

Defining An Architectural Syntax:
A Supportive Housing Center for the Homeless



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A Supportive Housing Center for the Homeless

by:

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Defining an Architectural Syntax:

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Abstract

The aim of this design thesis is to search for an architectural syntax, a “harmonious arrangement of parts or elements” that can be nurtured to realize a particular work of architecture; a transitional institution for the homeless. The facility, to be located in the urban context of Georgetown in Washington, D.C., is to include housing along with support program functions comprising a center for the homeless community.

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Introduction

The concept for the project evolved from two independent reciprocal objectives: the first was a desire to derive a lucid architectural syntax by way of the design process; the second was to use that design process as a means through which to address an understood social need – that of homelessness. Both the derivation of an architectural syntax and the project's function of housing the homeless suggest an attempt at austerity but, more than that, the objective of each is the elevation and elaboration of daily living. Affording a measure of both comfort and dignity through the architecture has been the unified goal.

The architectural syntax has been used to develop spaces of transition which enmesh the structural module of the project into a continuous whole and attempt to make provision for a full range of activity -- deliberate and spontaneous, communal and solitary. It is through that full range of activities that the individual and the community are engaged with respect to one another.

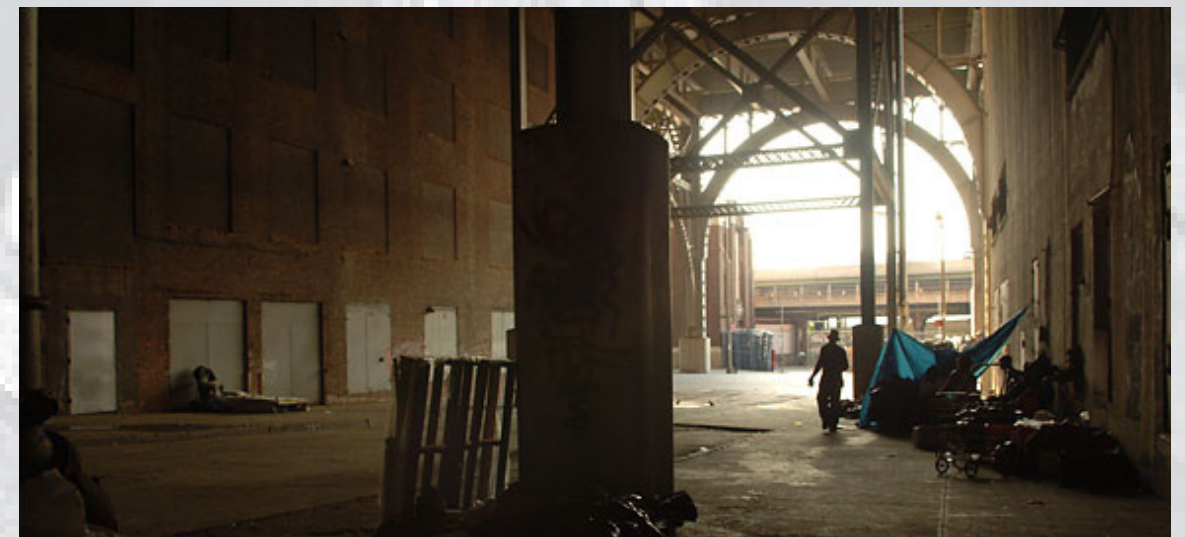
The sensibilities of the program have suggested clear relationships between those that inhabit the project, those that pass through the project, and the community of the city itself. The design seeks to elicit an intense reaction between these people and the places they encounter; to accommodate but also to suggest and even provoke response. To allow the inhabitants to avail themselves of the choices offered and to find the architecture as the protagonist for a multitude of responses.

The Project

The homeless of the streets of Washington, DC are hard to ignore; and yet those we readily identify as homeless are but a percentage of a much larger whole. Although the measure of their number is imprecise and a subject of debate, since the early 1980's the trend has been toward an increase in the number of homeless in inverse proportion to available affordable housing, federal aid and income assistance. Nevertheless, even as their numbers grow, our consciousness of their plight can easily become dependent on the larger economic experience, often divergent from that of the less fortunate.

The project is a transitional supportive housing center; an institution of permanent housing complete with attendant social services. The hope is that such a place, designed to house a number of programmatic functions in support of housing, provides the opportunity to nucleate a community while simultaneously reducing the use of other publicly funded services such as emergency rooms, mental health services, substance abuse services, and places of incarceration.

The architecture of the community is to be attuned to the relations and interactions of both those that reside there, the larger homeless population and the population of the city as a whole. The supportive center is an effective intermediary in the analogy between the dwelling as a microcosm of the city and the city as a macrocosm of the dwelling. Similarly, the territorial tensions between the constituent parts of the center and the center as a whole are intermediary between the center and the larger urban fabric.



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Precedents/ Inspiration

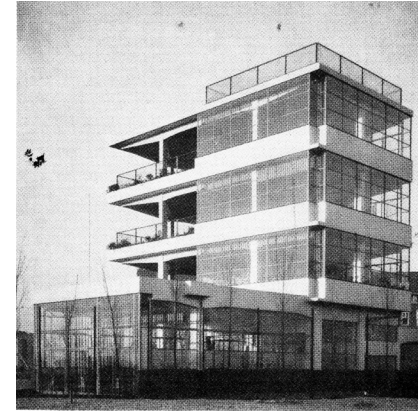
Not to know what happened before one was born is always to be a child.

-- Cicero

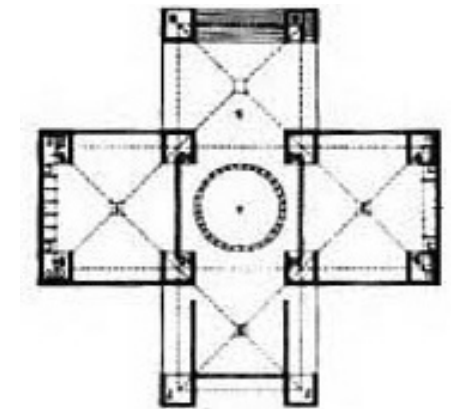
Inspiration for this project has been found moving forward and backward in time in particular the study and understanding of a related group of architects. The work of these masters embodies and exemplifies thoughts that inform my own direction. Isaac Newton said that "if I have seen further, it is by standing on the shoulders of giants." While I would certainly not purport to have seen further, I am convinced that it is through the eyes of my teachers, the gentlemen cited here, and many others stretching backward in time, that I have come to see. It is my opinion that this awareness of architectural history is to the profession as personal memory is to the individual architect – signposts of where we have been and where we are headed.

For me, each of the architects referenced here resonates in a particular way: with Johannes Duiker it is the balance and clarity of the structure together with the recognition of optimal functional arrangement; in Aldo van Eyck it is the reinvestment of humanism in architectural design; in the work of Louis Kahn it is the sublime balance of form and order in equal measure coupled with an expressive honesty and integrity of materials; and, with Herman Hertzberger it is the clear structuralist syntax and the potential expansion of the design through what he terms "inviting form".

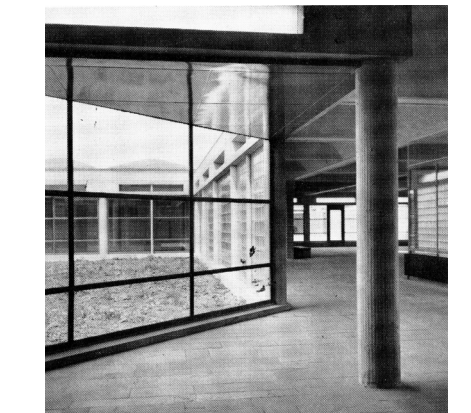
Johannes Duiker



Louis Kahn



Aldo Van Eyck



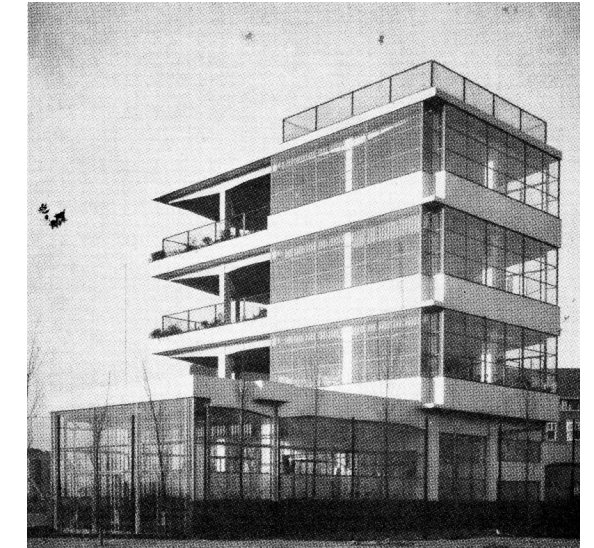
Herman Hertzberger



[Note: refer to page 27 for image credits]

Johannes Duiker
Open-Air School

1930



It is apparent, even upon a cursory first reading, that the Open Air School communicates a clear, lucid structural organization. The fabric of the glass building envelope reinforces the understanding of the open balconies and assists in transmitting the structural clarity and order of the building. As attention is honed, however, it is the resolution in tension between the program and the functional order that becomes apparent: the discrete integration into the structural organization of the gymnasium on the lower level and the individual elements such as the entrance door, which have been intensely considered and optimally contribute to the whole.

[Note: refer to page 27 for image credits]

Louis Kahn
Trenton Bath House

1956

Not unlike van Eyck, the architecture of Louis Kahn demonstrates an architectural understanding of place and occasion. Kahn's work incorporates in this understanding, an expressive honesty and integrity of materials that is unsurpassed. Form and order are present in equal measure.

The Trenton Bath House was considered by Kahn to be a turning point in his career. Within the possibilities of this small project with its simple elemental forms and most basic of materials, is read the clear expression of "served" and "servant" spaces. The structure of the building, the columns, realize their potential as "servant" spaces; transitional spaces between those spaces served.

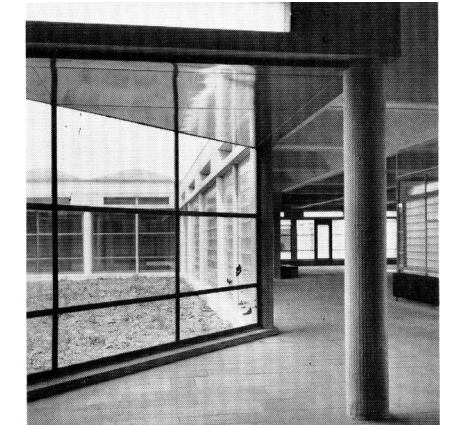
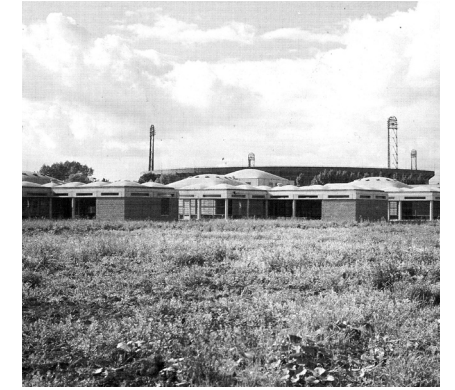
It was this struggle, the effort to understand such potential at the confluence of structure, enclosure and transition that were at the heart of my initial studies.



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The work of Aldo van Eyck awakened my recognition of the need for humanism within the architectural design. The Orphanage in Amsterdam represents, in a very clear way, van Eyck's considerations of the dwelling as a microcosm of the city and the city as a macrocosm of the dwelling. In so doing, the Orphanage emphasizes the primacy of the individual's relationship to the collective. This positioning of the individual in relation to the collective is extended to encompass the articulation of transition between spaces of divergent territorial claims and the gradation of spaces from intimate to extended areas. The project embodies van Eyck's ideas of "labyrinthian clarity" and "significant ambiguity" with passages analogous to streets and places of gathering analogous to the city square. The Orphanage also derives from a limited set of structural elements— the columns, the iconic beams, and the roof forms— rigorously organized as they progress across the site.

While the Orphanage was accretive on an expansive site, the Home for Mothers, in contrast, was on a bounded site within the urban fabric. Again, however, van Eyck resolutely strives to provide architecture focused on inspiring its inhabitants to identify with one another as well as with the architecture itself. The transparency of the Home recalls Duiker's Open Air School and it is through this transparency that the relationships of the constituent parts of the project are revealed for the user. Layered on this transparency, van Eyck skillfully retains a hierarchy of privacy for the project occupants.



Aldo Van Eyck

Orphanage
1955-1960

Home For Mothers
1976-1980



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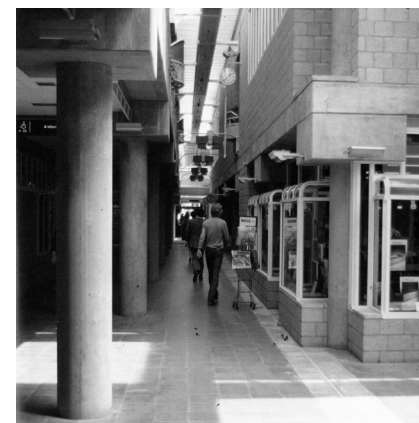
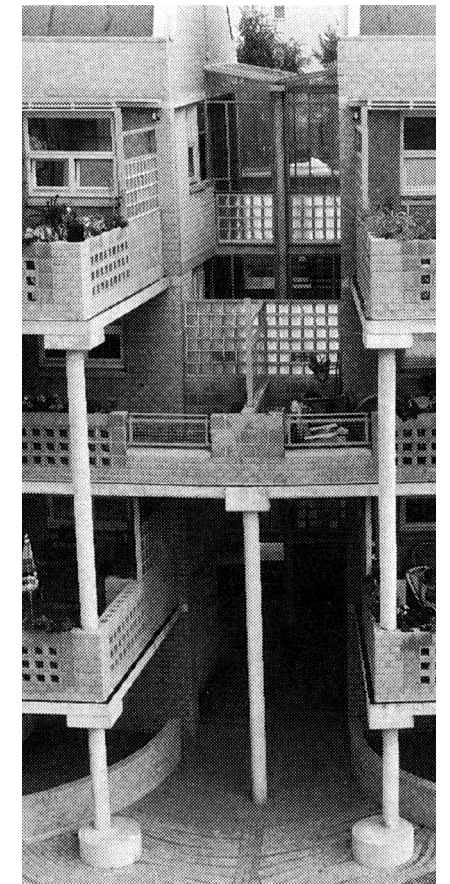
Herman Hertzberger

Music Center 'Vredenburg'
1978

'Apollo' Schools
1983

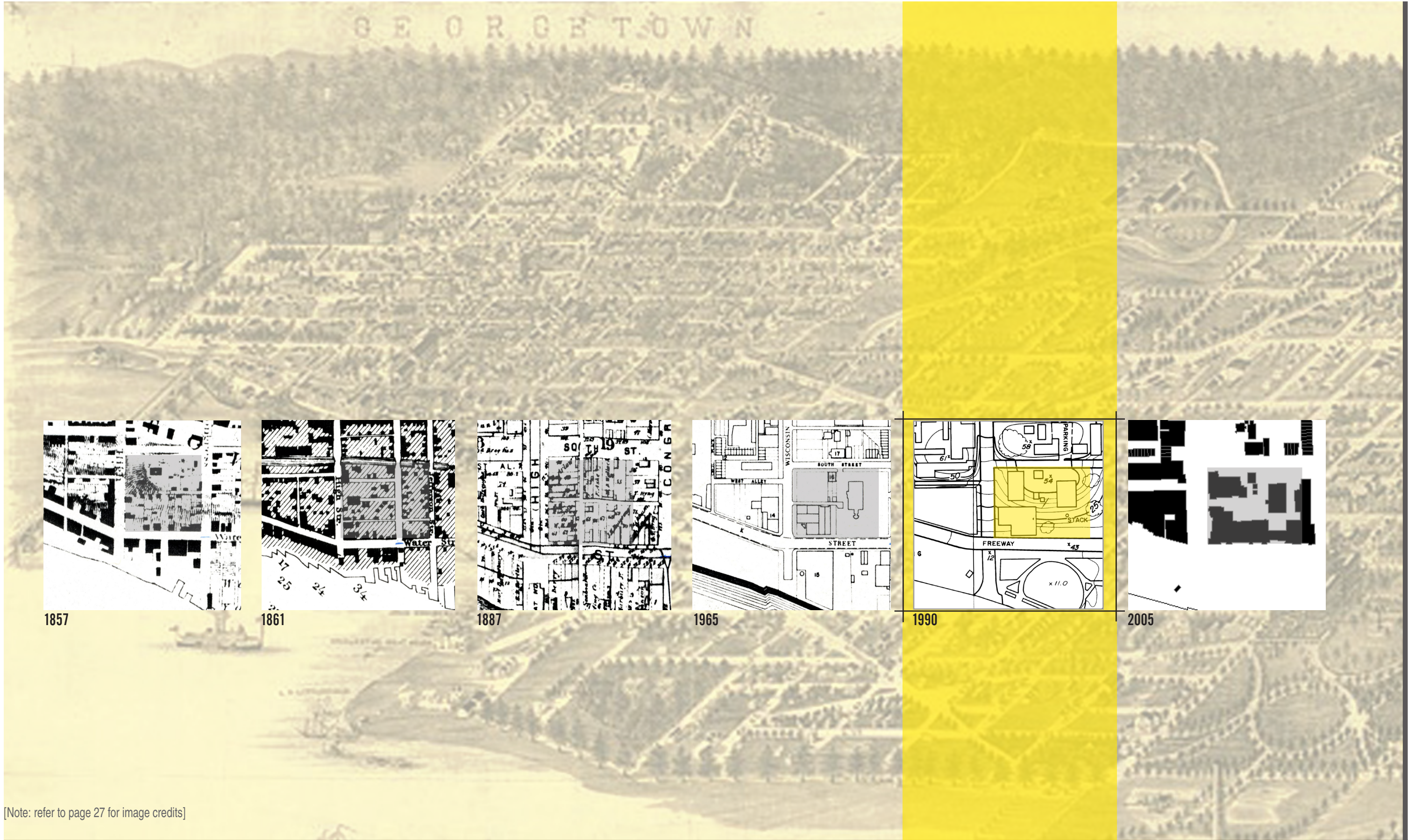
Housing Project 'Lindenstrasse'
1986

The work of Herman Hertzberger has been central to the foundational thought of this project. Where van Eyk's work serves to awaken the sense of possibility, I understand van Eyk's projects more as concise individual statements of that possibility – each skillfully crafted but, somehow, each distinctly unique. Hertzberger's projects, on the other hand, are resolutely didactic. There is a consistent evolutionary thread and the ideas unfold from earlier projects such as the factory extension at Lin Mij, through Centraal Beheer, the Music Center at Vredenburg, the "Apollo" schools, and the housing project at Lindenstrasse in Berlin. Hertzberger's ideas regarding the "in-between" spaces, structuralism in the philosophical sense, adaption of space, development of syntax from a discrete set of simple elements, and territorial claims, have all been examined in some depth in the development of this project.

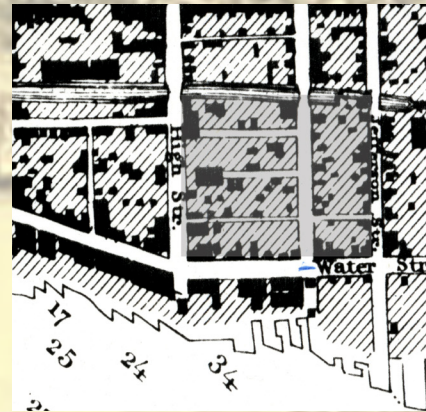


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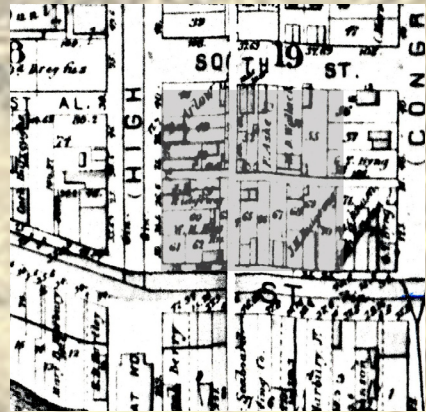
GEORGETOWN



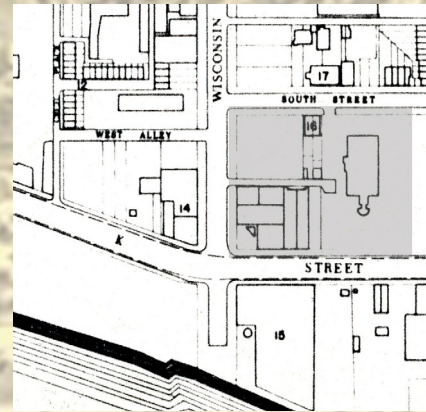
1857



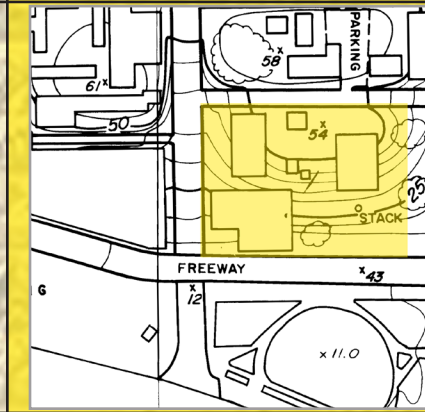
1861



1887



1965



1990



2005

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Existing Site Conditions

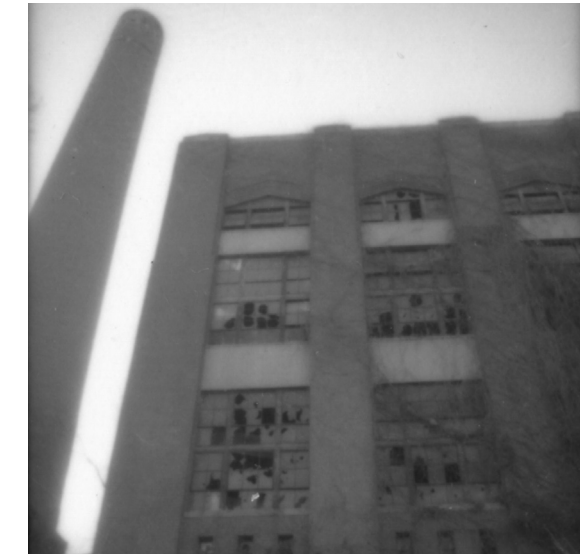
The project site is at the fringe of the dense urban fabric of Georgetown in Washington, DC. It sits at the foot of Wisconsin Avenue, the main north-south artery of Georgetown, which bounds the site to the west. The land slopes downward from the north edge of the site toward the Potomac River which lies approximately one hundred feet beyond Water Street, the site's southern boundary. And, while the water is in close physical proximity, its sensory presence is definitively diminished by the elevated highway, the Whitehurst Freeway, which is superimposed forty feet above Water Street. The freeway's steel supporting structure effectively forms a semi-permeable boundary between the project site and the water.

To the north, the site is bounded by South Street, a small-scale primarily residential street punctuated with the insertion of a small two-story masonry commercial structure and dignified at the corner of Wisconsin Avenue, directly across from the project site, by a small stone church.

The most distinctive feature of the site lies along its eastern edge: the old incinerator plant. Reminding Georgetown of its not-too-distant past, a time after the roughness of dock life had been replaced with the dirt of industry; when cement works, electric generating plants and meat rendering buildings occupied this tract of land, before the onslaught of the boutique shops currently a few blocks north. The immense incinerator plant masonry structure and chimney now remain, towering above the site and clearly visible from across the river in the newer urban fabric of northern Virginia.

The existing structures on the site are simple two-story brick boxes housing somewhat infrequently patronized shops on the lower level and office space above. The Wisconsin Avenue edge of the site is mediated between these small brick buildings and the street by a series of patron and tenant parking spaces.

The proposed project would remove these buildings in order to provide a center for the homeless which seeks to directly engage the public world around the site and manifest sequences of territorial tension between the bounds of the public world and the heart of the project; a necessary dialog given the nature of the project.



Origins of the Project

At its inception, the desire was to find an appropriate architectural solution for a perceived social need: housing for the homeless. The belief was that the architecture, if well conceived, could afford, perhaps reinvest, dignity and respect for those whose plight is frequently suppressed in our consciousness. From the start, the environment of the project was envisioned to be structured to create an integral order while, at the same time, suggesting and making provision for, the possibility of self-motivated behavior; to encourage initiative. In so doing, the objective was to provide a place allowing for the full range of nuance and subtlety of social interaction; a place where residents of the center could fully dwell for however long their stay.

Preliminary Studies

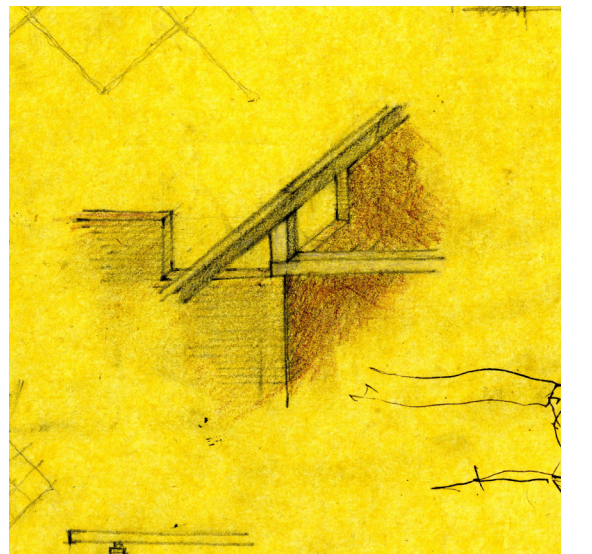
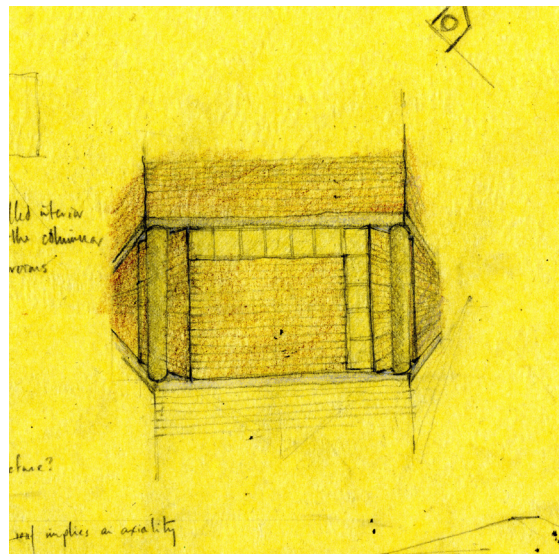
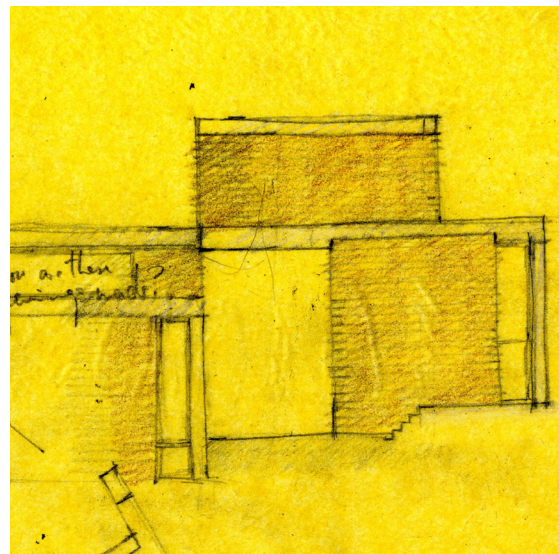
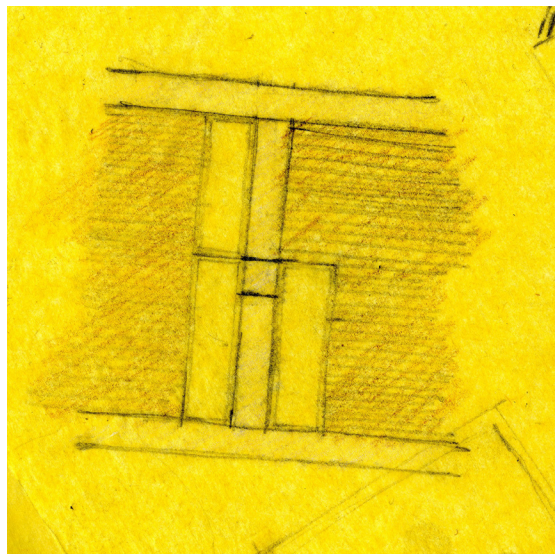
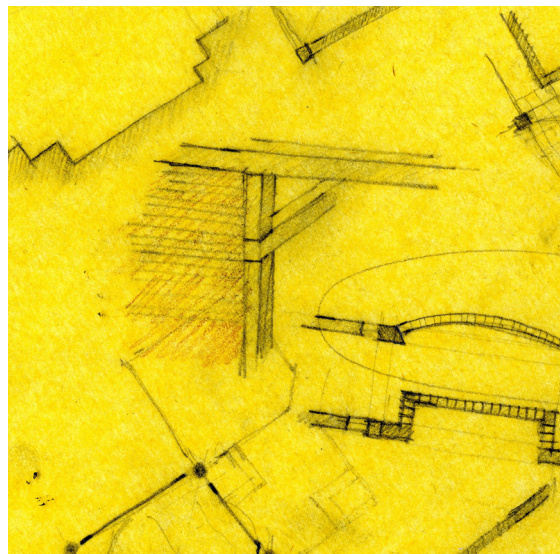
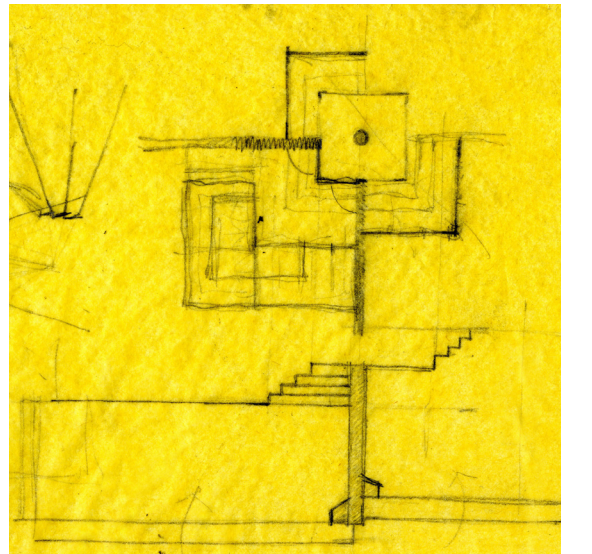
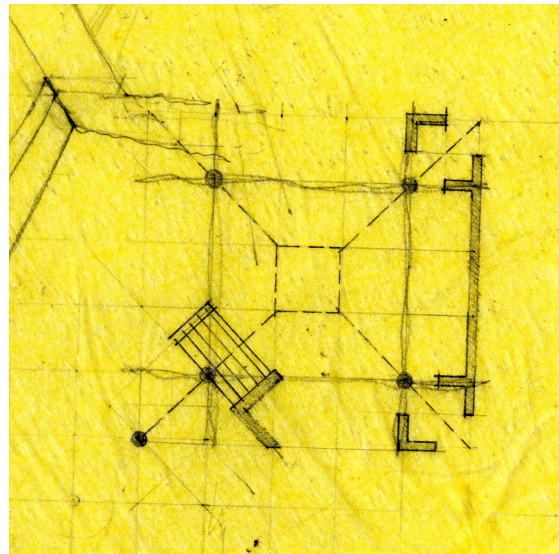
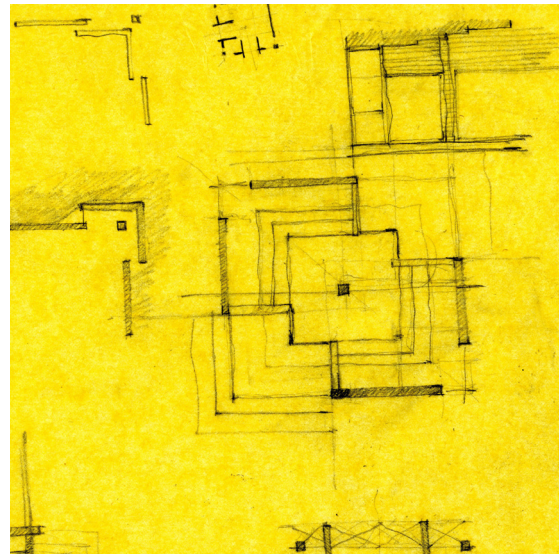
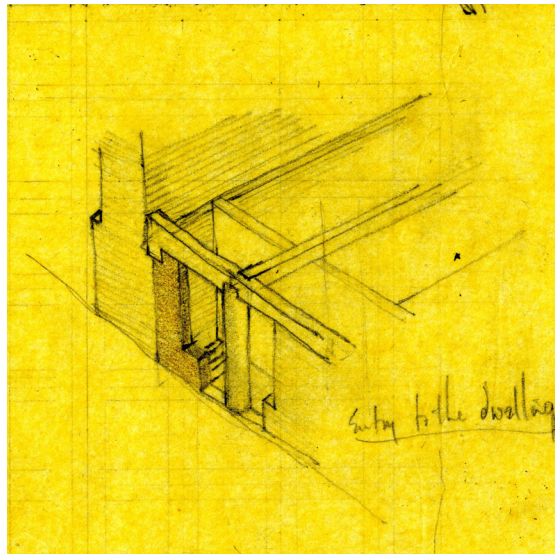
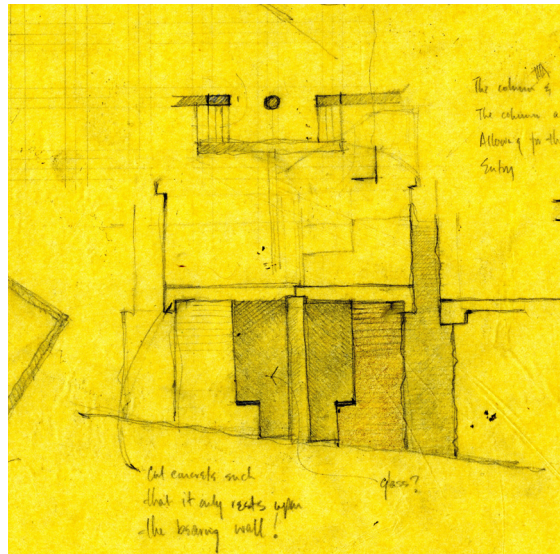
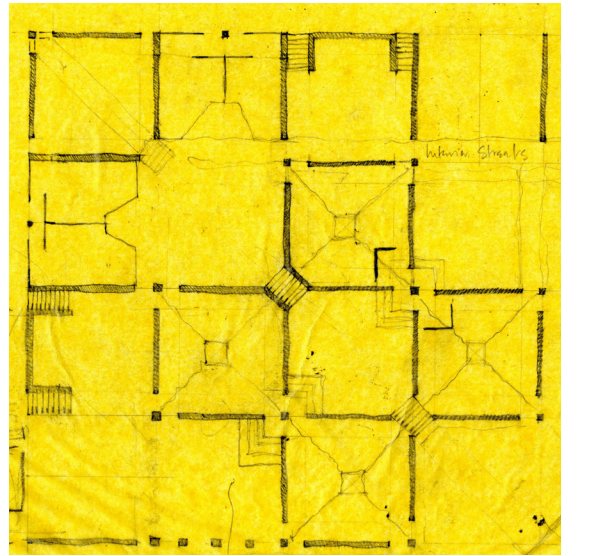
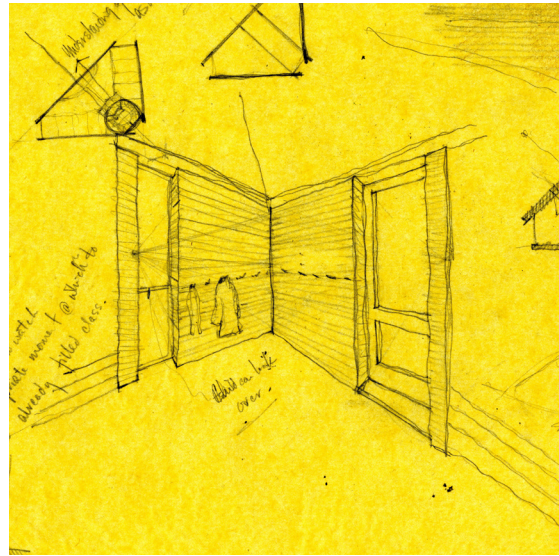
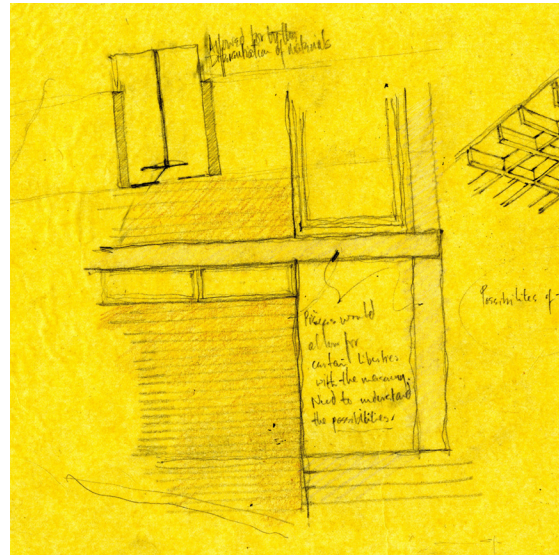
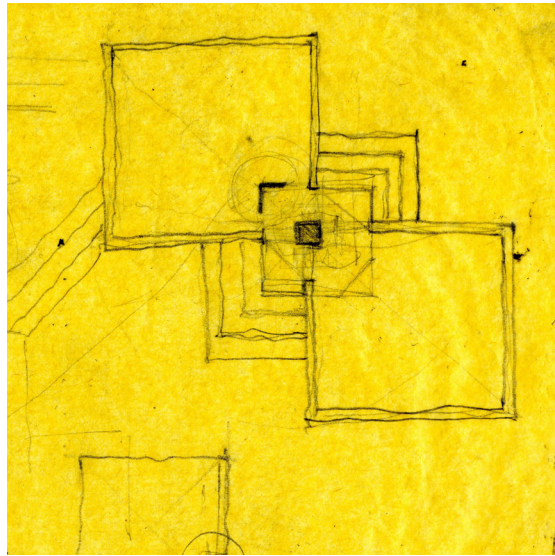
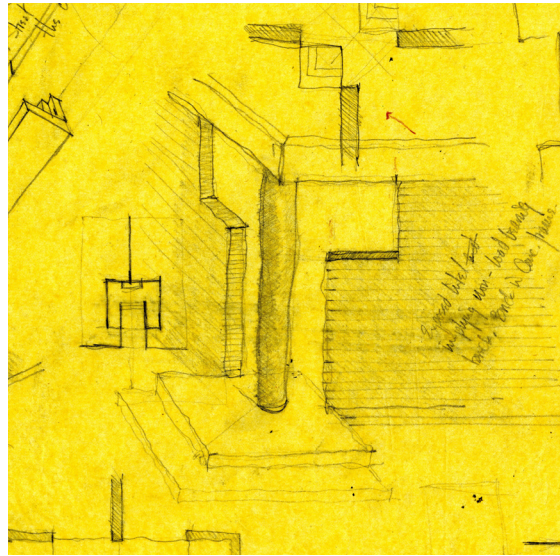
In simple terms you could say that the building order is the unity that arises in a building when the parts taken together define the whole and conversely when the separate parts derive from that whole in an equally logical way. The unity resulting from design that consistently employs this reciprocity – parts determining the whole and being determined by it – may in a sense be regarded as structure...In other words, a structure which may be said to be programmed to accommodate all expected infills. In this way it is possible to aim consciously at the unity of spatiality, components, materials, and colors in such a way that a maximum variety of uses can be accommodated.

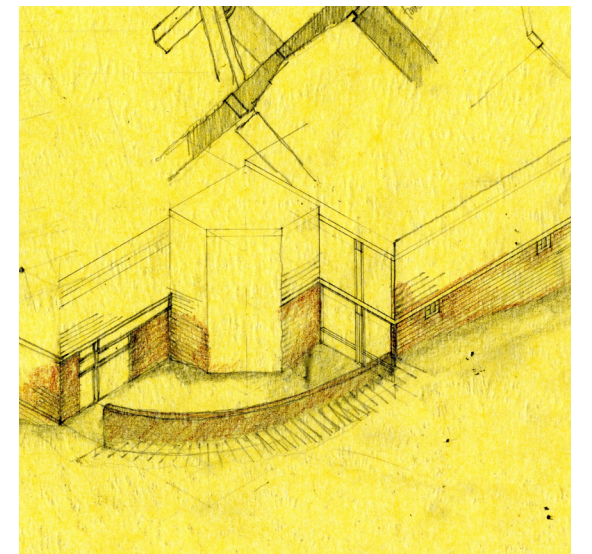
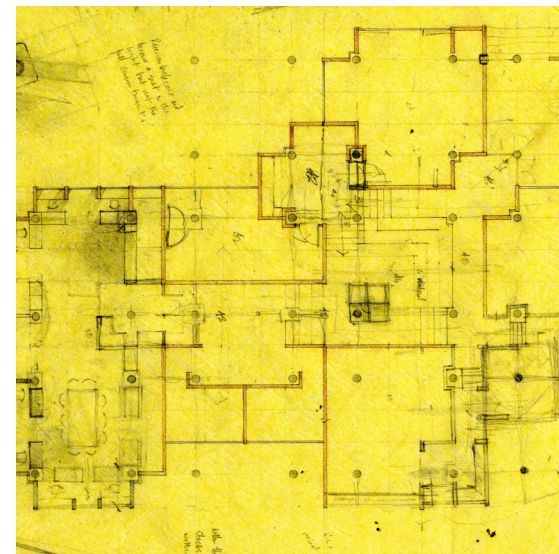
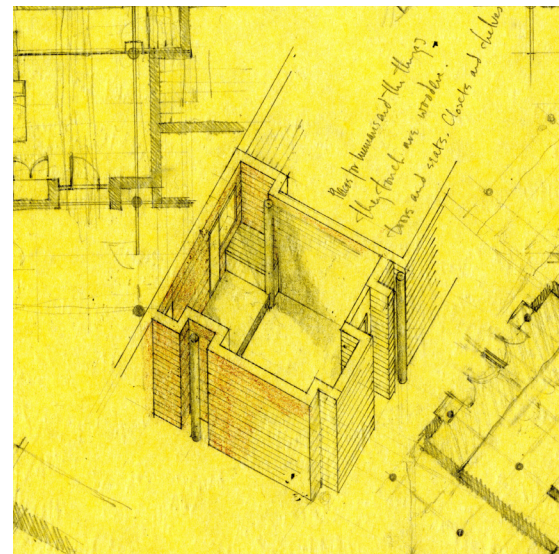
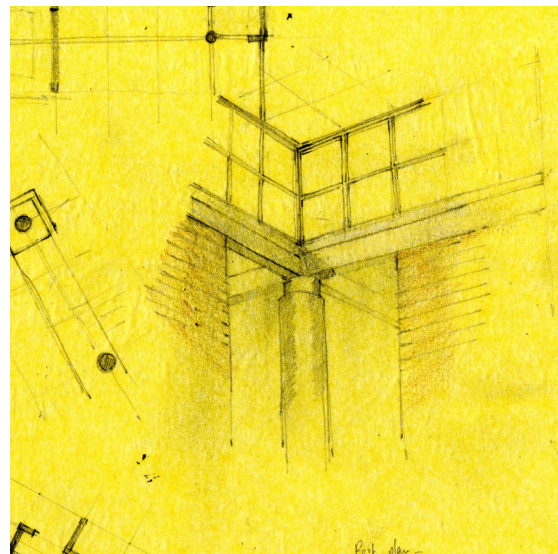
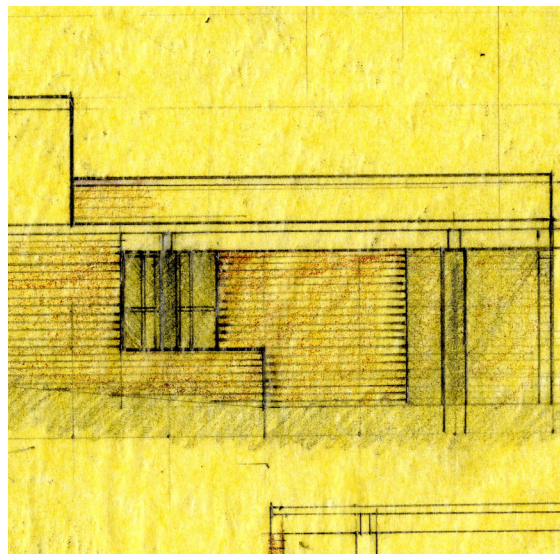
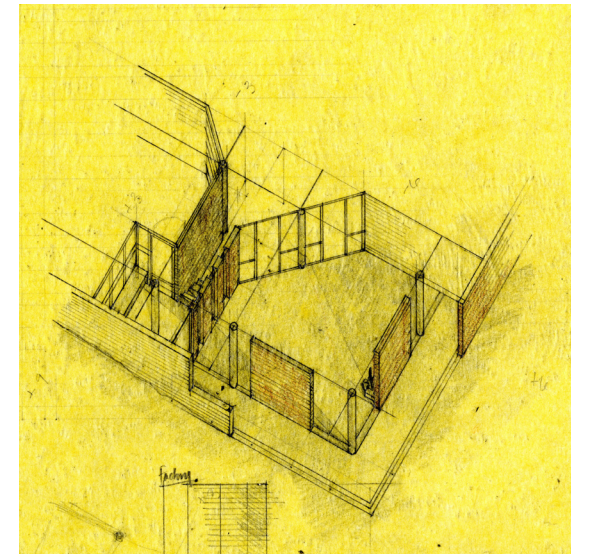
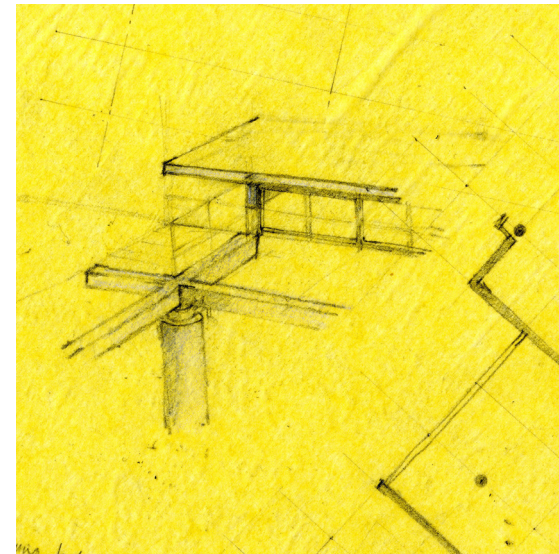
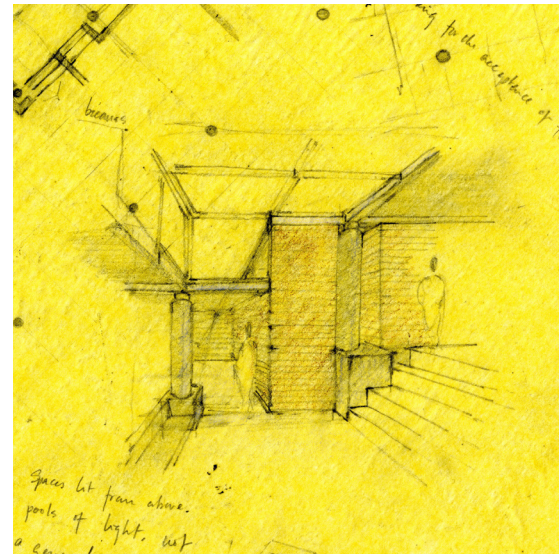
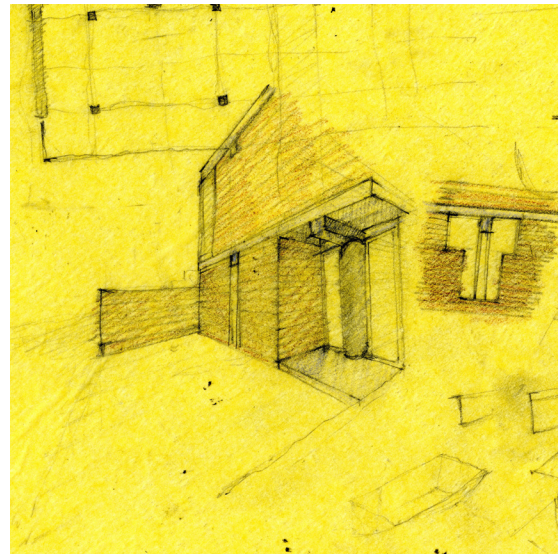
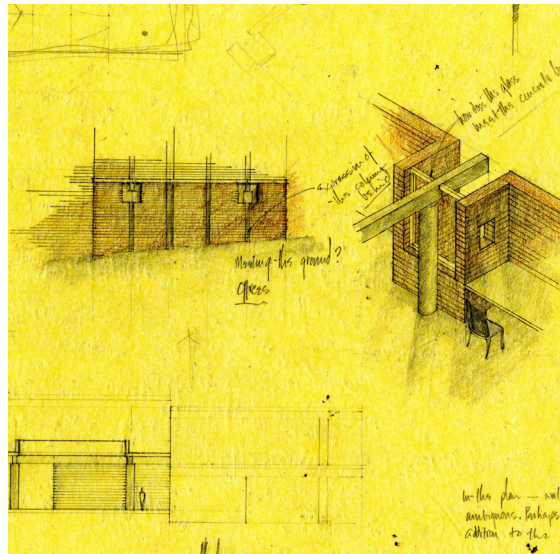
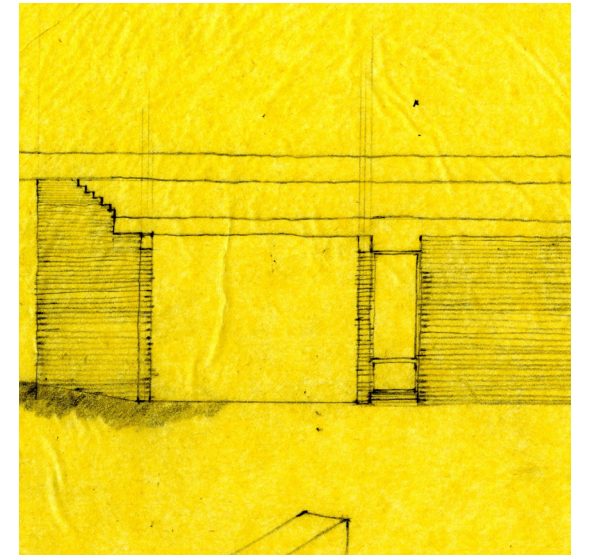
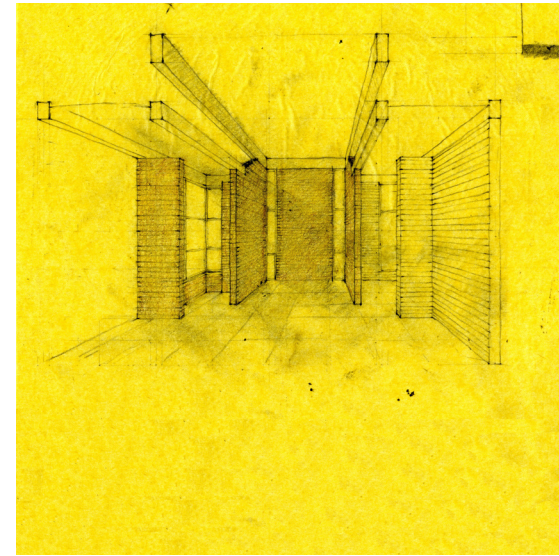
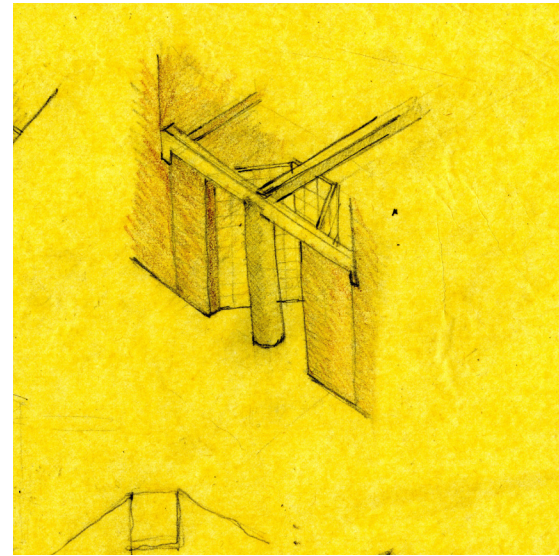
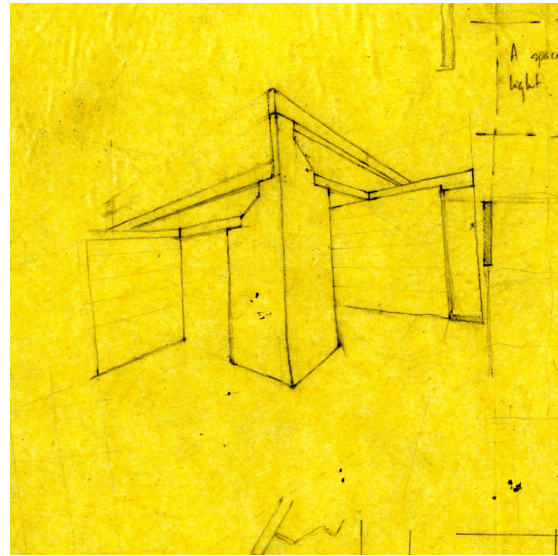
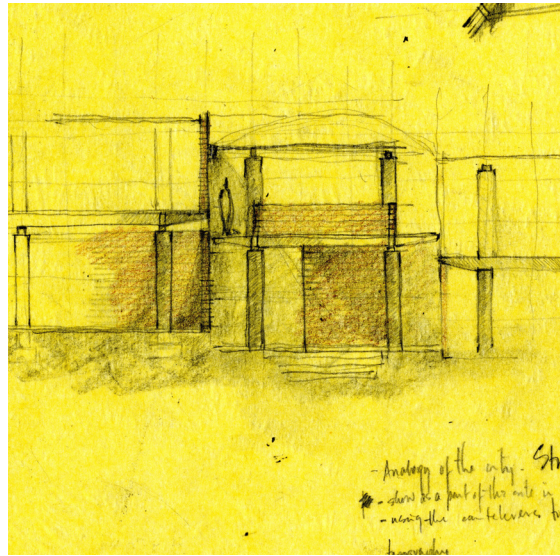
-- Herman Hertzberger

Work toward a syntax began through the examination of a limited number of discrete elements. I wanted to use these components of architectural form – columns, beams and walls – clearly articulated and, through this study, begin to understand how, at their essence, these might relate signification of place and occasion. As a consequence, early studies focused on areas of transition, of “in-between”, where experience and meaning on either side of this metaphoric threshold are heightened.

Early on, the masonry wall was envisioned as load-bearing and congruent with both the column and the supported beams. Consideration of the relationship of the beam to the height of the wall afforded an opportunity for the beam to divide horizontally into two and to allow light to pass between the beams into the space below. A vision for how this might be realized and related to the larger integral structure and program was, unfortunately, elusive. Perhaps fodder for another, more evolved study.

As the work progressed, there came a moment when the wall became independent of the structure in purpose and material – the masonry wall defined space while the concrete column and beam alone came to define structure. The column and the beam allowed the wall to shape the space for the necessary range of possibilities that could occur through the program.





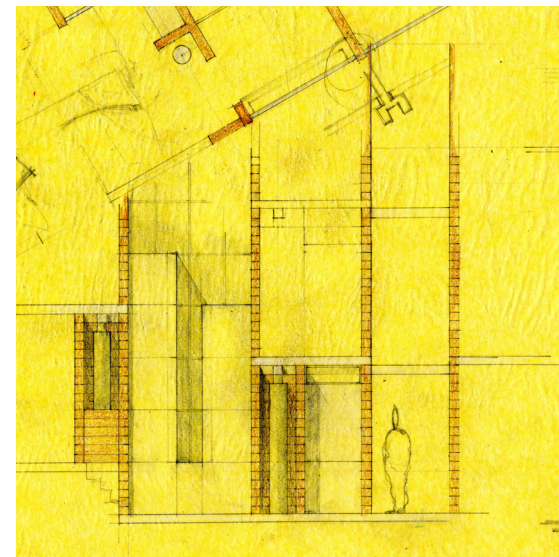
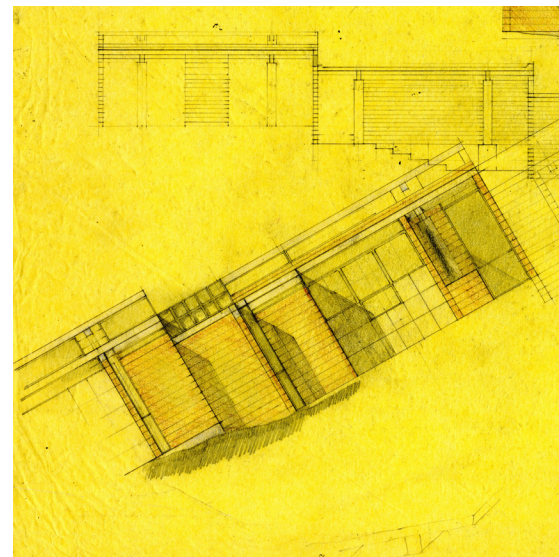
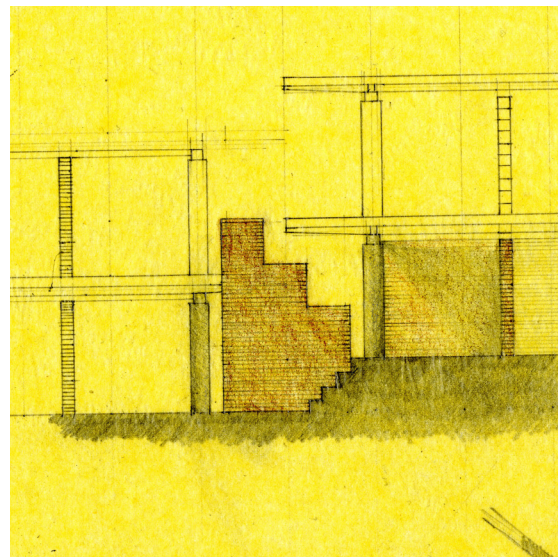
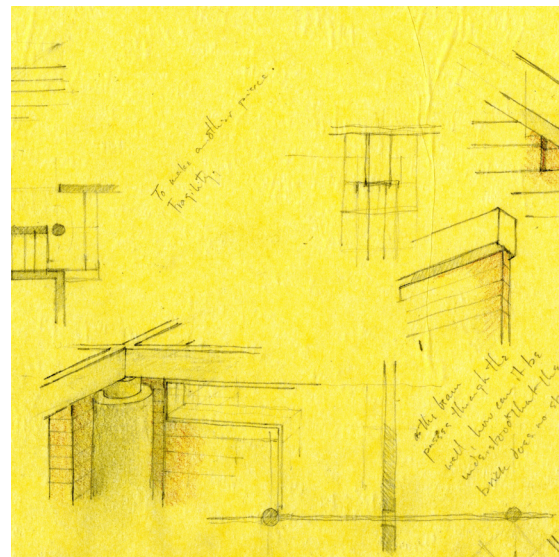
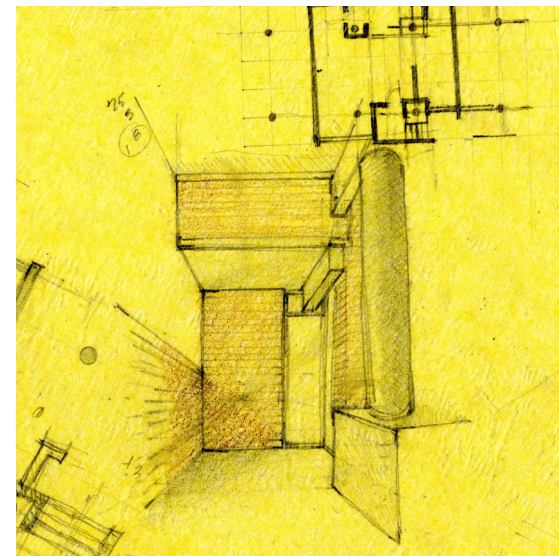
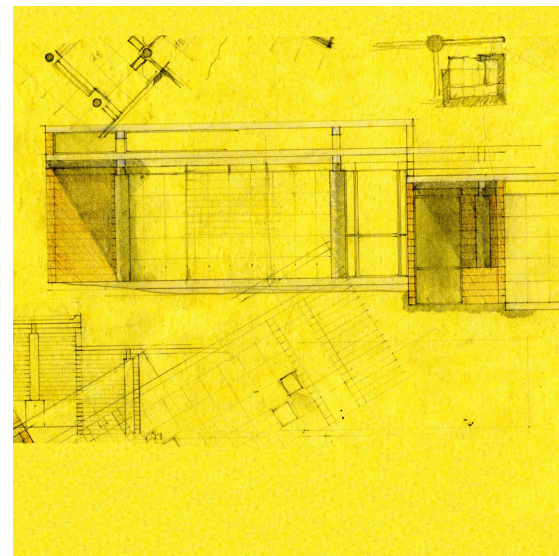
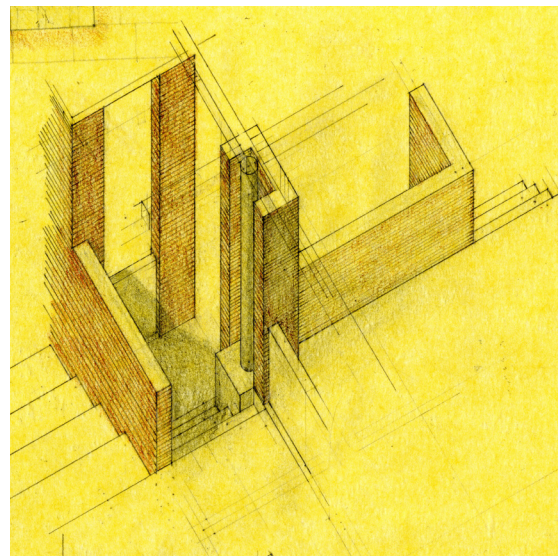
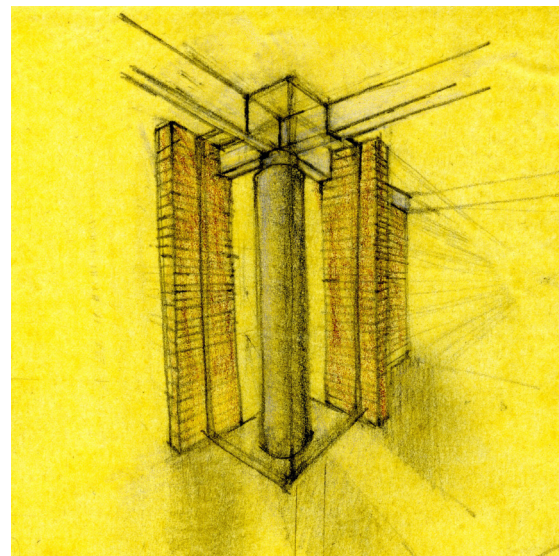
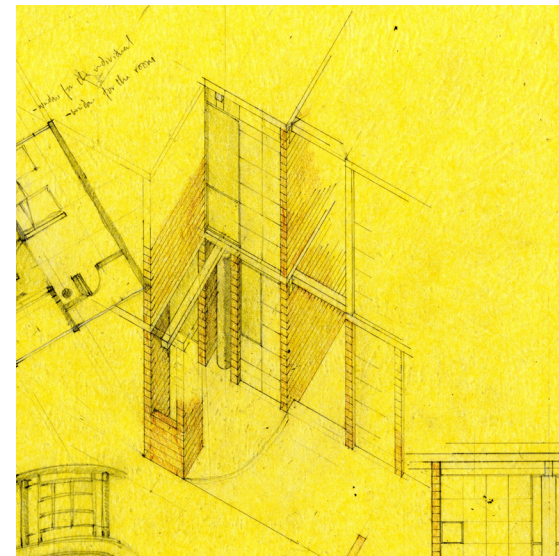
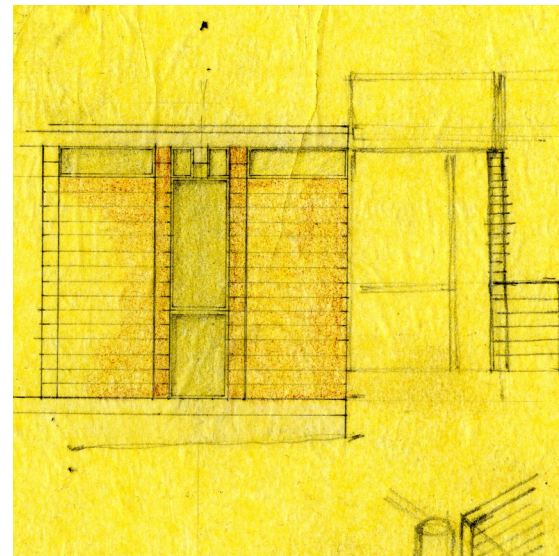
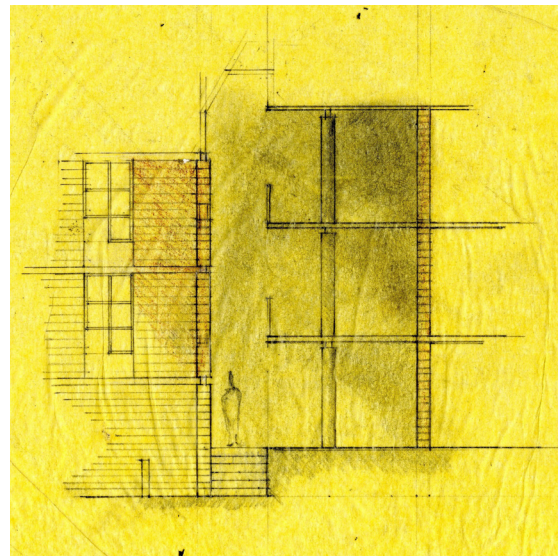
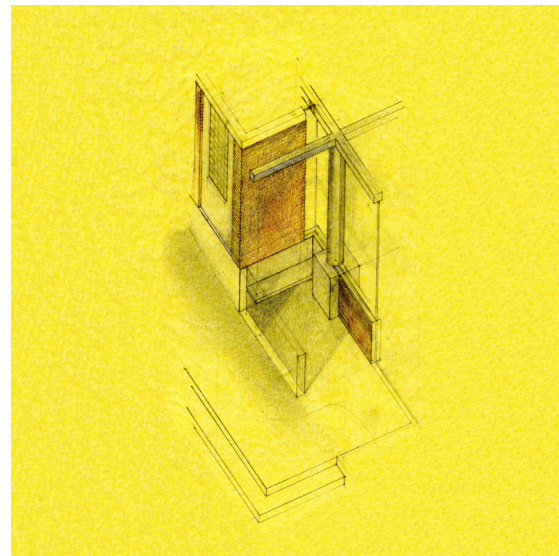
Design Progression

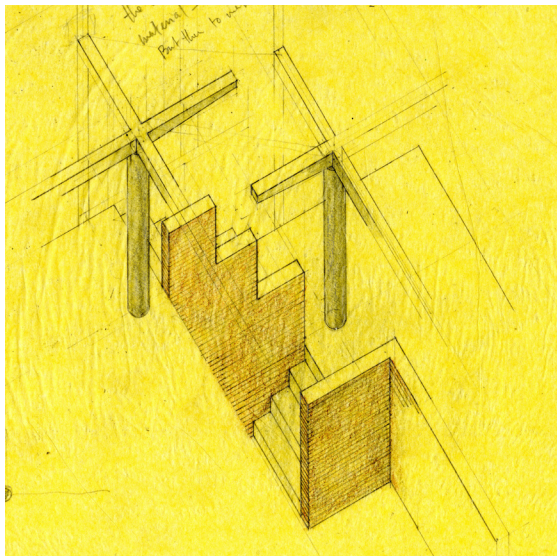
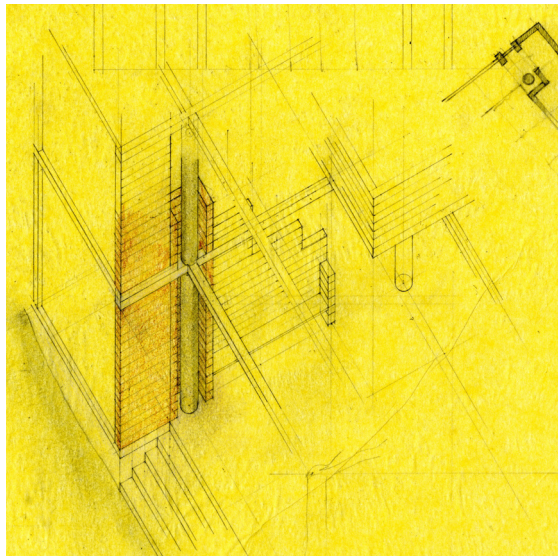
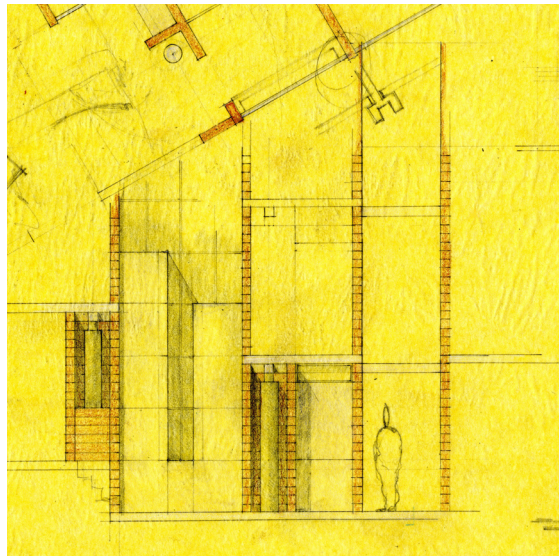
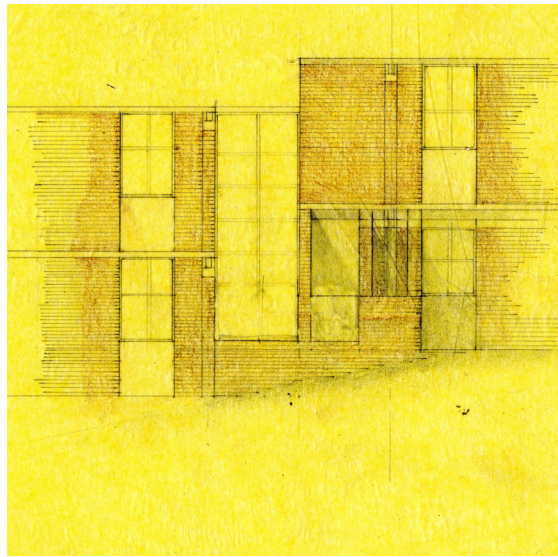
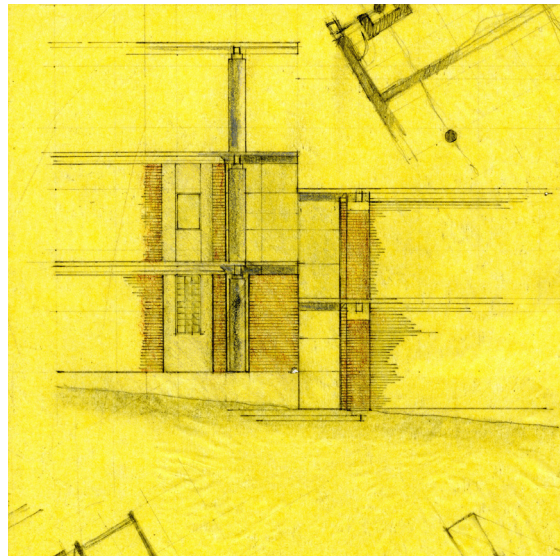
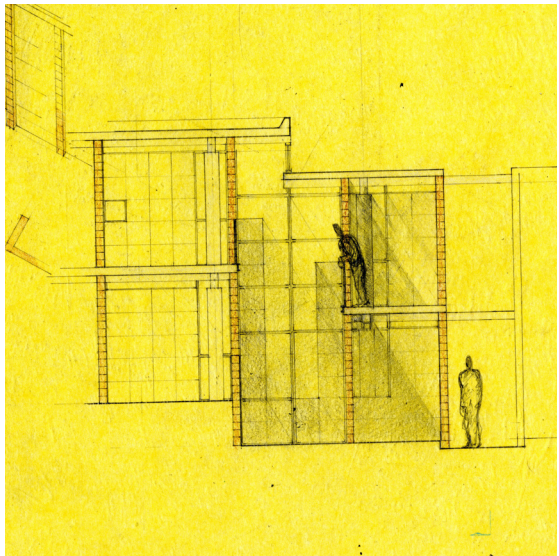
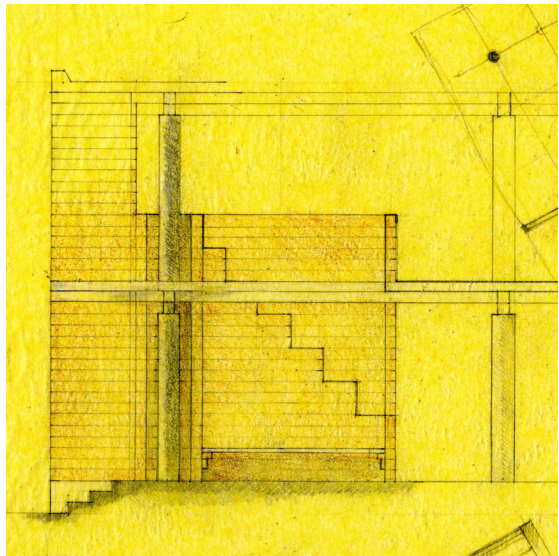
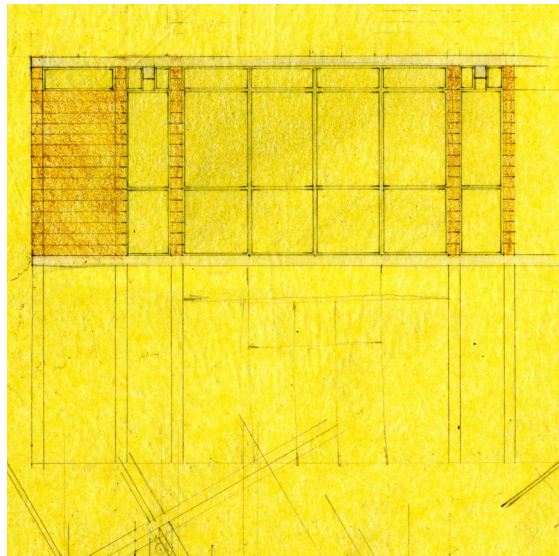
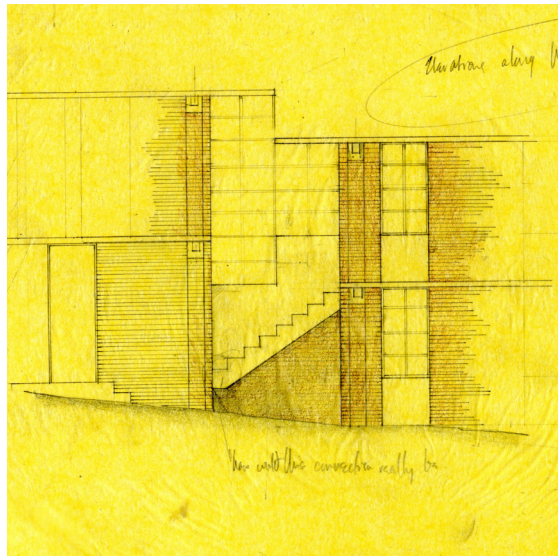
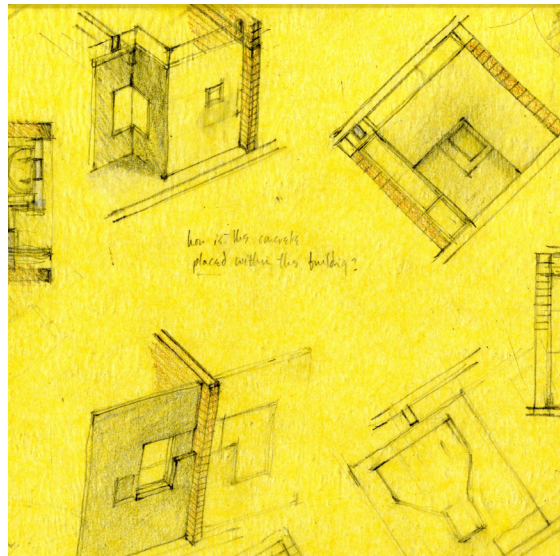
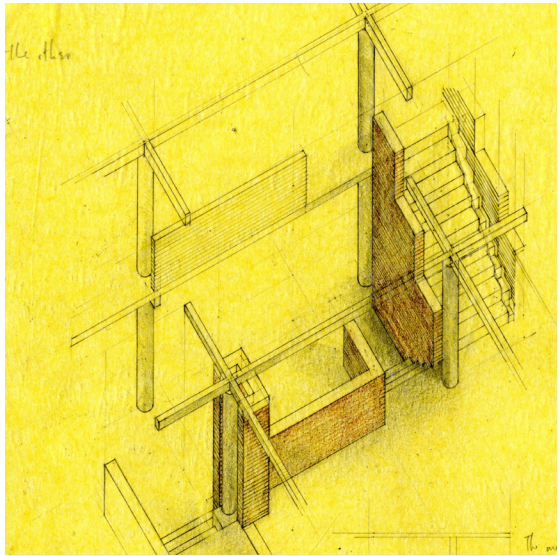
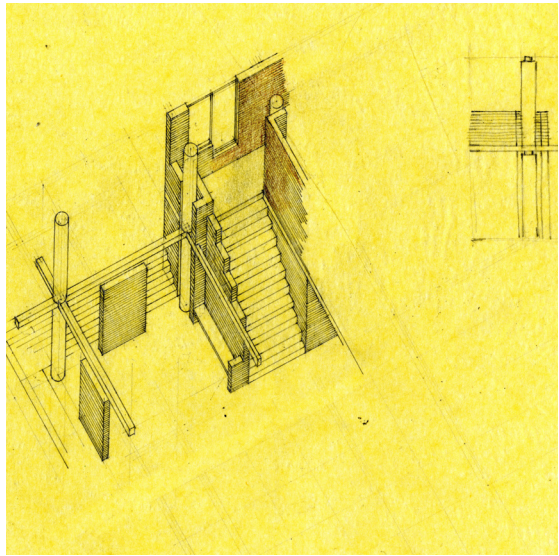
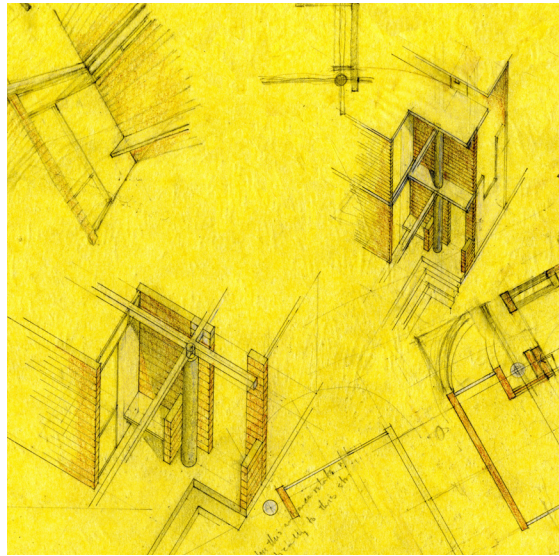
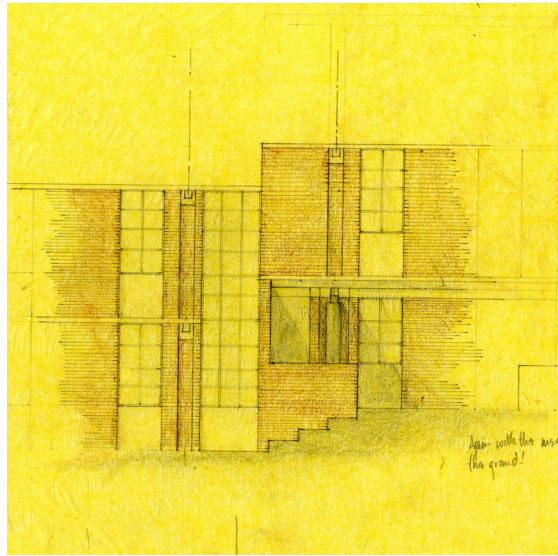
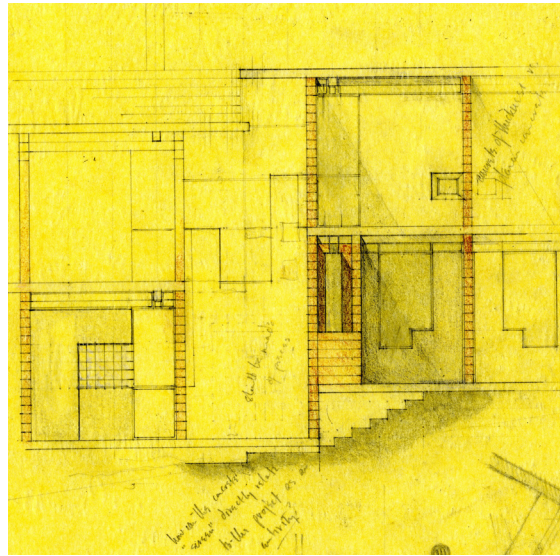
Definition of the wall, column and beam were necessary to the continued evolution of study of signification of place and occasion. Additionally, the separation of the wall from the structural cell also served allowed the spatial organization, the cornerstone of which is the column, to be perceived even where the constraints of space do not reveal the structure in its entirety: that is that the order is not just seen, but sensed. The meaning of place could then be defined in relation to the structure.

As design progressed, the structural cells also became offset vertically initially in response to topography and program. This vertical offset, however, also became a means through which light enters the heart of the interior spaces and defined interior circulation routes. Now, it was possible to see that within the larger framework, where order is extended both laterally and vertically, space could be shaped – compressed, released and allowed to flow – by the arrangement of walls at the dictates of program and, importantly, with respect to the range of social possibilities relative to the inhabitants of the center and the larger city.

The walls also became further differentiated between those masonry walls which shaped and defined space, and aluminum and glass or ceramic panel planar infill systems which both reveal the structure and define the relationships of interior and exterior space through defined degrees of transparency.

Development also sought to extend private territorial claims outward from the dwelling into the public site space, making the space beyond the defined bounds of the dwelling into a communal space. At the same time, the desire was to create subtle layers of transition between the larger communal space and the dwelling as intermediary spaces, individually interpreted.



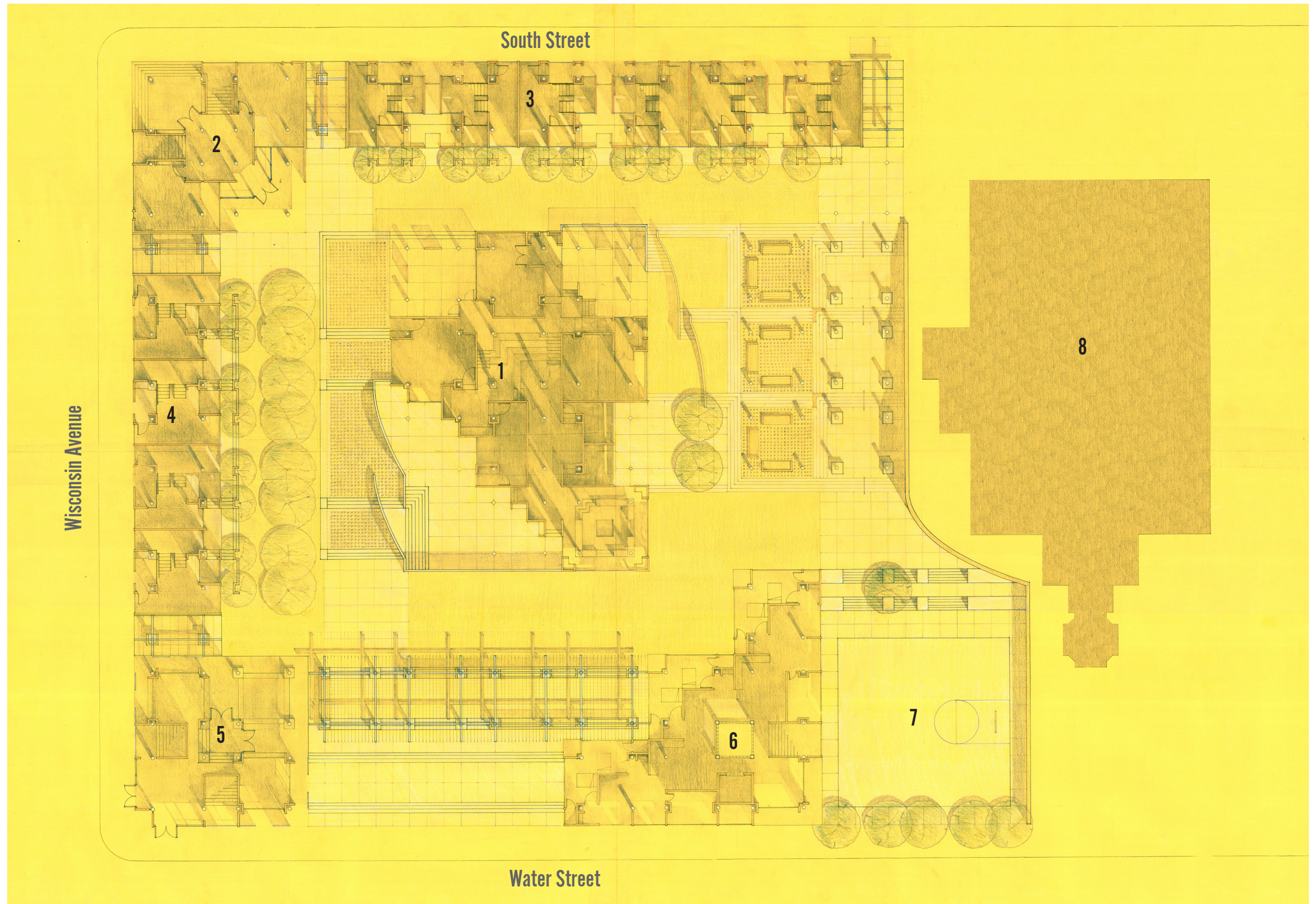


Key

- 1. Learning Center
- 2. Administration
- 3. North Housing
- 4. West Housing
- 5. Counseling
- 6. Infirmary
- 7. Basketball Court
- 8. Incinerator

Site Plan

The site provides transitional spaces, those spaces mediating between the fabric of the city and the project, extending inward to meet the communal spaces extended outward from the housing. The site includes a sub-system of pedestrian routes accessible to everyone and extending invitation to the homeless of the city via areas of open and covered shelter. The trellis and the terraced steps at the southern edge of the site provide reconnection of the site with the river.



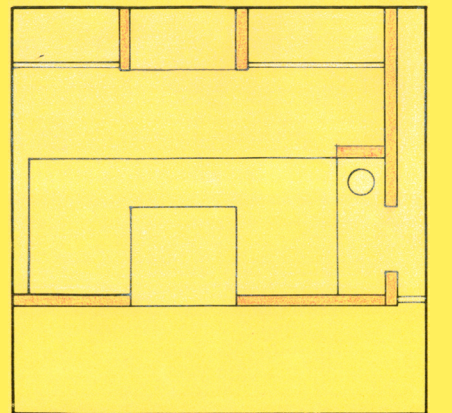
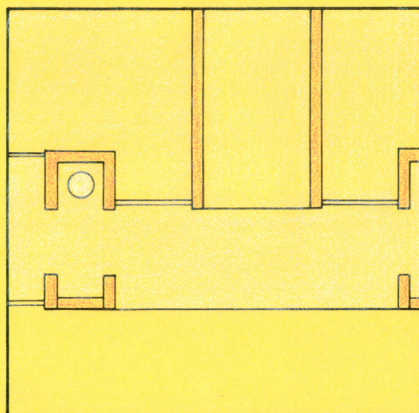
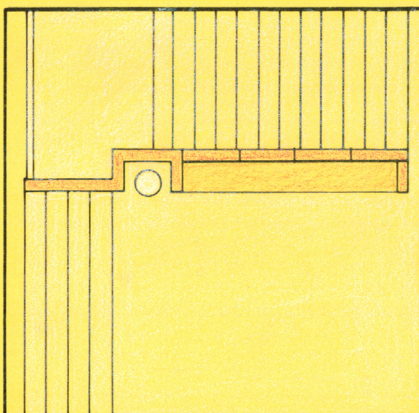
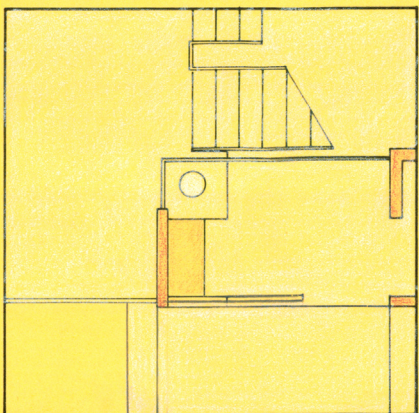
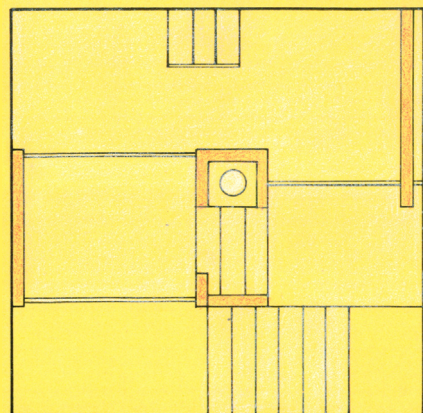
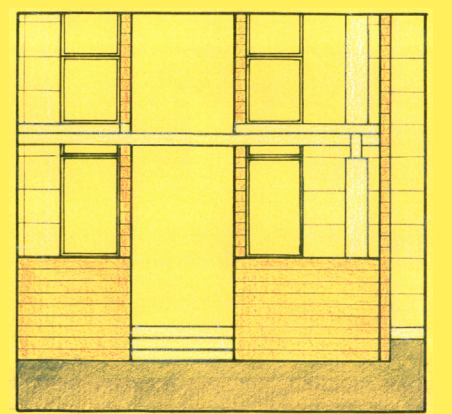
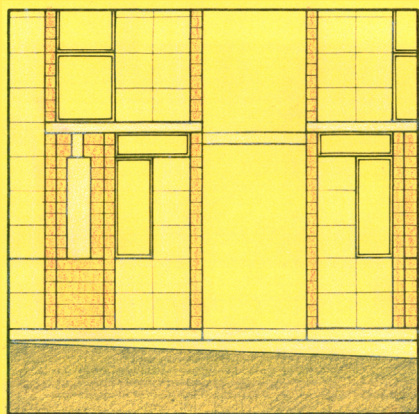
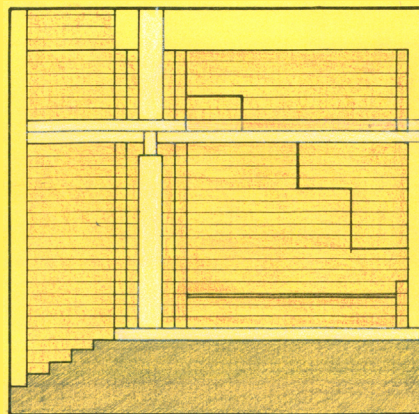
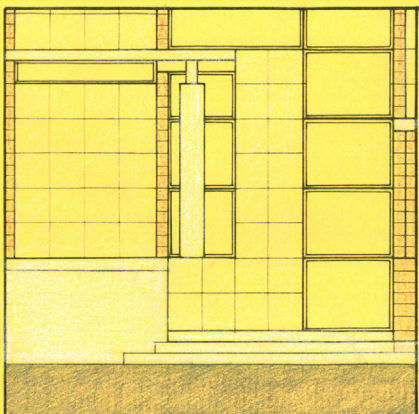
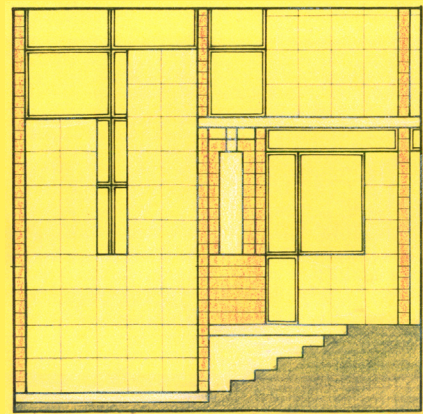
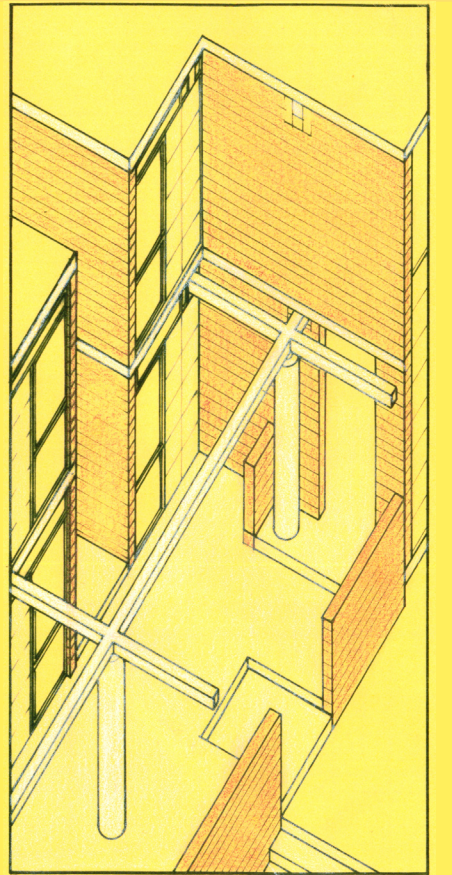
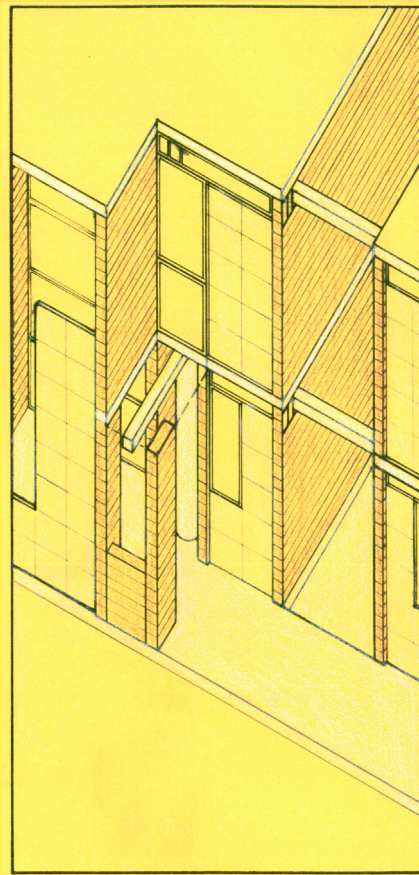
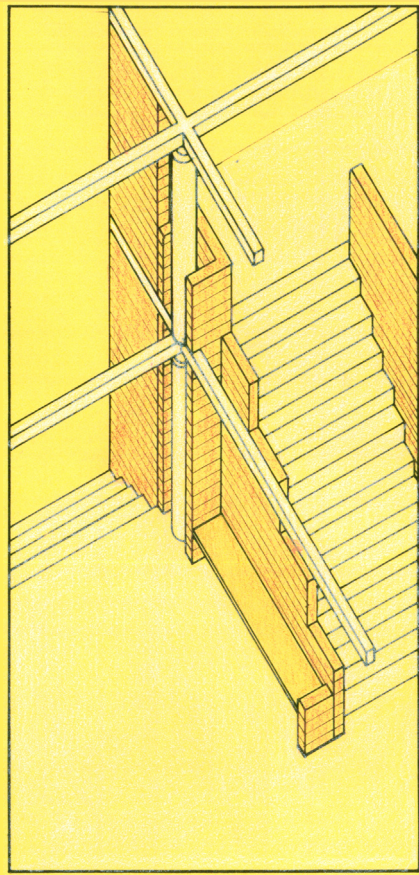
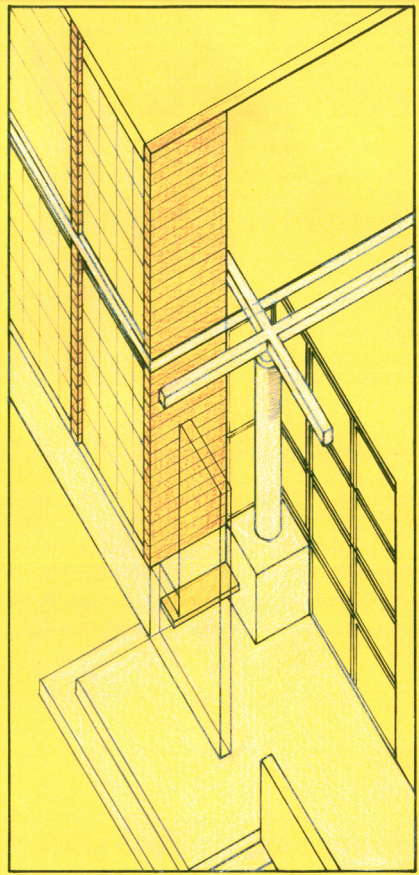
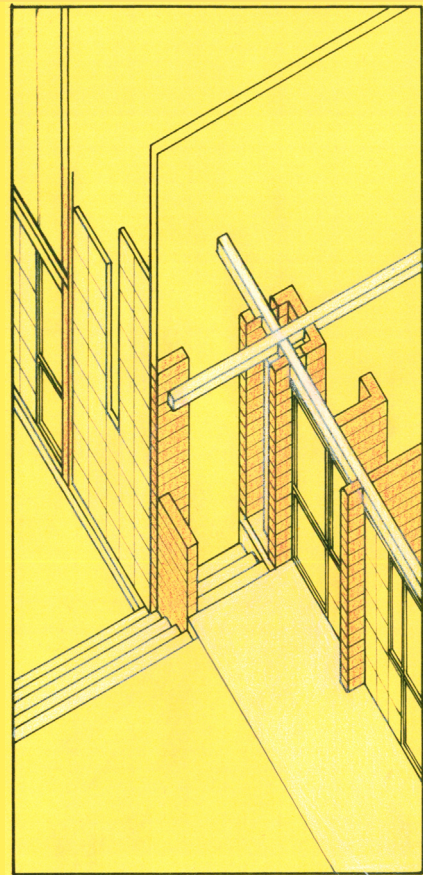
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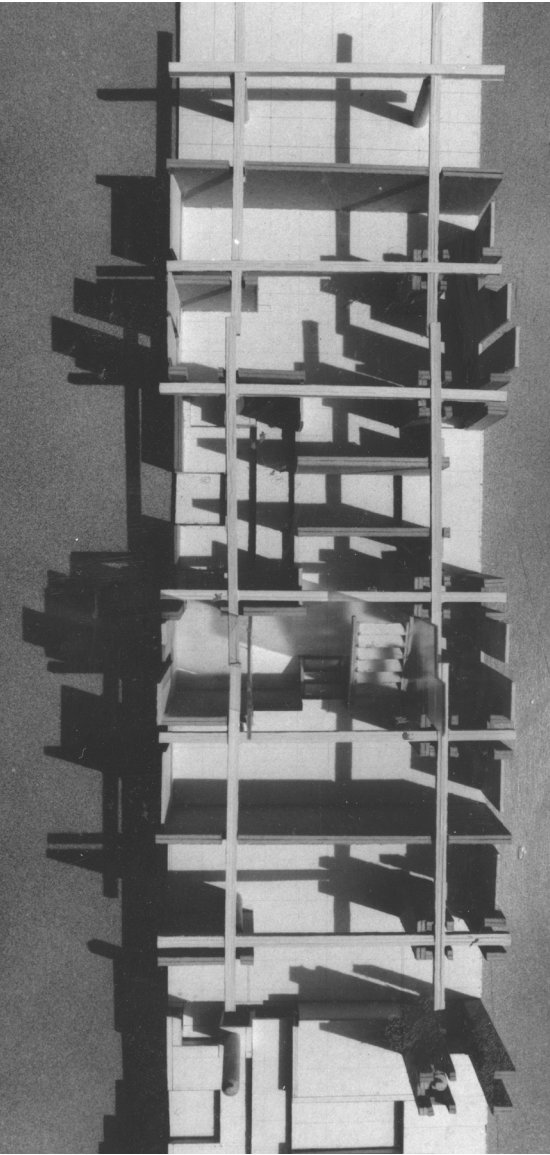
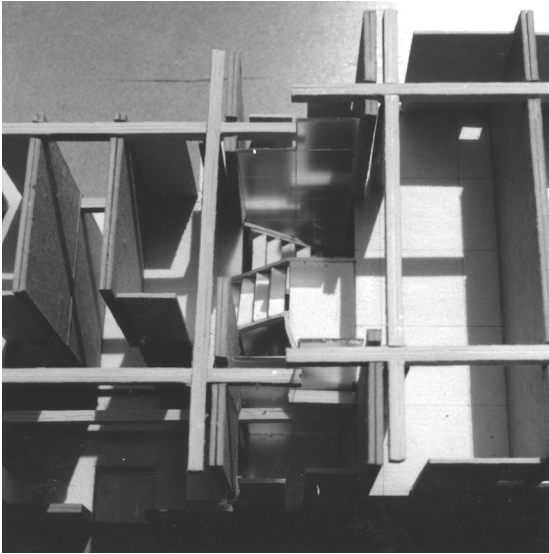
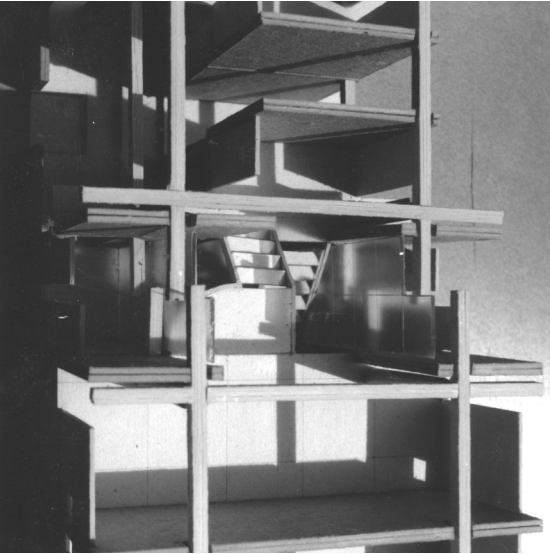
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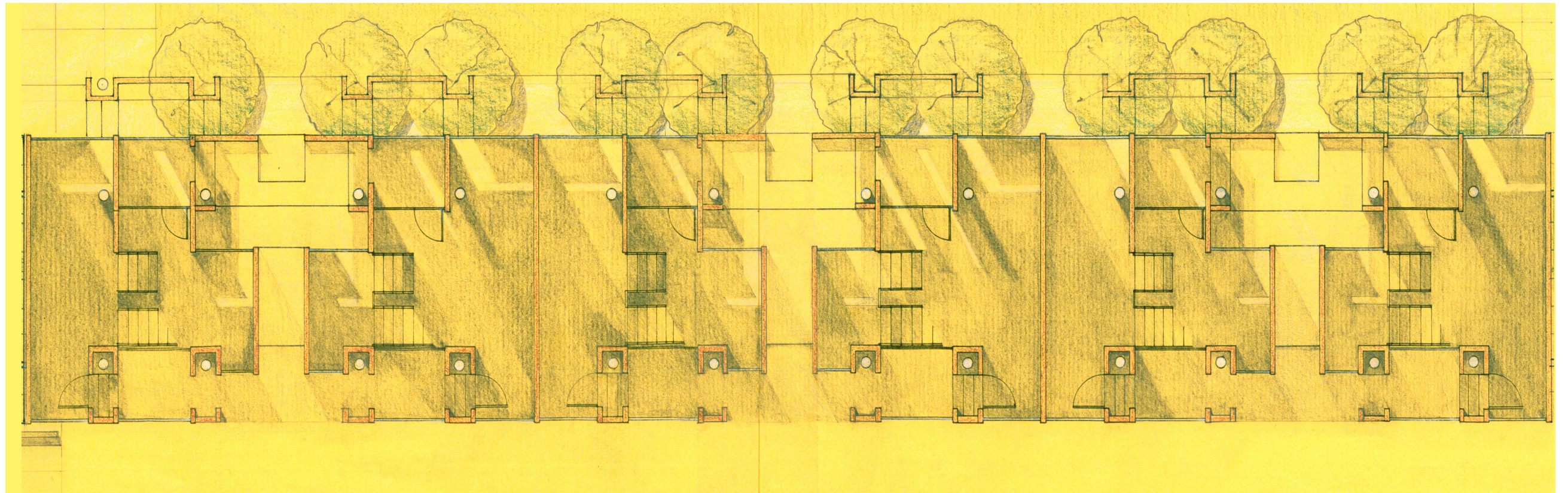
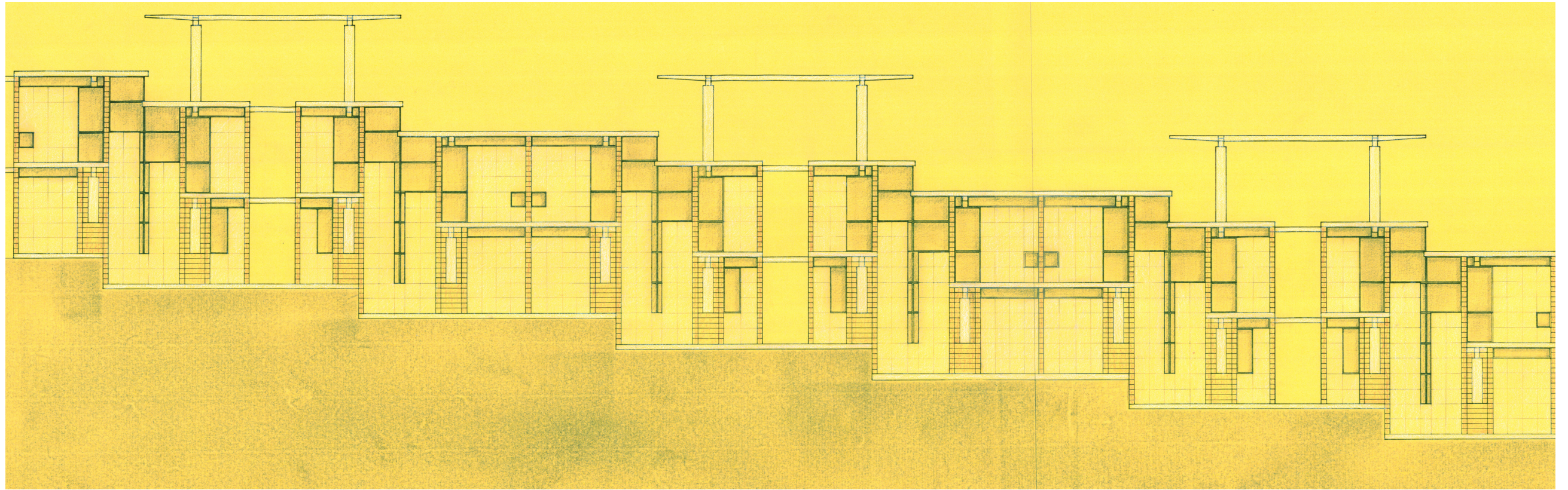
An ordered aggregate of repeating structural cells of clearly articulated architectural components: concrete beams and columns. At definite locations, the cells are offset vertically, in response to topography and program, allowing light to penetrate to fill the void of the interior and to provide personal connection with the exterior. The structure resonates; it is perceived as much as directly seen. Masonry walls, independent of the structure, define the space, making areas of relative movement and relative rest. Planar aluminum and glass, and ceramic wall panel systems define the relationship of the interior with respect to the exterior through the measure of transparency. From one location to another, structural and spatial solutions are permutations of one another.

There is a duality of purpose; a heightened sense of community in balance with the provision of areas of privacy and semi-privacy with respect to that community. There should be an awareness of the whole and, simultaneously, identity on a small scale.

Through areas of transition, areas of "in-between", the project attempts to provide for the extension and appropriation of communal space from the dwelling outward, and from the fabric of the city inward.

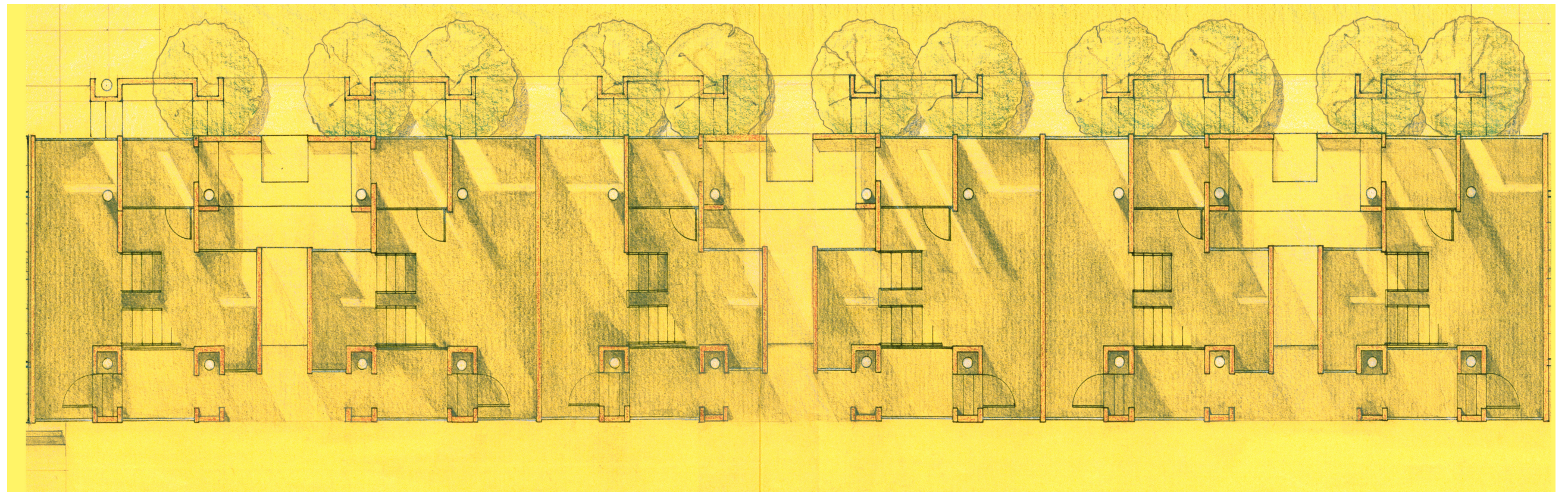
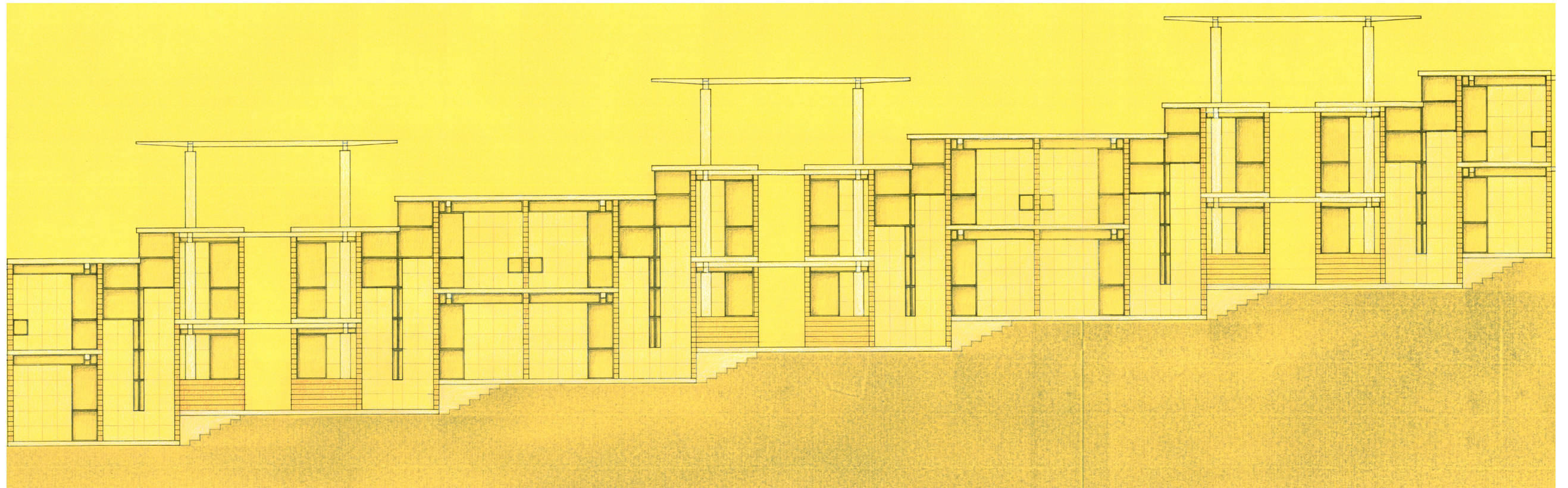






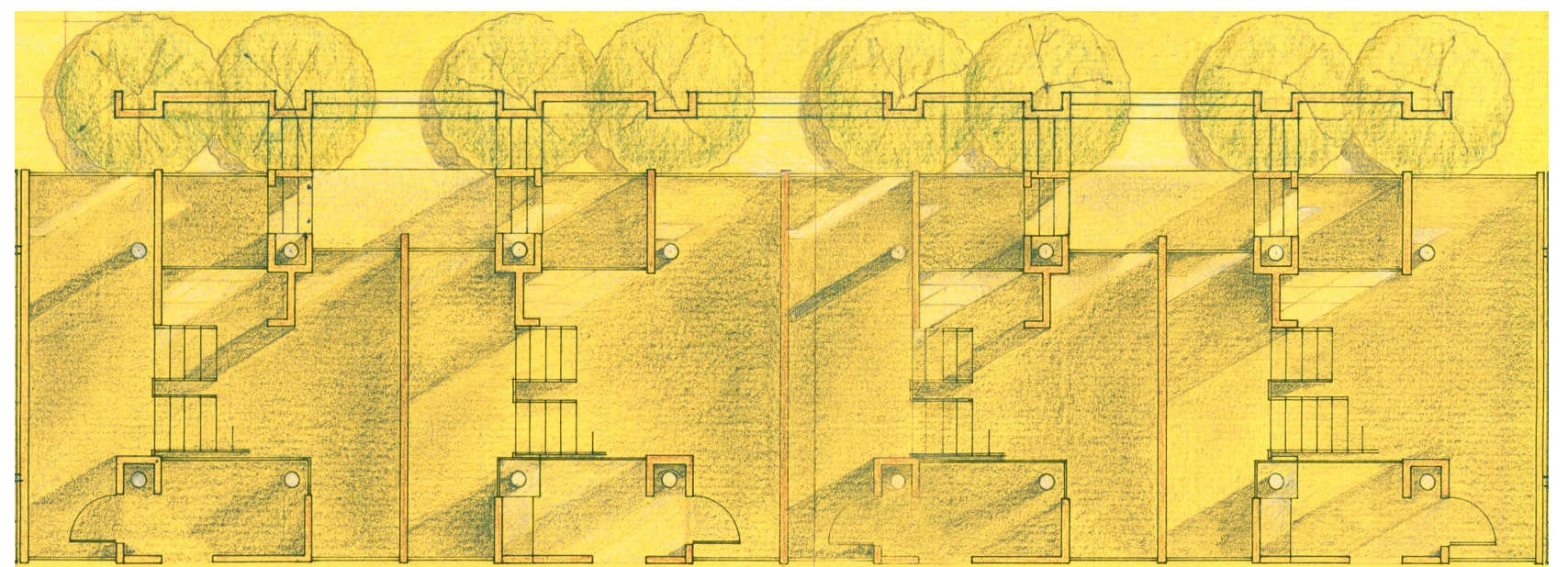
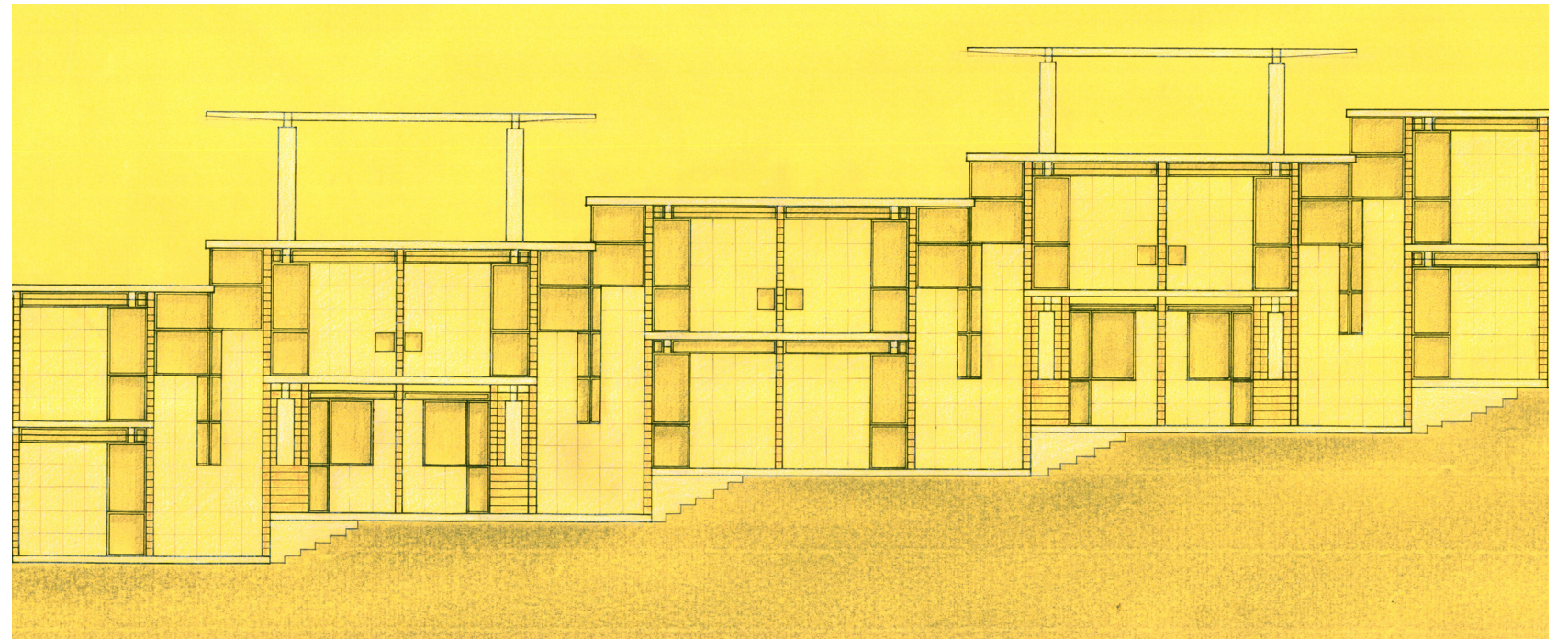
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North Housing- Plan and South Street North Elevation



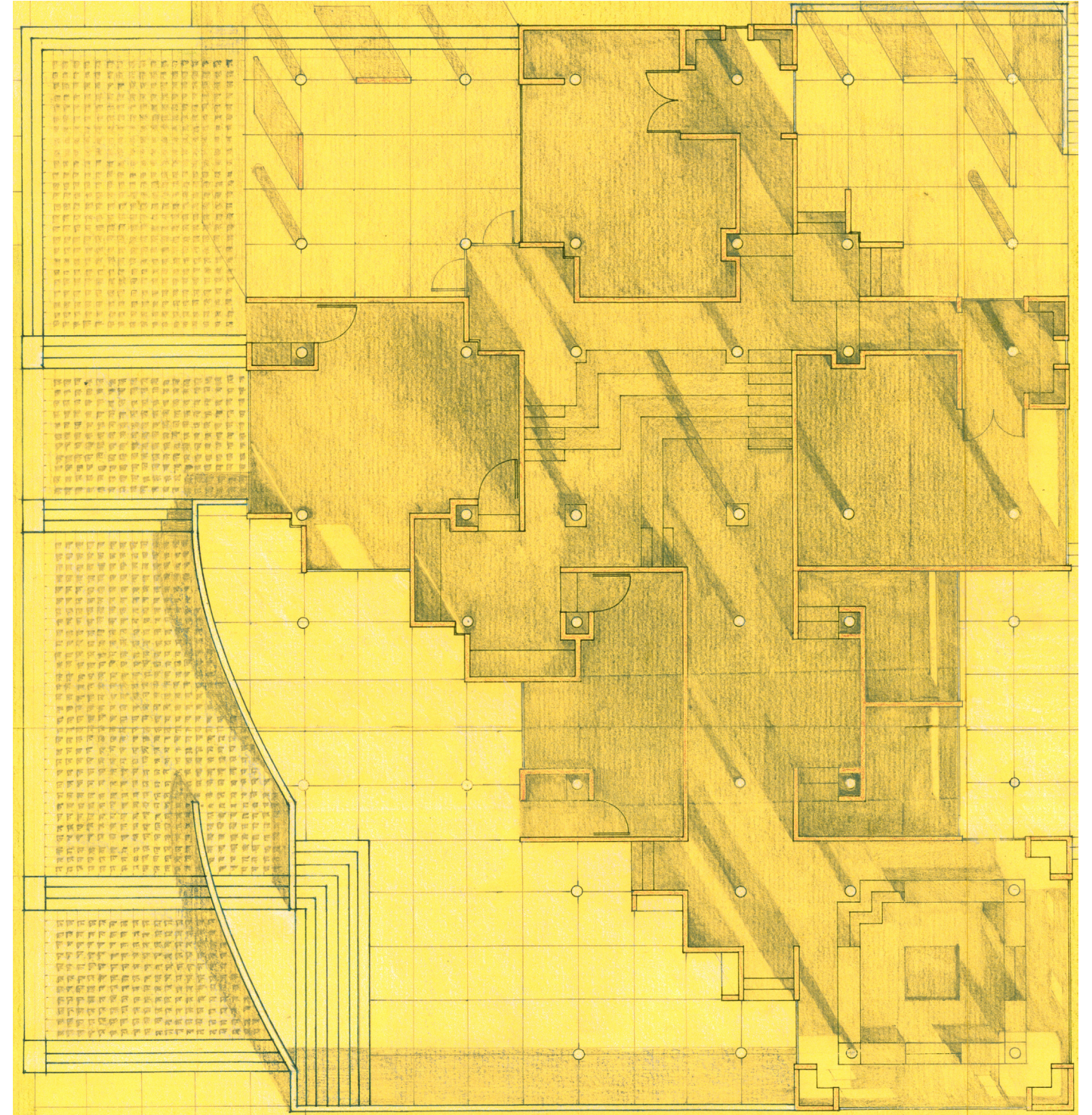
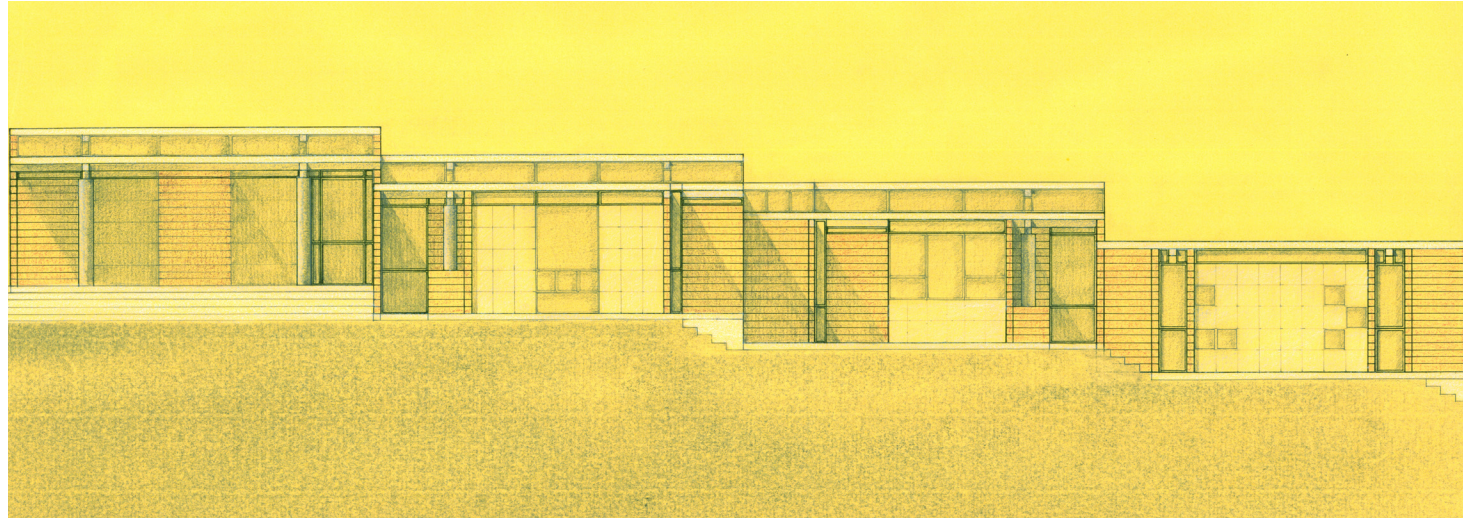
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North Housing- Plan and South Street South (Interior) Elevation



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West Housing- Plan and East (Interior) Elevation

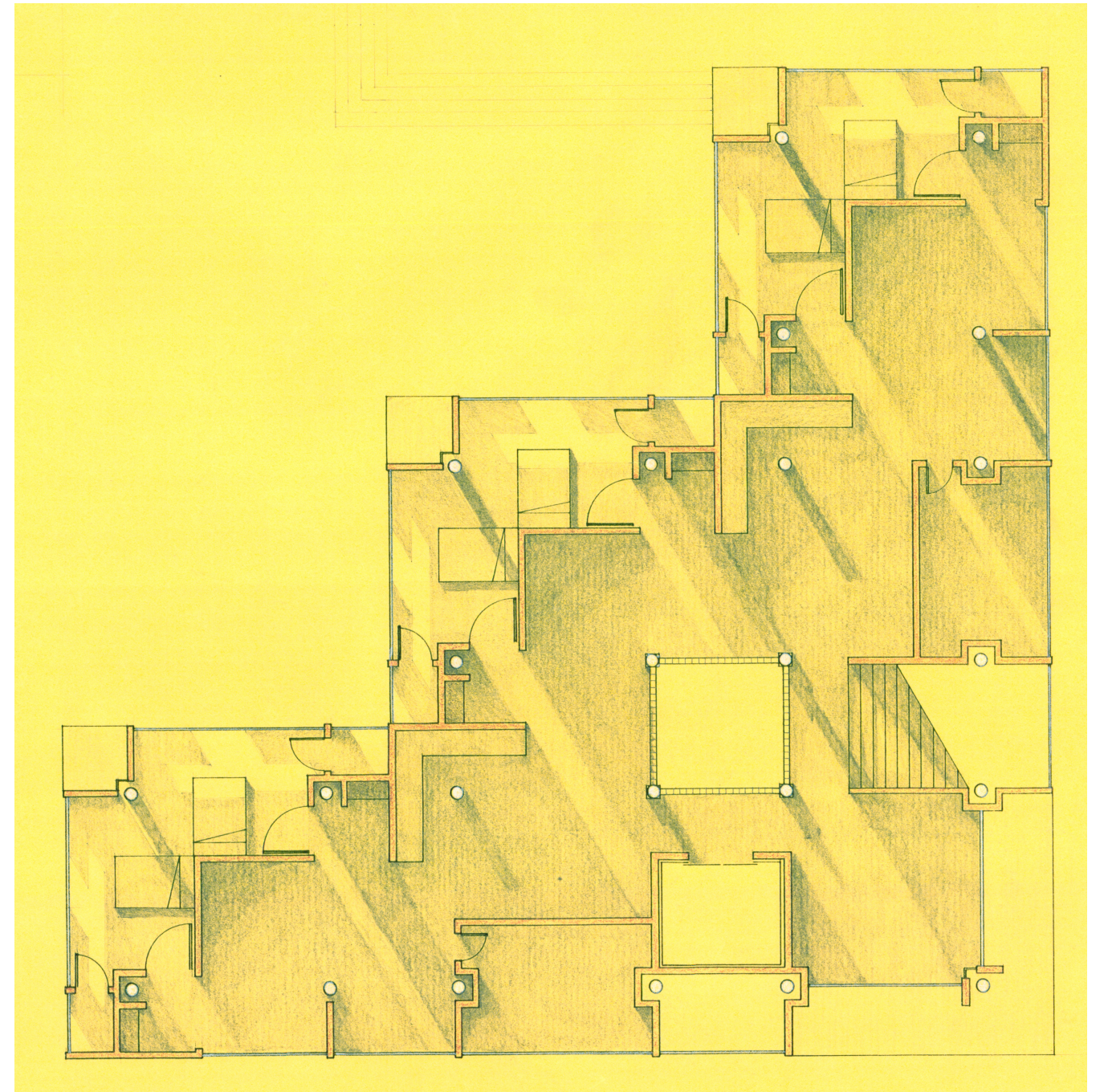


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Community Learning Center- Plan and West Elevation

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Infirmary-Plan



Findings

Problems will always torment us, because all important problems are insoluble: that is why they are important. The good comes from the continuing struggle to try and solve them, not from the vain hope of their solution.

-- Arthur Schlesinger Jr.

The project allowed for an extensive study of a way of working that, I believe, provides a firm foundation for a lifelong evolution of architectural discovery. I believe that the essentials are in there: ideas about the technics of architecture, transition, signification and so on. I'm aware that these are mixed with no small measure of social optimism but that is, perhaps, the resultant compound of my belief and my hope.

This way of working revealed tensions that require further examination in various contexts; the tension between the internal accretionary order and the façade, is a primary example. How the order of the project comes to a defined conclusion at the façade and how that order relates to the larger order, particularly in an urban context such as that considered here, require a more evolved response.

Alternately, the investigation into the idea of the space imbued with potential and founded around a static structure has proved, for me, much richer than devised mechanisms by which to accomplish "flexibility".

In total then, this is the base material and these are the touchstones to which I will return each and every time.

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Notes/ Credits

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Unless otherwise noted, photos and work are by the author.

- p.2 1
Background image:
<http://www.eapn.org/code/en/publ.asp?num=30§ion=x1x>
2
Homeless person in a cardboard box shelter: http://sf.metblogs.com/archives/2006/03/now_how_much_would_you_pay.phtml
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Homeless person under a sheet of cardboard: http://logout.sh.cvut.cz/~dave/ub_homeless1.html
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3 and 4
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