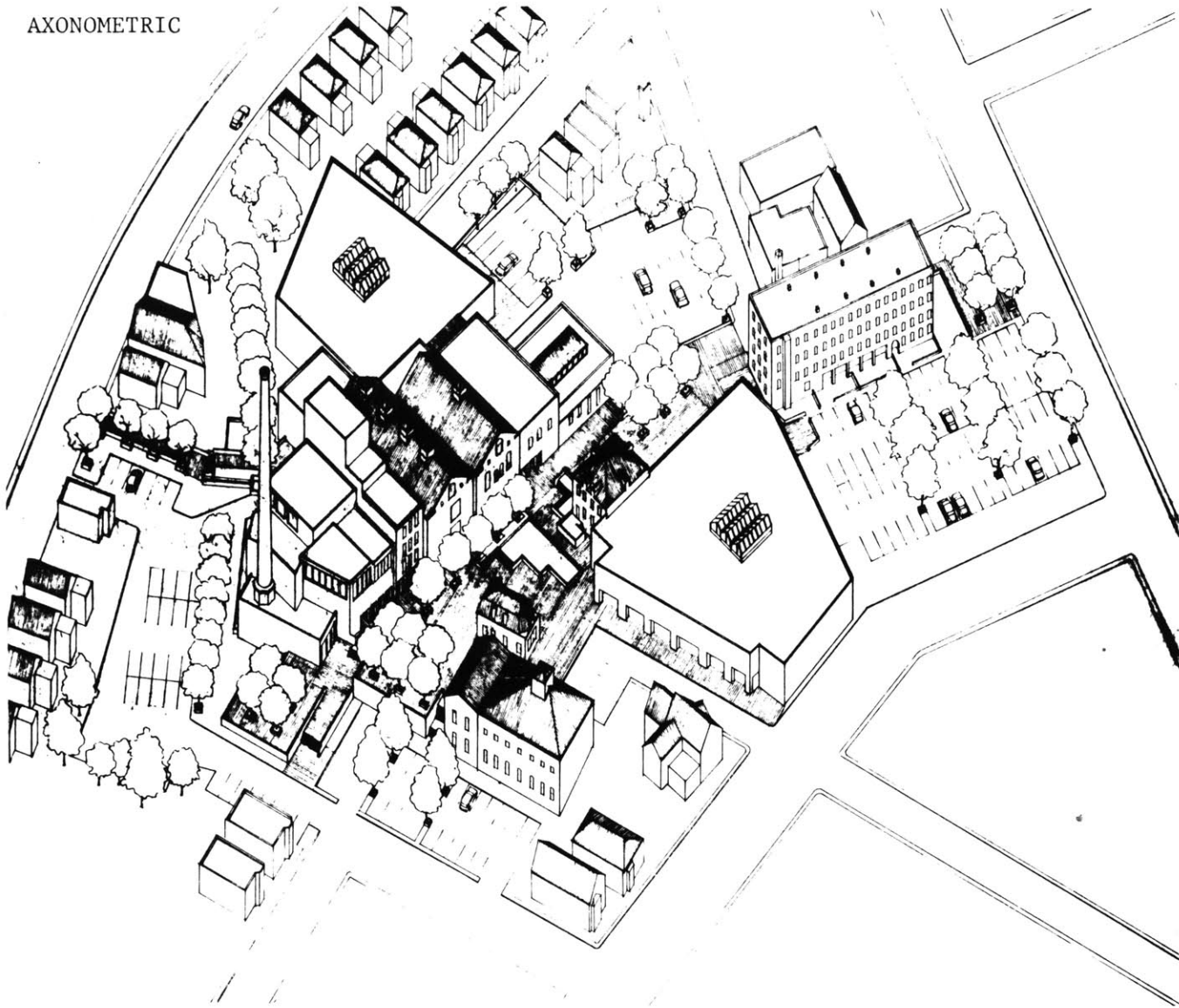


ILLUSTRATION SOURCES:

- pp. VI-VII -Drawing by Saul Steinberg in text by Harold Rosenberg
- p.7 -From Hydra: A Greek Island Town, Its Growth and Form by Constantine E. Michaelides
- p.23 -Photo by Ted Jojola
- p.24 -From Measured Drawings of Japanese Gardens by Mirei Shigemori
- p.32 -A. From Team 10 Primer edited by P. and A. Smithson
 -B. From The Dynamics of Architectural Form by Rudolf Arnheim
 -C. From Hans Scharoun by Peter B. Jones
- p.40 -After Stevens, in Hesperia XV, 1946
- p.47 -From Das Kurze Leben der Modern Architecture by E. Schulz
 and Landscape Design with Plants by Brian Clouston
- p.54 -From Space Design on Carlo Scarpa
- p.59 -From Space Design on Carlo Scarpa
- p.74 -From Villages and Towns #2: Adriatic Sea (Global Architecture)
- p.81 -From Space Design on Carlo Scarpa
- p.83 -From Space Design on Carlo Scarpa
- p.84 -Photo by Richard Tremaglio
- p.100 -Photo by Richard Tremaglio
- p.112 -From Space Design on Carlo Scarpa
- p.121 -From Living Architecture; Rome by Charles-Picard
- p.125 -From The Decorative Designs of Frank Lloyd Wright by David Hanks
- p.128 -From Five California Architects by Ester McCoy
- p.134 -From The Decorative Designs of Frank Lloyd Wright by David Hanks
- p.137 -From The Thinking Eye by Paul Klee

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