

A Woven Place

By Neal Terrell

Acknowledgements

I dedicate this book to my grandparents Frank D. Conant Jr. and Joy H. Conant.

I would like to thank my committee, Bill Brown, Hunter Pittman, and Hans Rott.

My gratitude to you all for what I have gained through our years together. A greater understanding of the world we live in, who we are, and the future of possibilities.

I would also like to thank, my beautiful wife Dawn Terrell, my family, friends and colleagues for their constant support.

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INTRODUCTION

Material, structure and construction are the basis of architecture. We build to meet the desires, needs and uses of our daily lives. The reverence we have for our time and place on earth is evident in our built environment, the world of things in which we live, work and play.

The making of drawings and models are the impetus for what will be built. They are representations once removed from the material transformations they propose. A representation can be a tool or an image. The production of an image and the construction of drawings and models as tools are two separate courses.

A building can not be known through images alone. In the production of an image, the intended representation is not revealed through a process, rather it is certain in the beginning. This type of illustration is concerned with only one aspect of a possibility, the visual. Yet, it is the understanding of material, structure and construction that has the power to transform ideas into reality.

The quality of what is to be built and the impact it will have on the fabric of place is consistent with the designer's engaged study and the subsequent complex ordering of the 'things of architecture' that are presented in his proposal: the clearing of the site and the excavated earth, the wall of poured concrete and the impression of

its formwork forever embedded, the tooled masonry joint and the shadow it casts, the floor meeting the wall, the wall changing direction, the ceiling above, the place formed within and its relation to the greater whole of which it becomes.

Through the construction of drawings and models we are making tools. The physical properties of the things of architecture are the measure for these constructs: the weight bearing, the column supporting, the beam spanning, the bricks stacking and the sun washing over all. The intent of the tool is the knowledge gained through its making, the rigor of questioning, proposing and assessing. The concrete structural and aesthetic qualities of material confront the abstract ideas of the design, and the distance between the representation and the future reality it proposes narrows.

A building is designed from a set of initial intended needs and uses. Yet, a building is a construction of its time and values that will stand for future generations long after the client and architect have faded. Therefore, an architectural intervention has a responsibility to the greater whole, the city.

The subject of the thesis is the design of a house in Wilmington, North Carolina. The concern of the design is not the building as an object. The design is a proposal in architectural terms

of what is necessary to render concrete the possibilities of a specific location that will serve our ever-changing daily needs, uses and desires with dignity. The proposal is based on an investigation of the fabric of place into which the building will be woven. That fabric consists of the natural landscape and the human interventions that have transformed it throughout its history.



PLACE

Wilmington was founded as a port at the mouth of the Cape Fear River. The river begins in the north-central part of the state, near Greensboro, and flows southeast to the Atlantic Ocean. The original residential neighborhoods begin at Fifth Street, east of the river. The blocks in this area were divided into long narrow lots, roughly thirty feet wide by one hundred and sixty feet deep. The house is sited on one of two adjacent empty lots in the eighth block of Dock Street.

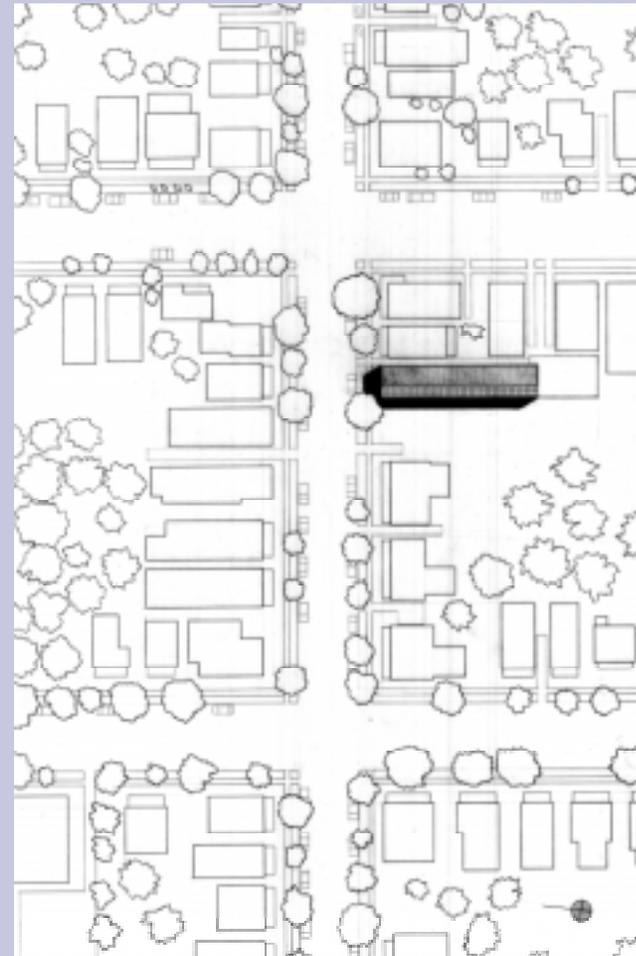
The deep narrow site is reflected in the theme of the design. Three longitudinal walls perpendicular to the sidewalk structure the house. The walls form three spaces, two internal and one external. The house consists of two volumes, the living area and the corridor along which it is ordered. An external passageway leads to the rear garden in the interstitial space created by the new construction and the existing building.

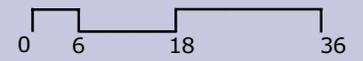
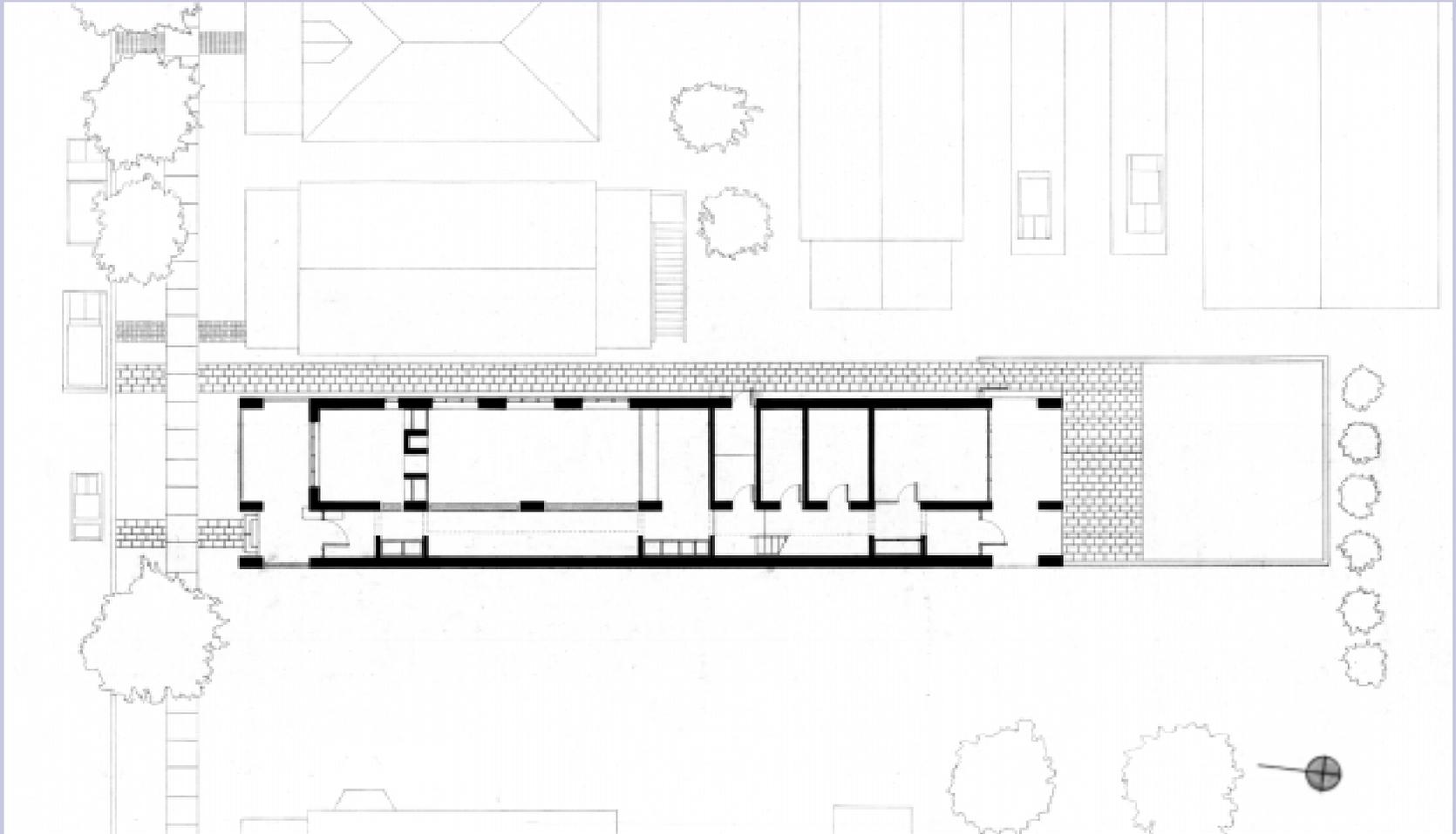


right
plan of downtown Wilmington

far right
800 block of Dock Street

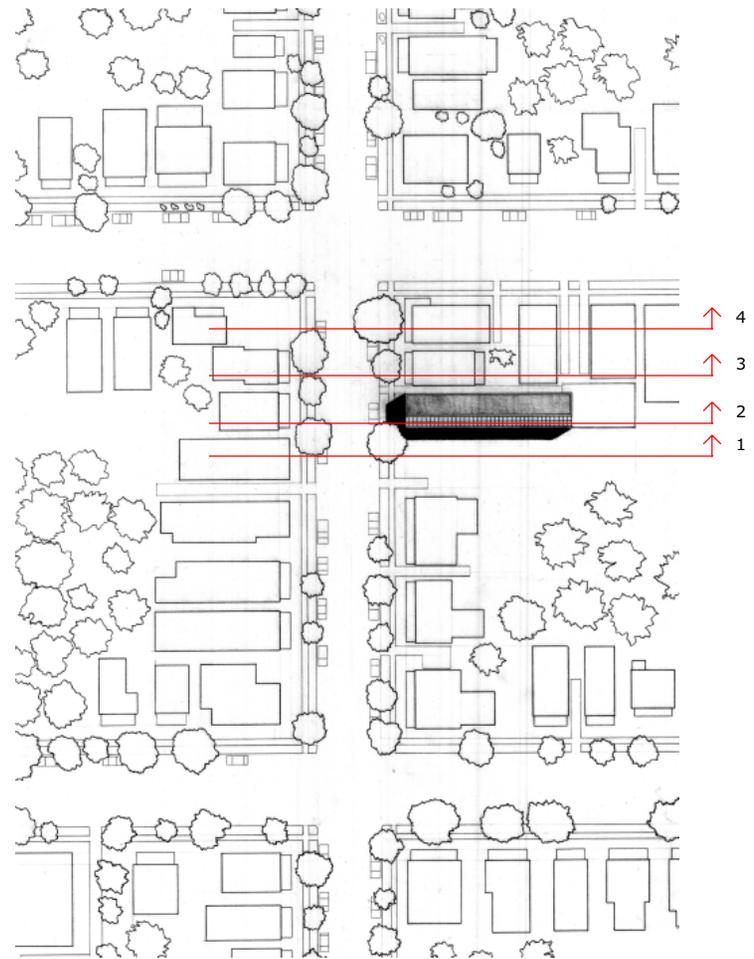
facing page
site plan



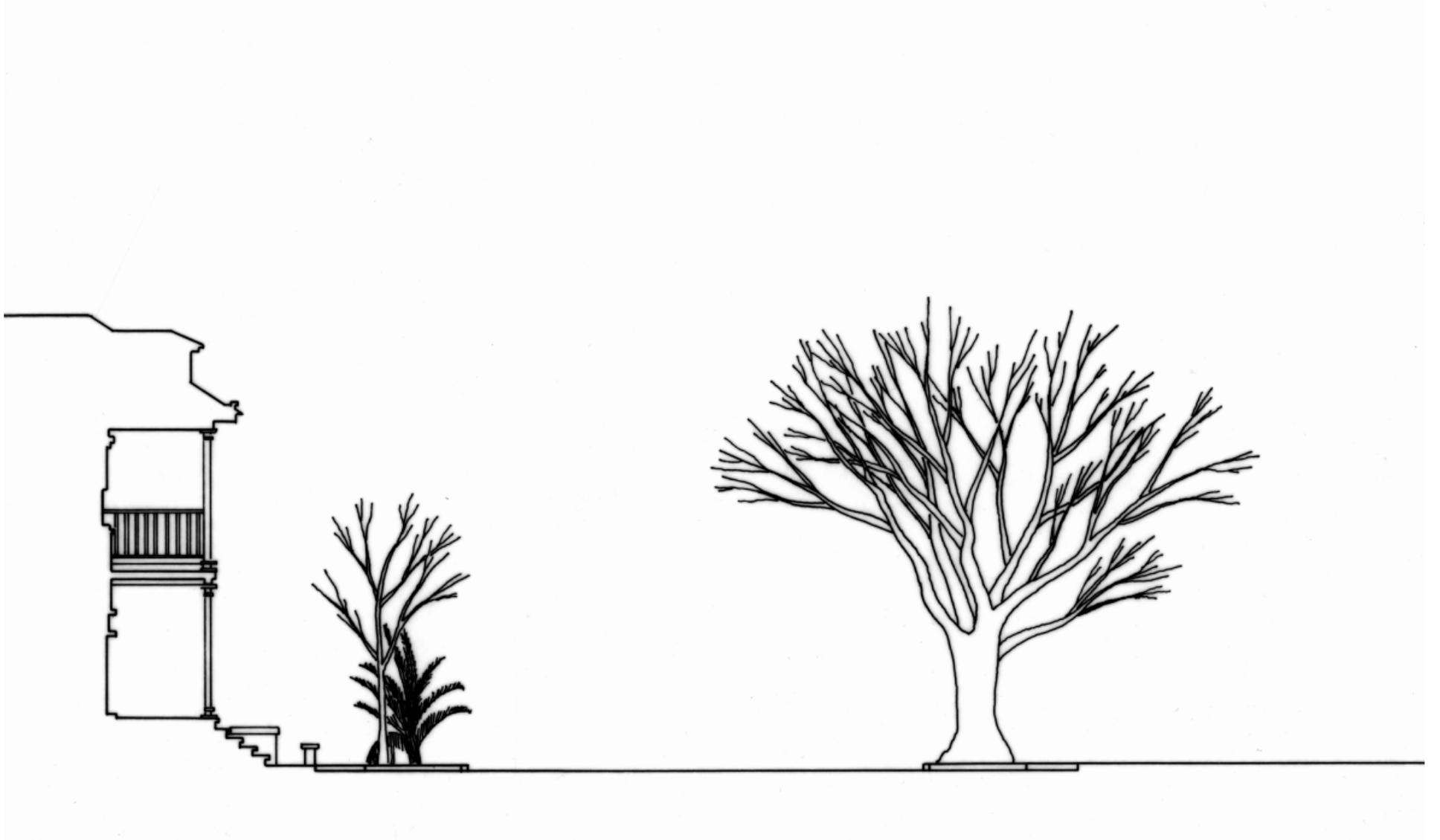


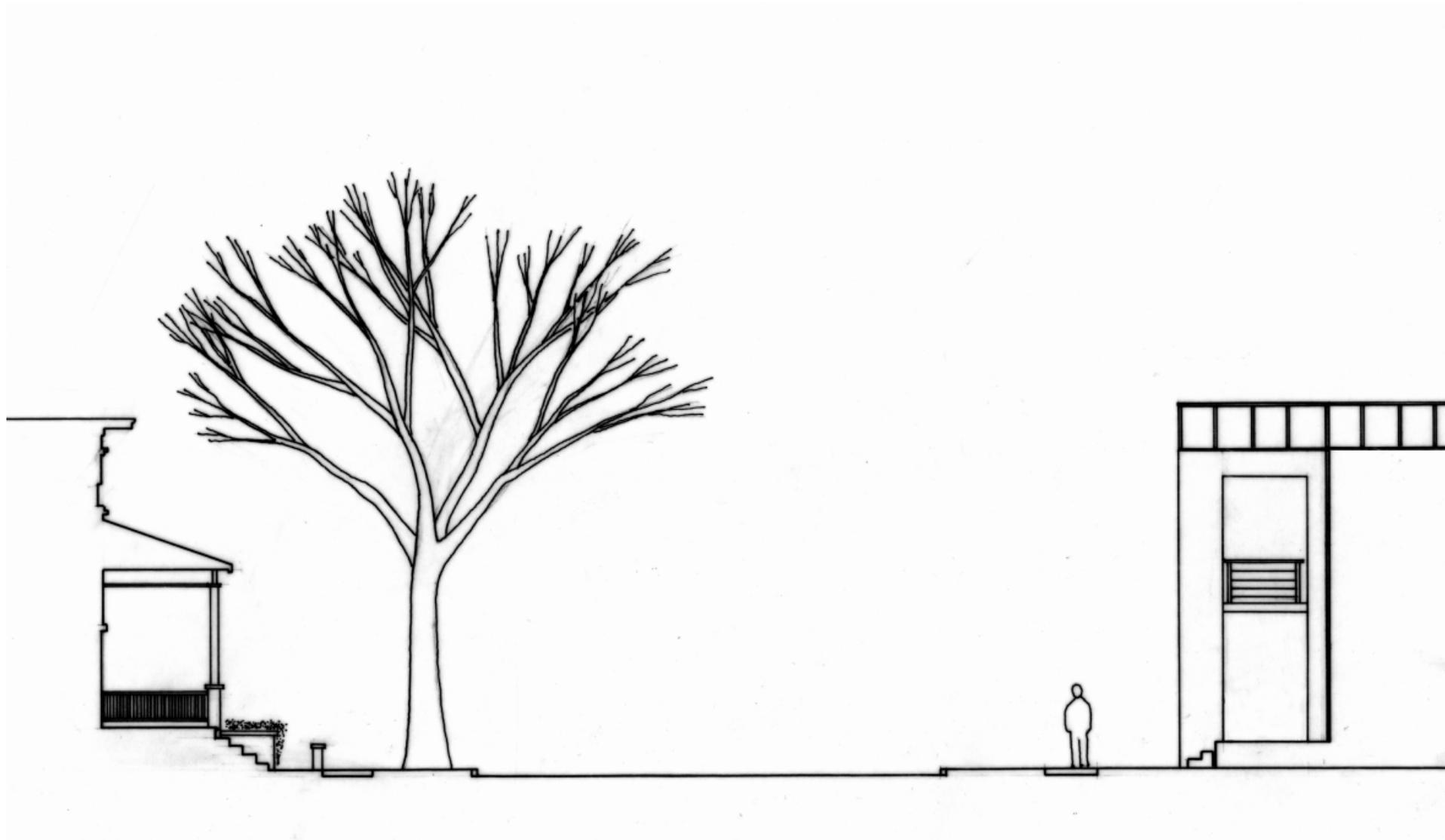
In the city, the constructed public, semi-public and private realms take a variety of forms. It is the coalescence of these three forms, rather than their isolation from one another, which establishes a fabric that sustains within it the possibilities for the growth of both the individual and the community. The tectonic fabric of Dock Street bridges the two realms and each has the possibility to enhance the other. Within the street, these realms take concrete form as the sidewalk, the porch and the house. A series of sections were constructed to investigate the structure of the street.

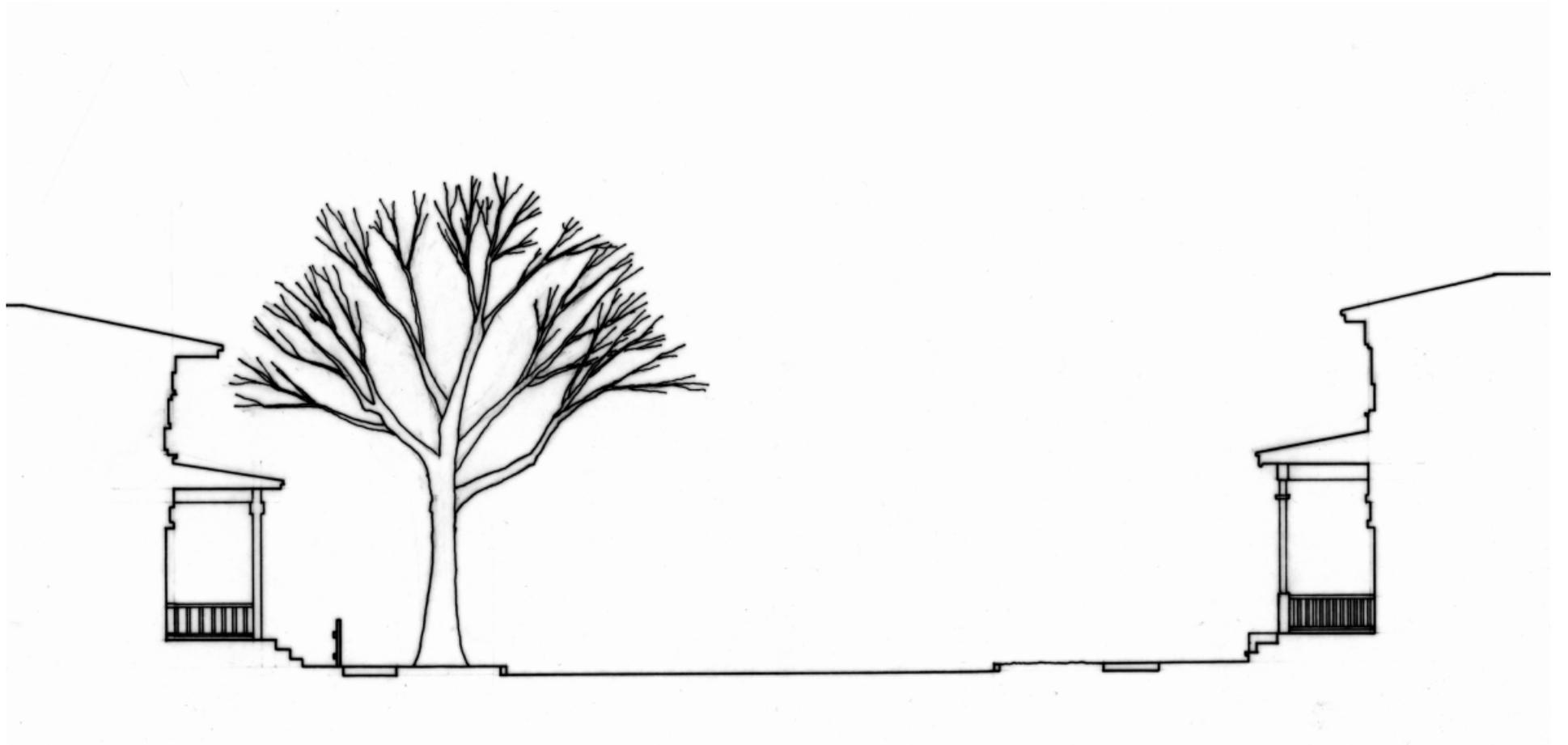
As the design progressed, the sections served the understanding of what was being proposed. Sketches could be placed within the composition of the street. The rythm of the sidewalk to the framed porch to the mass of the house became evident. The existing structure of Dock Street is reinforced by the proposal.

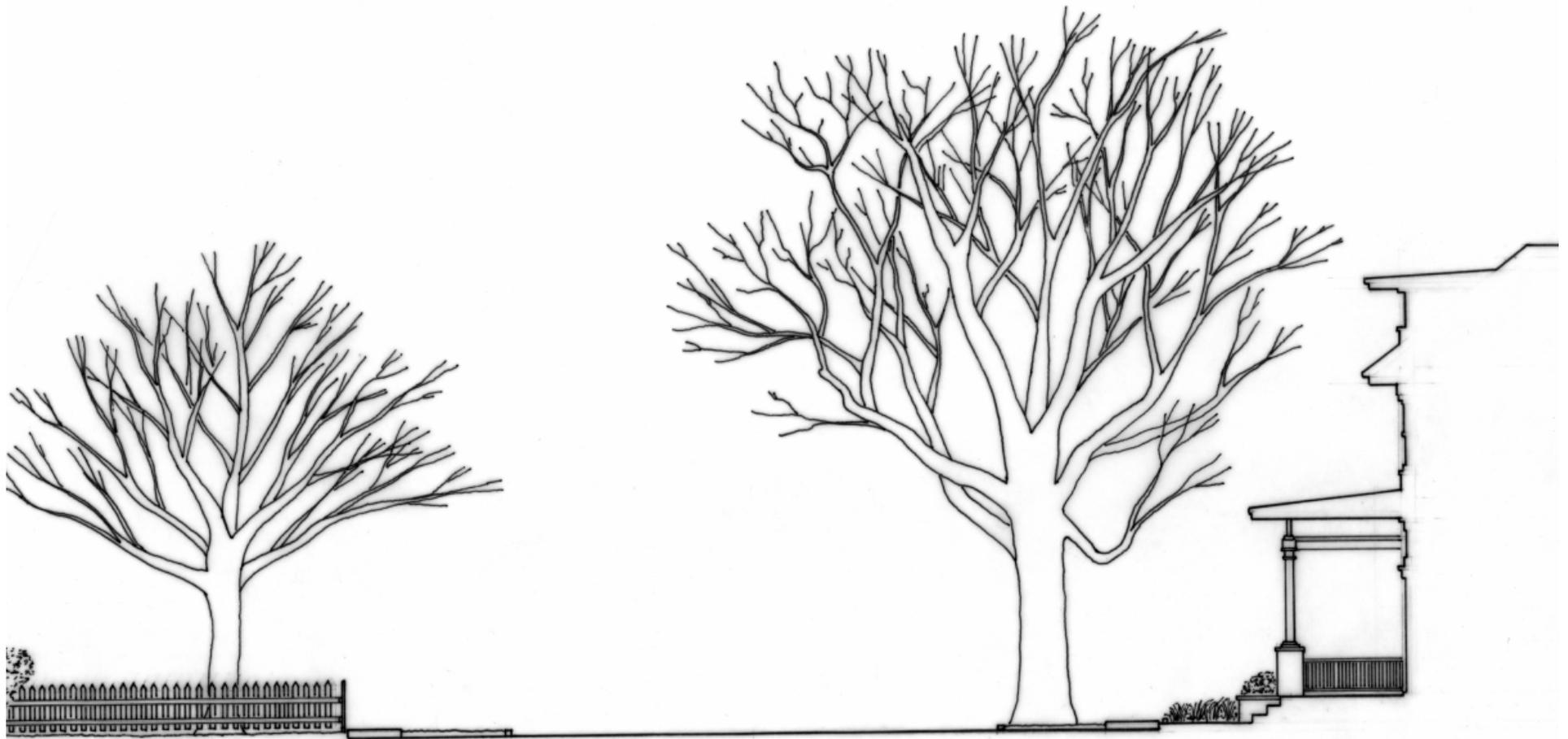


following pages
sections along Dock Street









A characteristic of traditional building in the region was the use of brick pilasters to elevate the ground floor above the earth, creating a crawlspace for natural ventilation and to reduce the chance of water damage from flooding. This building method results in the front porch being elevated above the sidewalk, establishing a physical transition between the sidewalk and house. This necessary relationship was incorporated into the design of the house.

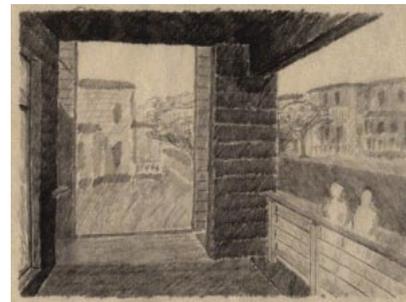
The front porch and interior corridor are framed above the slab on grade. The porch is the threshold of the house, defining the boundary of the public sidewalk and the private residence. Although the porch is a significant element in the composition of the street, the difference in elevation between the sidewalk and the porch reinforces its role as a place that belongs to the house.



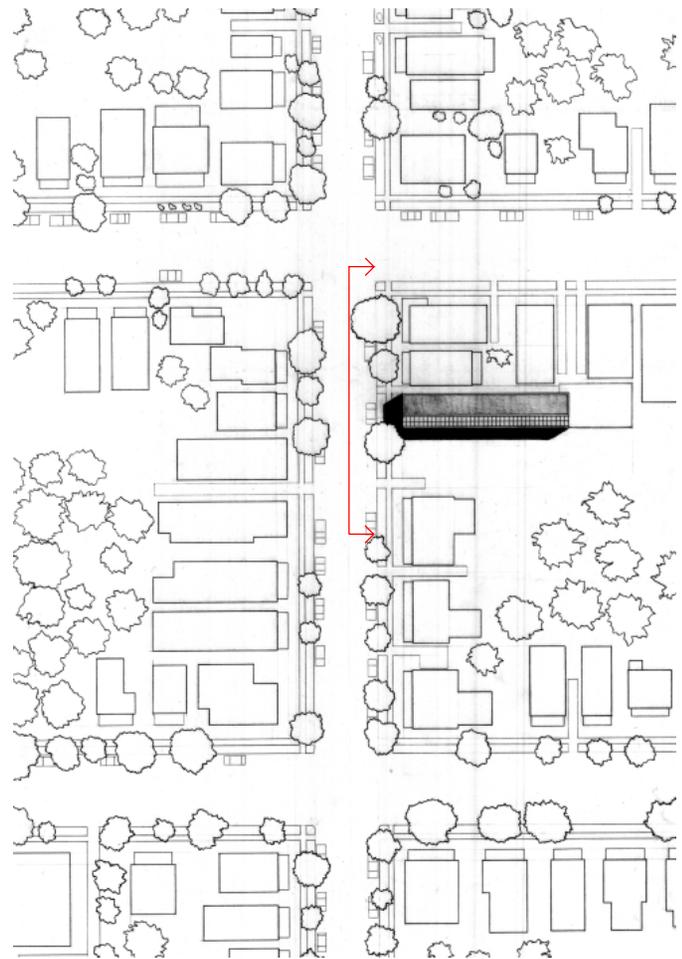
above right
elevation of model

right
perspective from porch facing east

facing page
perspective from sidewalk facing west







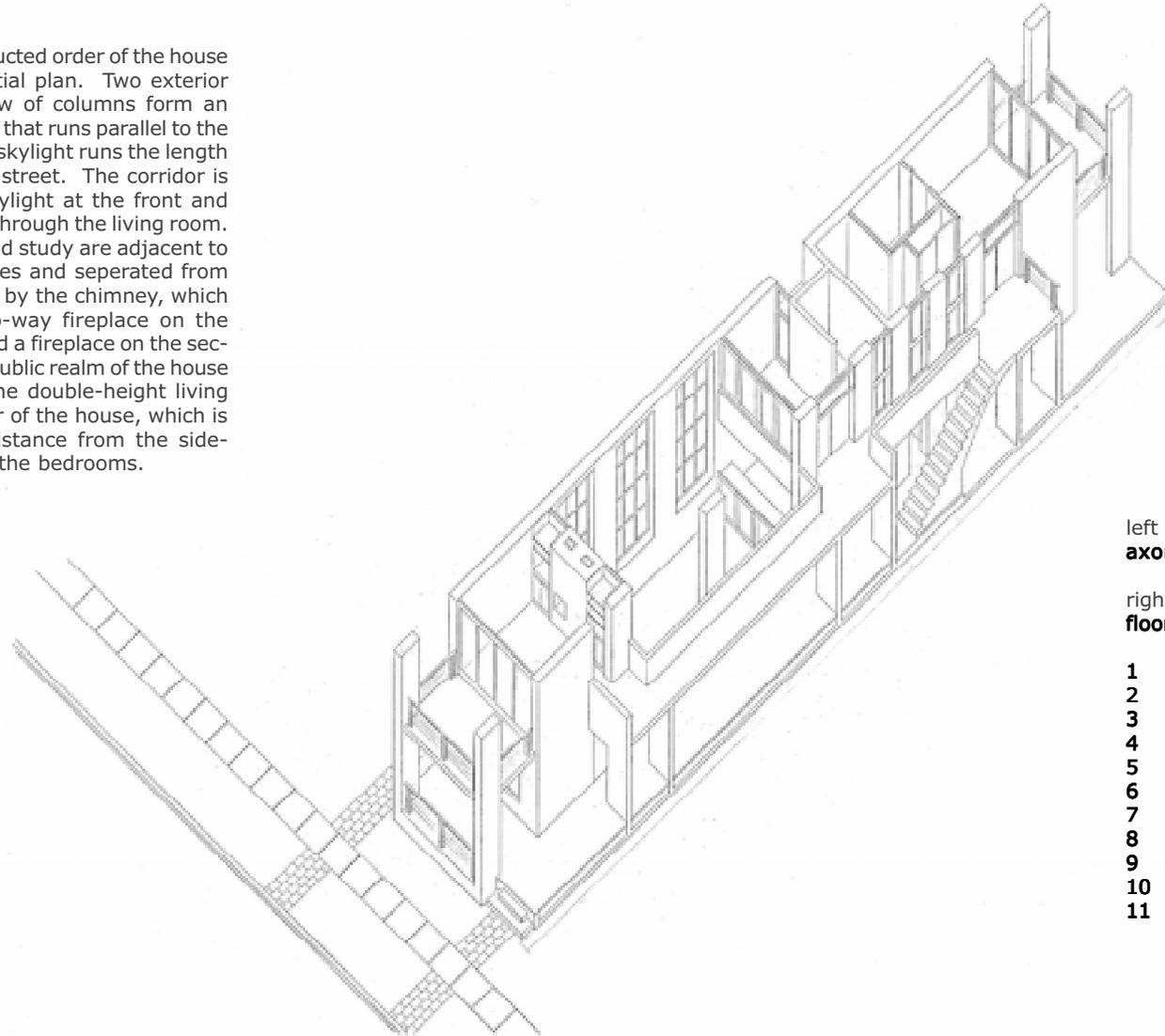
right
photos of Dock Street
facing page
elevation



STRUCTURE the order of complexity

The constructed order of the house defines its spatial plan. Two exterior walls and a row of columns form an interior corridor that runs parallel to the living areas. A skylight runs the length of this internal street. The corridor is open to the skylight at the front and rear entry and through the living room.

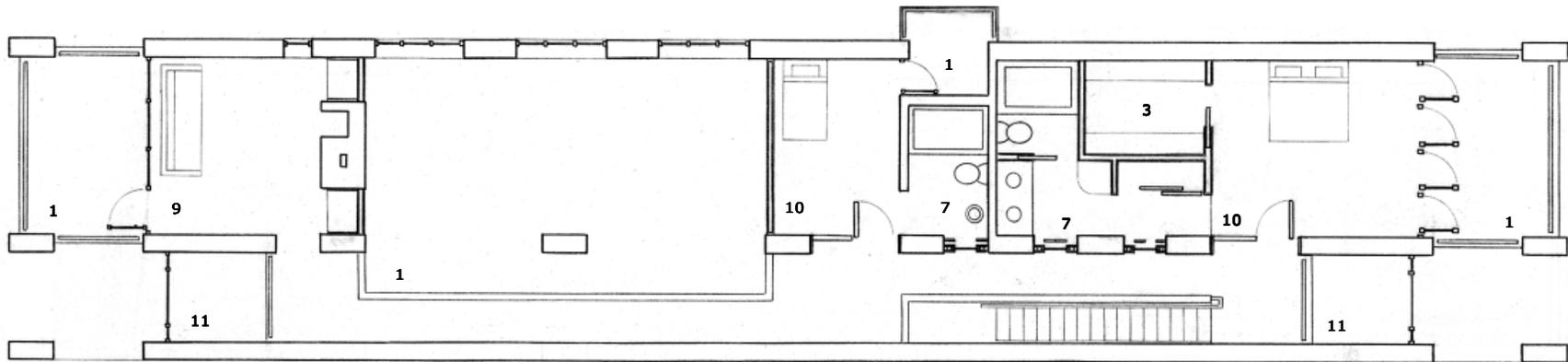
The den and study are adjacent to the front porches and separated from the living room by the chimney, which contains a two-way fireplace on the ground floor and a fireplace on the second floor. The public realm of the house is formed by the double-height living room. The rear of the house, which is the greatest distance from the sidewalk, contains the bedrooms.



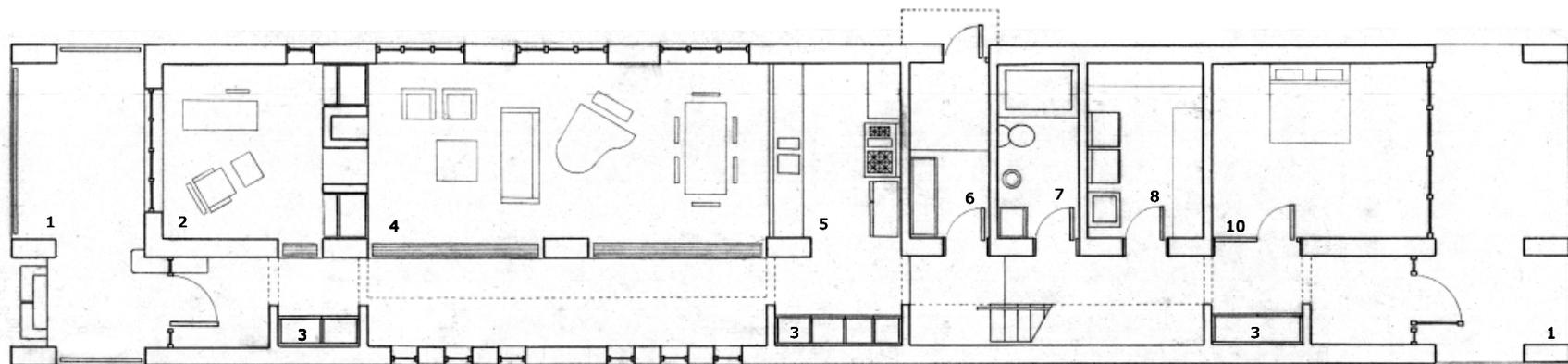
left
axon

right
floor plans

- 1 porch
- 2 study
- 3 closet
- 4 living / dining
- 5 kitchen
- 6 pantry
- 7 bath
- 8 wash room
- 9 den
- 10 bedroom
- 11 open to below



second floor plan



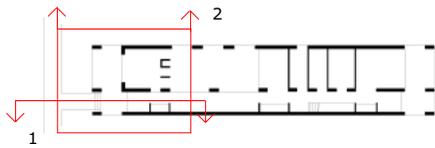
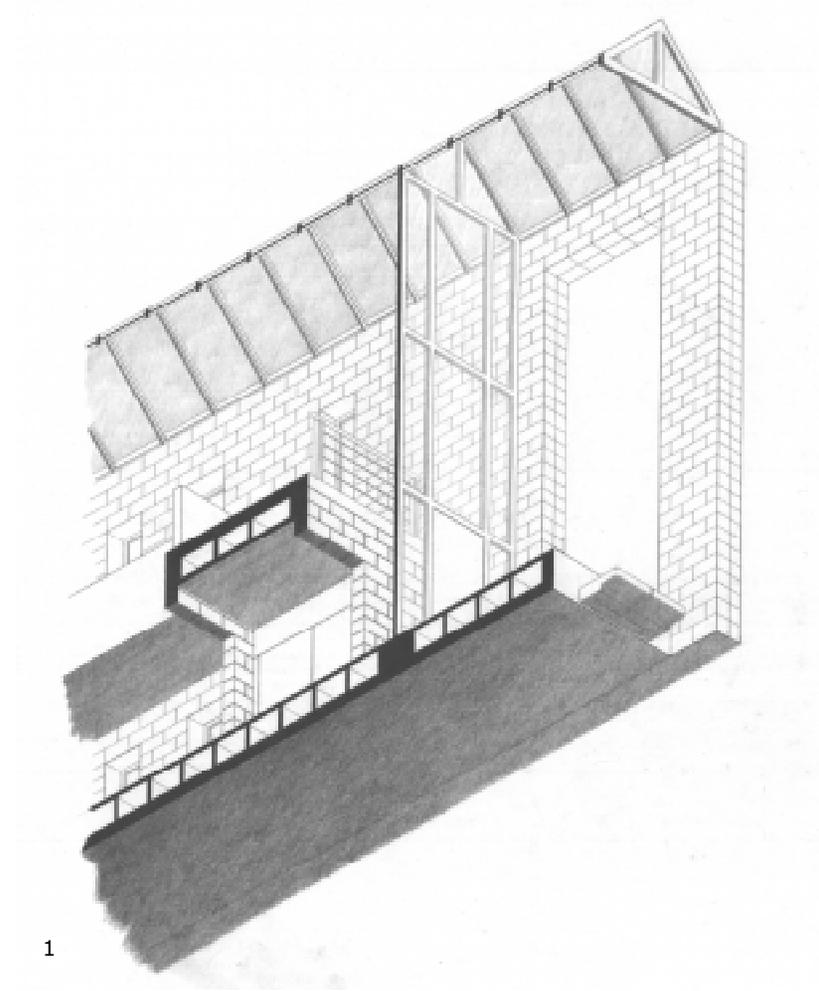
first floor plan

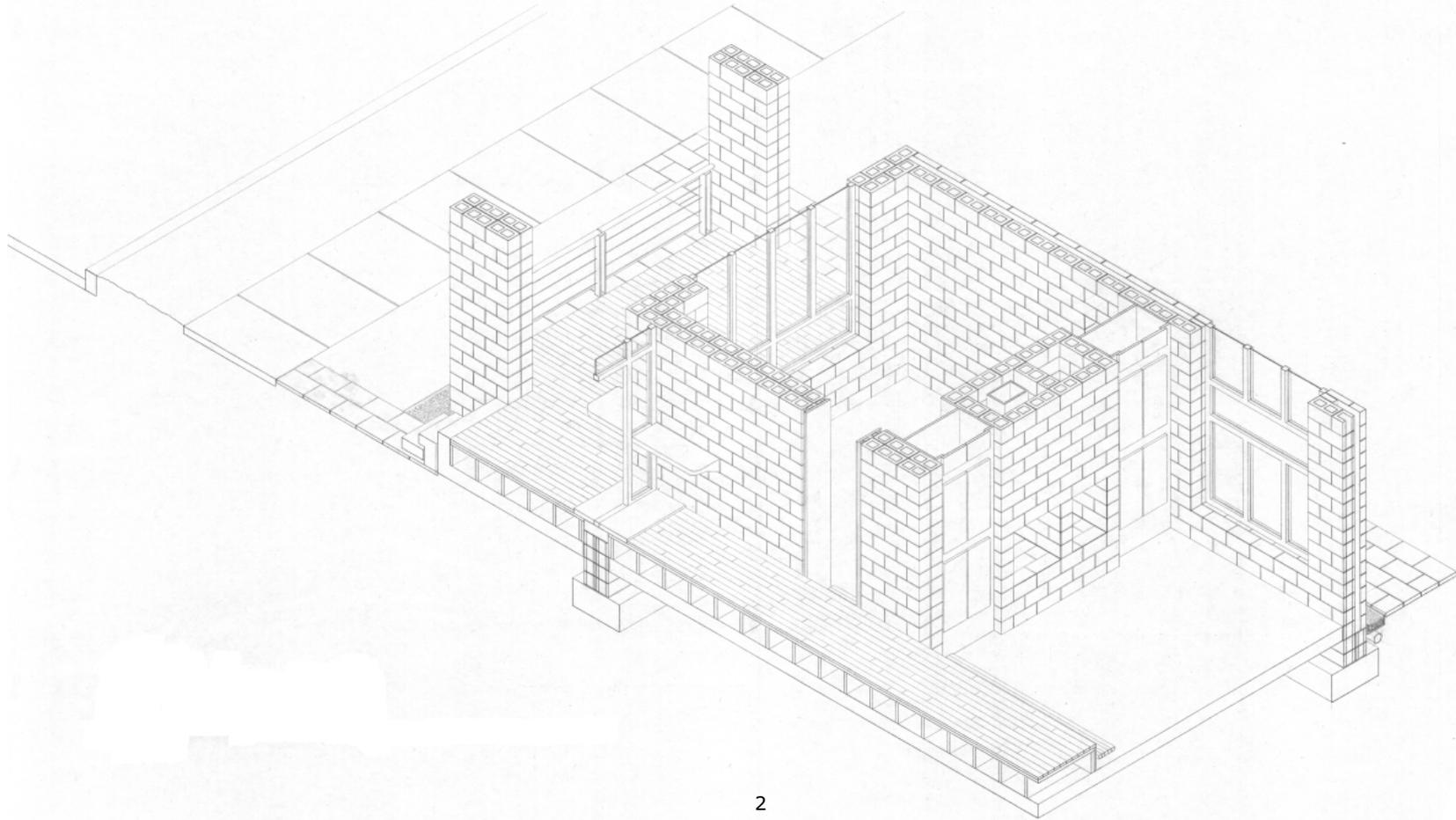


The skylight extends over the double-height entry, adjacent to the front porch to provide cover in inclement weather. The wood floor of the porch, framed above the slab on grade, continues into the house as the floor of the corridor. The closet, across from the study entrance, compresses the corridor horizontally, marking the transition into the living area of the house.

right
worm view axonometric of entry

facing page
axonometric section of entry



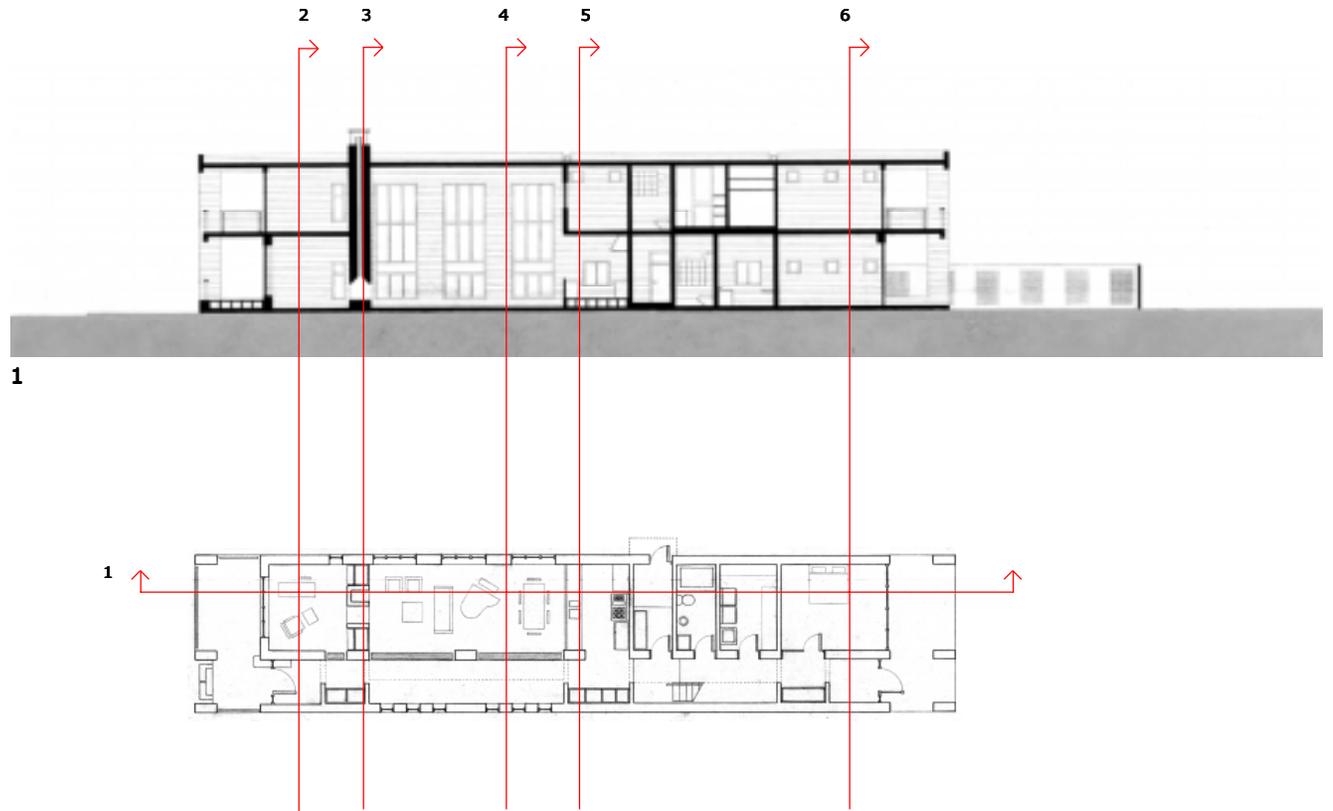


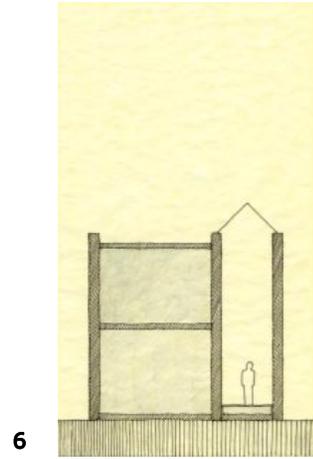
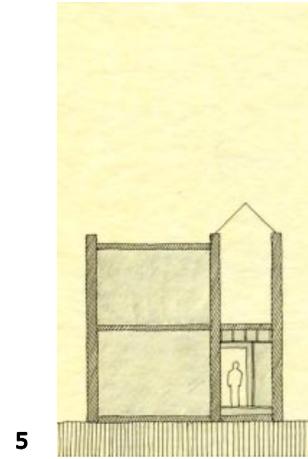
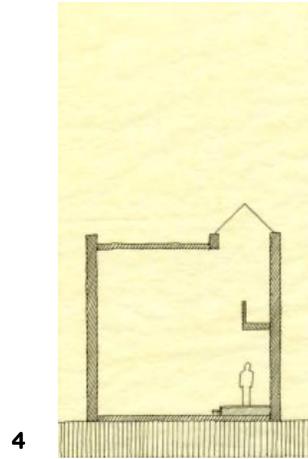
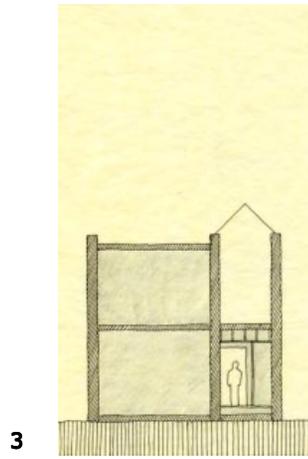
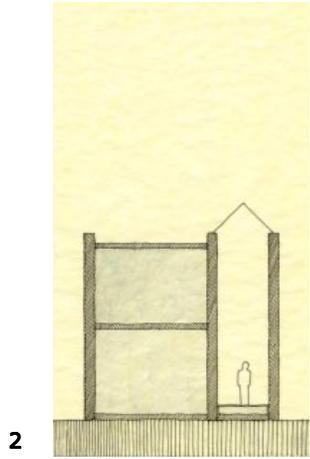
2

On the ground floor, the transitions between the different areas of the house are marked by a compression of the corridor. The width of the path is decreased by the stair and closets located at both entries and adjacent to the kitchen. The balcony that serves the second floor rooms compresses the corridor vertically.

right
plan and section

facing page
cross sections





The narrow site prompted an early study of how daylight could enter the building. Due to the proximity of the adjacent building, a study model of a skylight was constructed. In early drawings, the skylight element ran along the eastern side of the house. The model was photographed and studied in daylight and the orientation of the skylight was changed. When the model was rotated, placing the skylight along the western wall, morning light washed the adjacent wall and afternoon light penetrated into the living area.

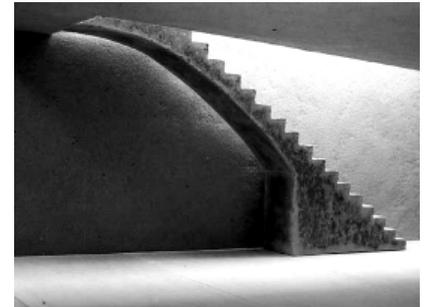
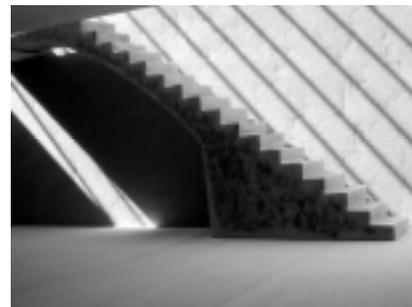
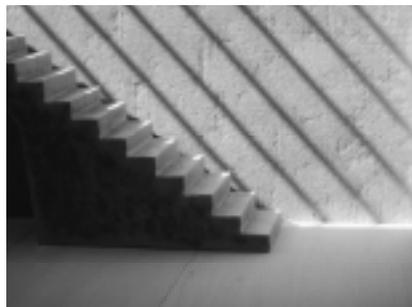
right

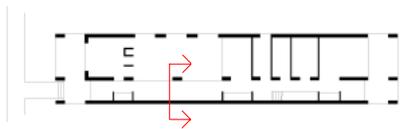
early studies of skylight

note: Stair used for studies is a cast replica of the stair designed by Clark and Menefee for the Middleton Inn, in Charleston, South Carolina.

facing page

axonometric section through the skylight

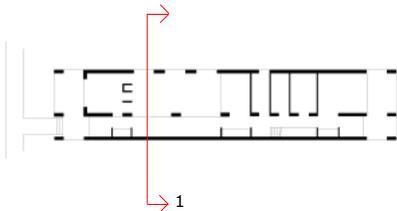




right
model photograph of eastern wall

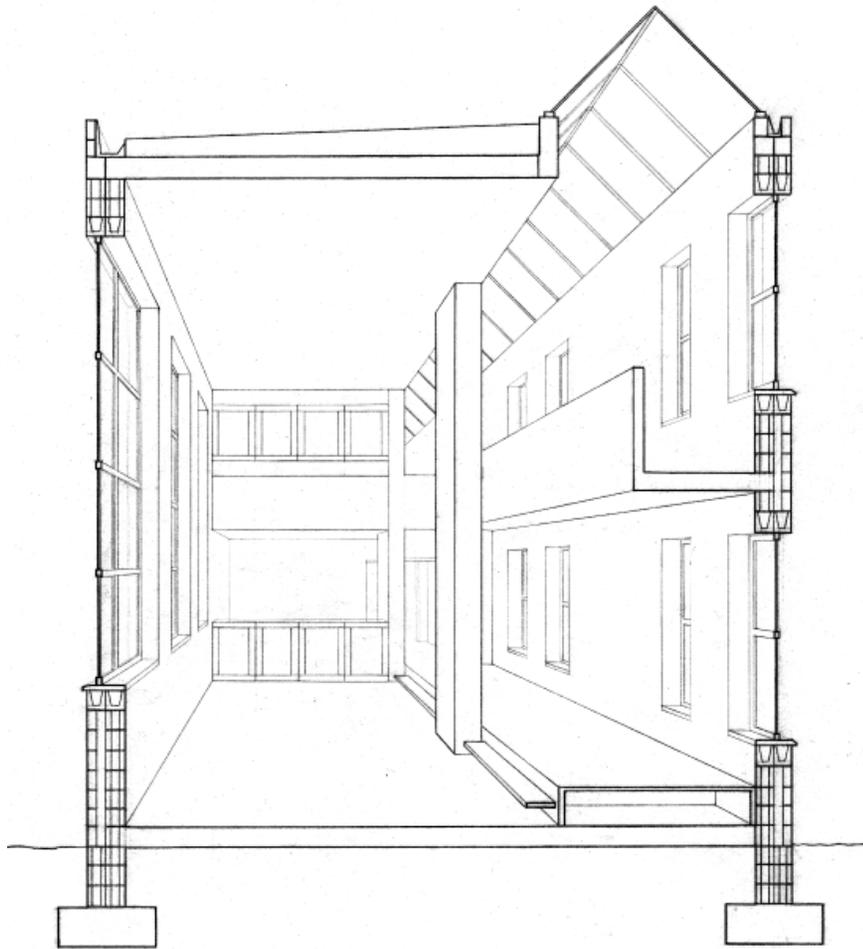
facing page left
transverse section of living area

facing page right top
model photograph of western wall



The eastern wall of the living room has three large vertical openings, which contain vertical panes of translucent glass and an operable horizontal pane of transparent glass. The windows are designed to allow diffused morning light to enter the room and to provide privacy. The western wall of the room contained a rhythm of vertical windows, in the initial drawings. As the working model developed, it became apparent that the windows disrupted the daylight washing down the wall. The reduction of windows in the wall also better anticipates the development of the adjacent lot.



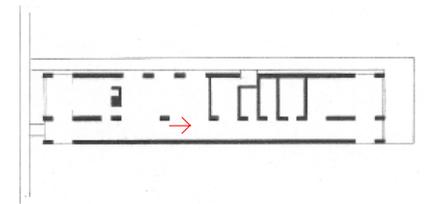


1



The masonry piers separate the rooms of the house from the spine element and define the individual room openings. Transom windows above the bedroom doors allow daylight and ventilation into the rooms. Frosted glass framed in wood is used as infill between the piers along the master bathroom. An operable paneling system composed of wood allows the bedroom above the kitchen to have a visual connection with the living room and to be closed for privacy.

left
perspective looking south on second floor balcony





CORPOREALITY material and construction

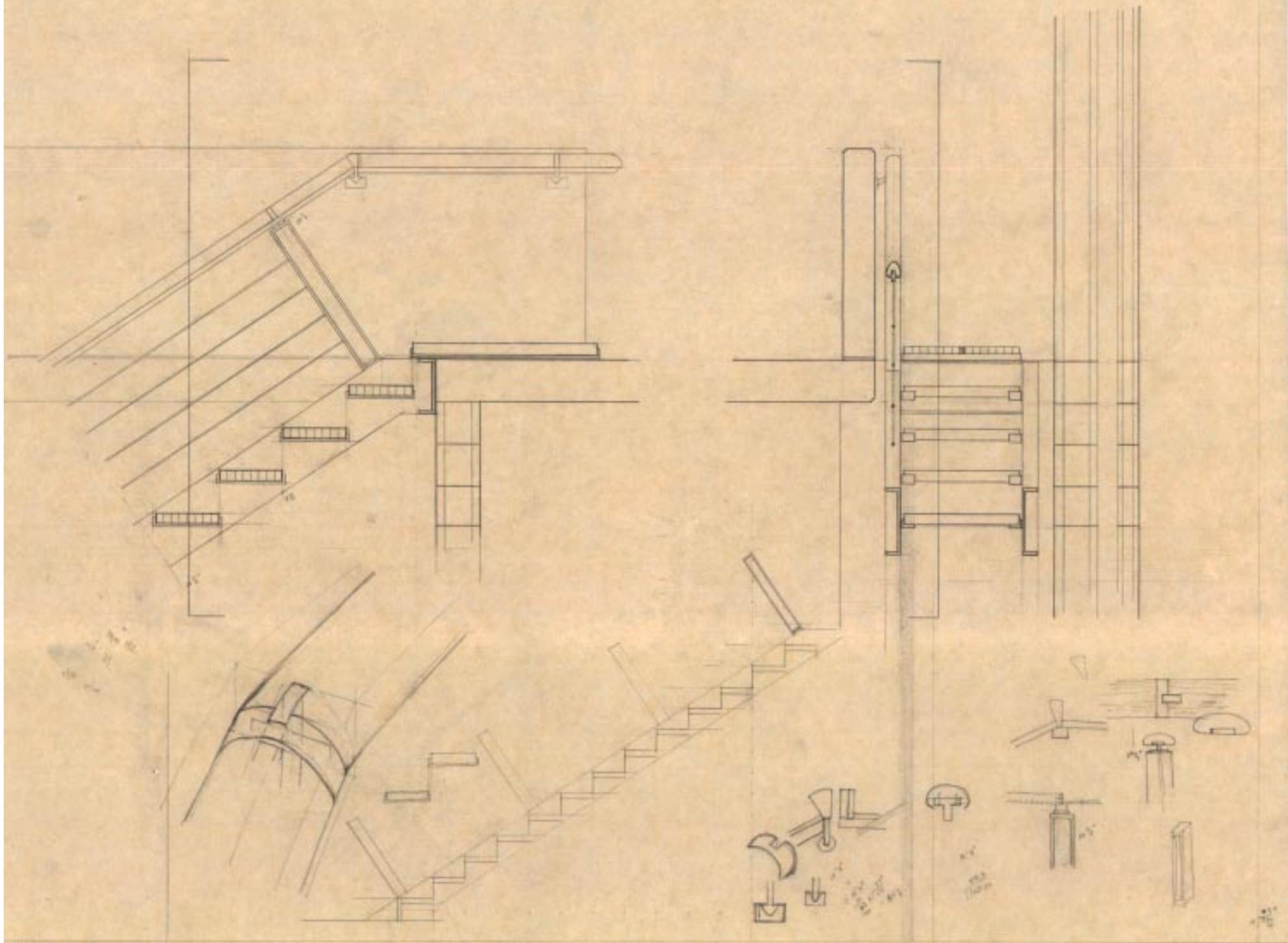


above
**material palette: concrete, masonry,
glass, and wood**

facing page
stair details

The qualities of a building are derived from the innate characteristics of the materials with which it is constructed. Through drawing and modeling, an architect investigates how materials will be brought together to serve the needs and uses of our daily lives with dignity. How will the building weather and deteriorate with respect to its detailing and material joints? What are the physical properties of its materials? What are the aesthetic aspects of a material: how do they feel to the touch, how do they smell, how do they reflect or absorb sound and light?

The drawing to the right is an investigation of the stair construction. The drawing is a dialogue of questions and possibilities. How can the stair be composed of steel and wood and remain as open as possible to the daylight passing through the skylight above? How does the wood handrail attach to the steel support, that runs its length and how does the support attach to the steel balustrades? How should the shape of the handrail be? How will it feel to the hand and what happens as the hand passes over the joints of its sections? How will the sound of footsteps differ if the stair is supported across its width or only at both of its ends?



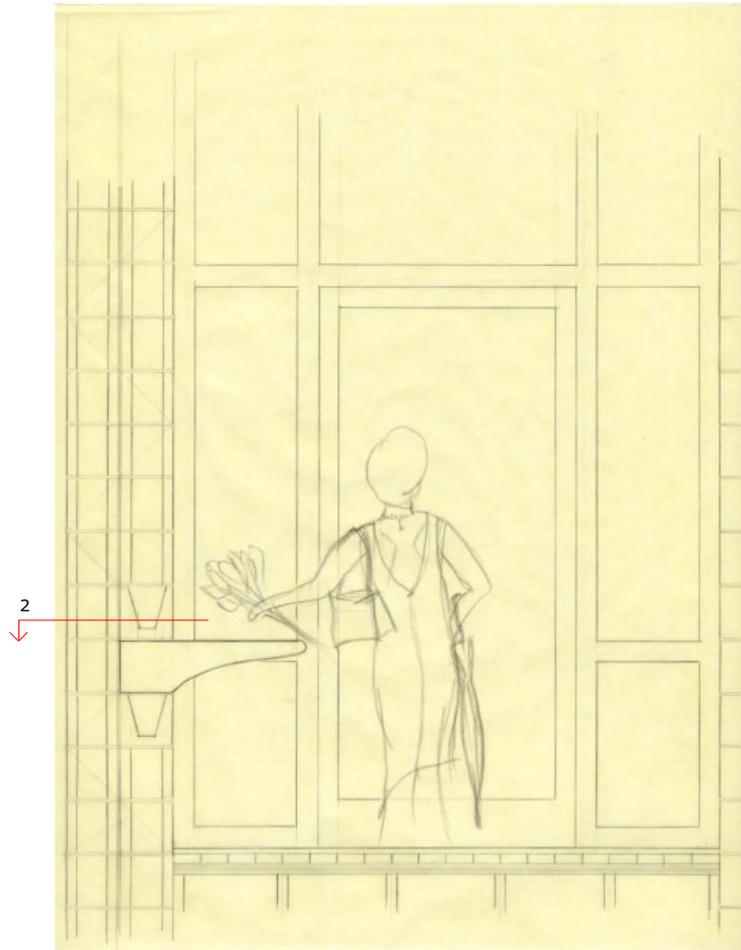
A concrete shelf that extends across the threshold is laid into the wall of the entry vestibule. The shelf is formed in two sections, which become a course of the masonry wall. As one enters and leaves the house, it provides a place to rest carried items as the door is locked and unlocked.

above right
elevation of design model

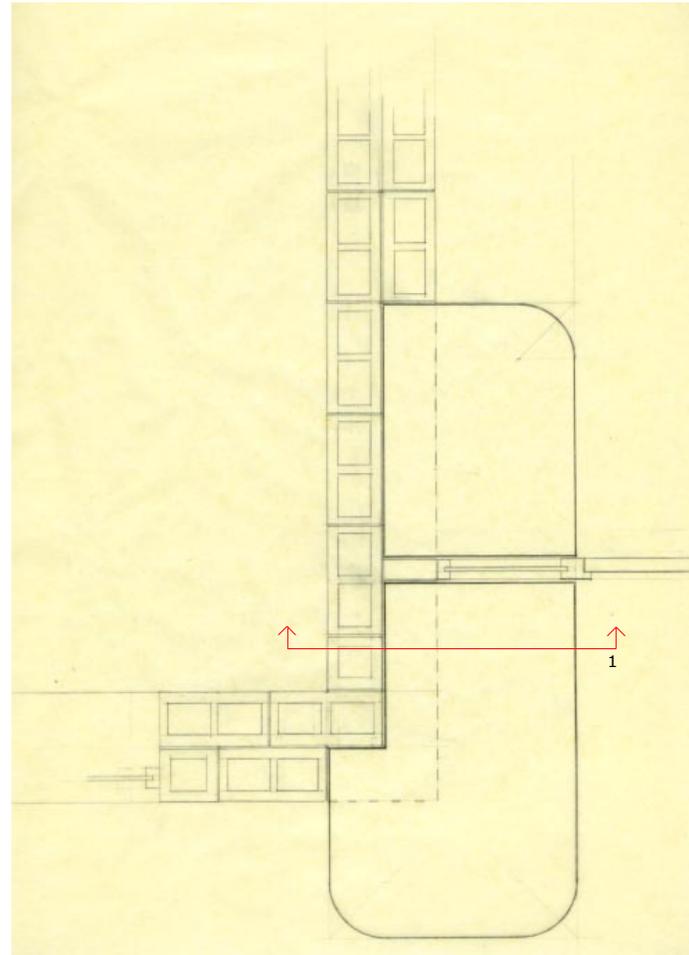
below right
perspective of entry

facing page
sections of entry and shelf





1



2

A working model was developed from the initial explorations of the study model and drawings. The model was constructed in courses of basswood. This method was chosen in order to better understand the possibilities of masonry construction. The model was used throughout the design allowing each process, drawing and modeling, to aid each other as they developed together. In order for the working model to develop, drawing as a method of critical thinking had to become more refined as opposed to drawing as a means to an end, or an image. Corner details for the exterior walls had to be considered. How the masonry pillars would meet and support the concrete slab of the porches had to be explored.

The design began to advance from images of ideas into sections and details. These studies developed into tools, which contained a better understanding of how to form a constructed order from materials.

The shelf on the previous page is an example. I began to think about how one would come in and out of the house everyday, usually carrying something - a briefcase, an umbrella, grocery sacks. The need for a shelf developed into an image. Yet, the tools necessary for this idea to become an architectural element were not contained within this image. There were many open questions.

From what material should the shelf be made? How would the shelf be supported? How would the shelf meet the wall and what was necessary to make the joint between the shelf, wall, and window frame?

Just as drawing became a tool used for developing a greater understanding of how the proposal could be constructed, the method of building the working model allowed it to be more than simply a three-dimensional representation. Each layer of the model required clearer definition and further study of the consequences of design decisions. What became more and more present was not only a representation but also, and more importantly, an understanding of the material, structure, and construction that have the power to transform a proposal into a building.

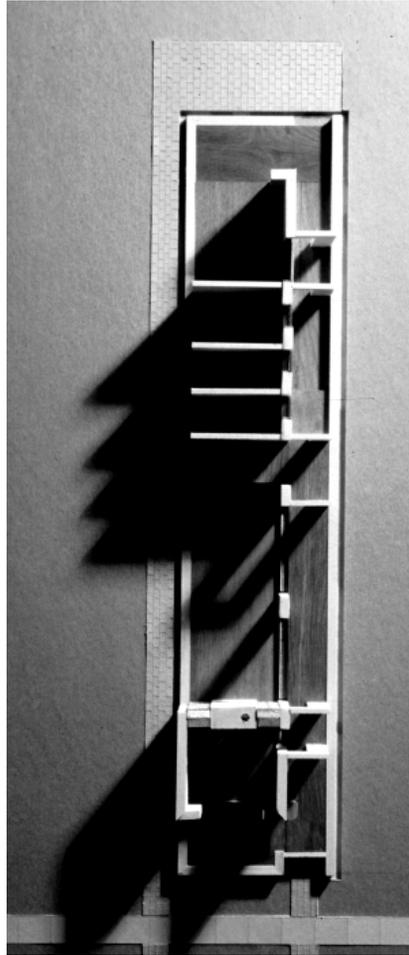
right

model construction phases

- 1) initial construction of first floor**
- 2) interior walls of first floor**
- 3) interior walls of second floor and balcony**
- 4) roof and skylight**



1



2



3



4

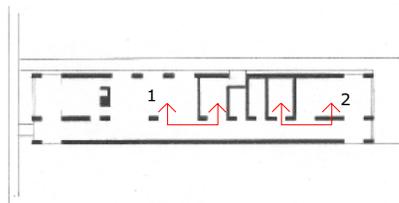
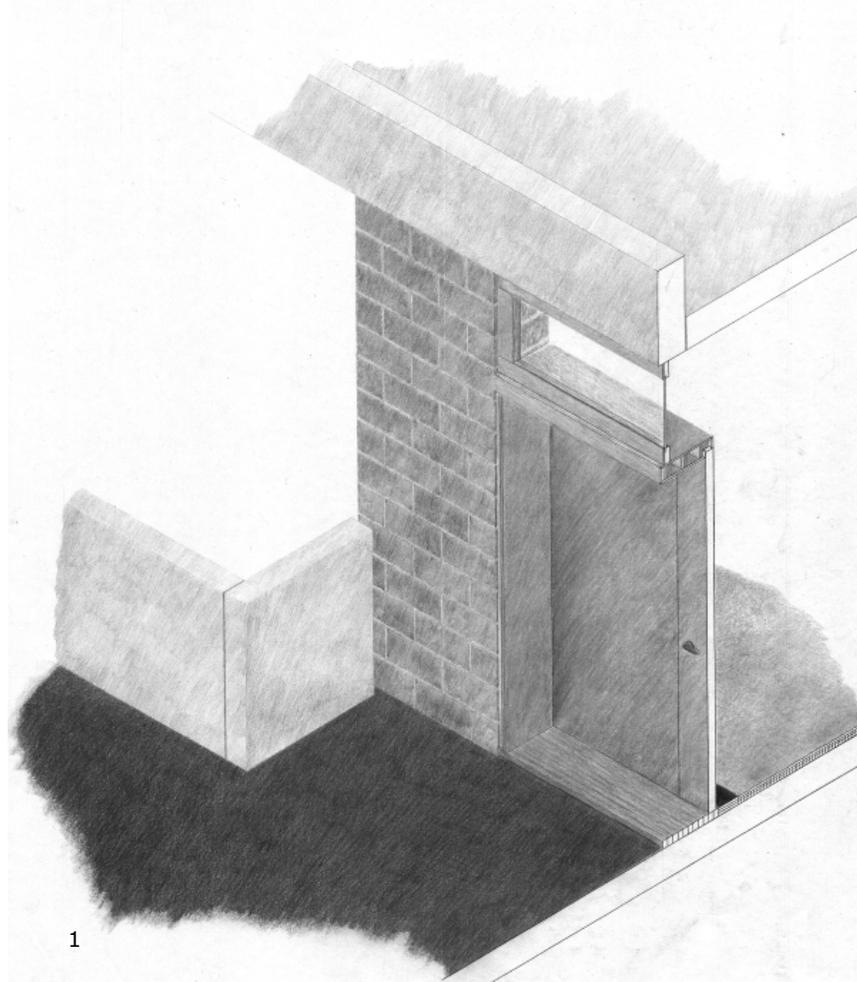
The thresholds to the bedrooms between the masonry piers are framed in wood. As a place of daily passage, the use of wood enhances the sensual quality of this area of daily contact. The wood floor of the threshold creates a tactile change from the concrete balcony into the bedroom.

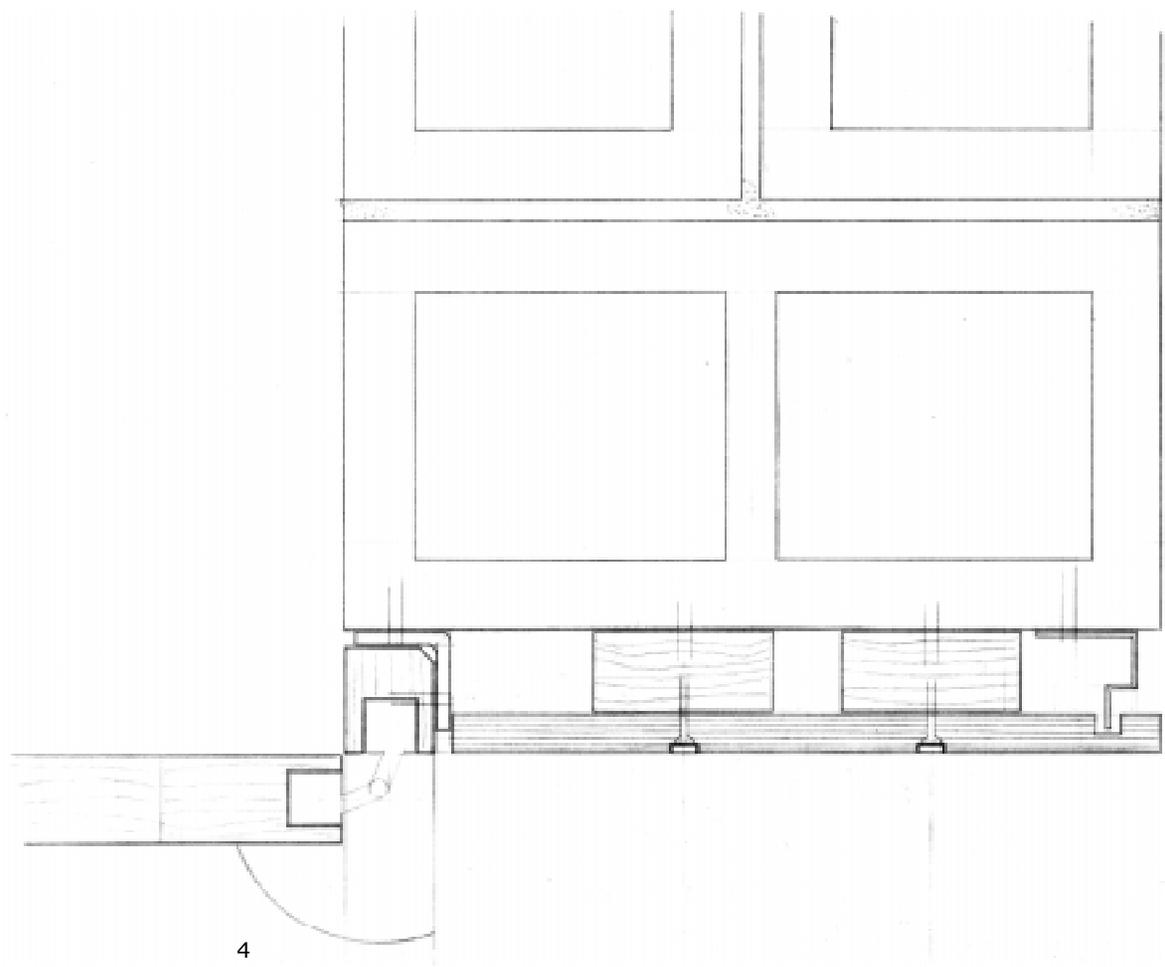
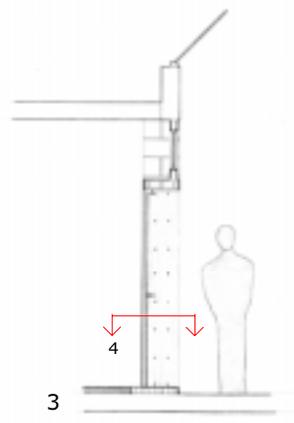
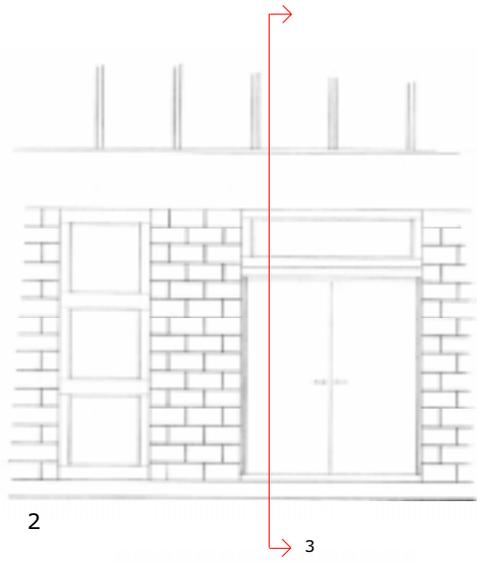
right
axonometric section of threshold

facing page top left
interior elevation of master bedroom entrance and frosted glass infill

facing page bottom left
section through threshold

facing page right
door detail





The side balcony off the front bedroom provides an unobstructed view east and shelters the side entrance below. The entrance opens onto the stone path that runs between the two houses from the sidewalk to the back gate.

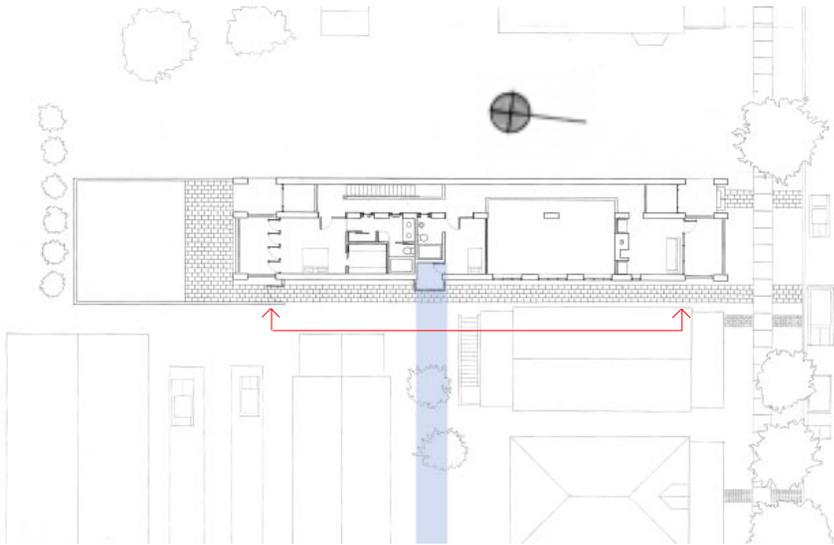
45

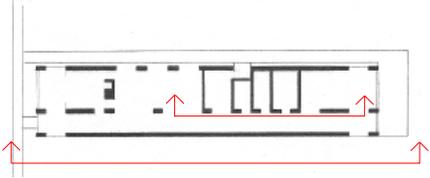
right
eastern elevation

facing page left
sight line from balcony

facing page right
elevation detail



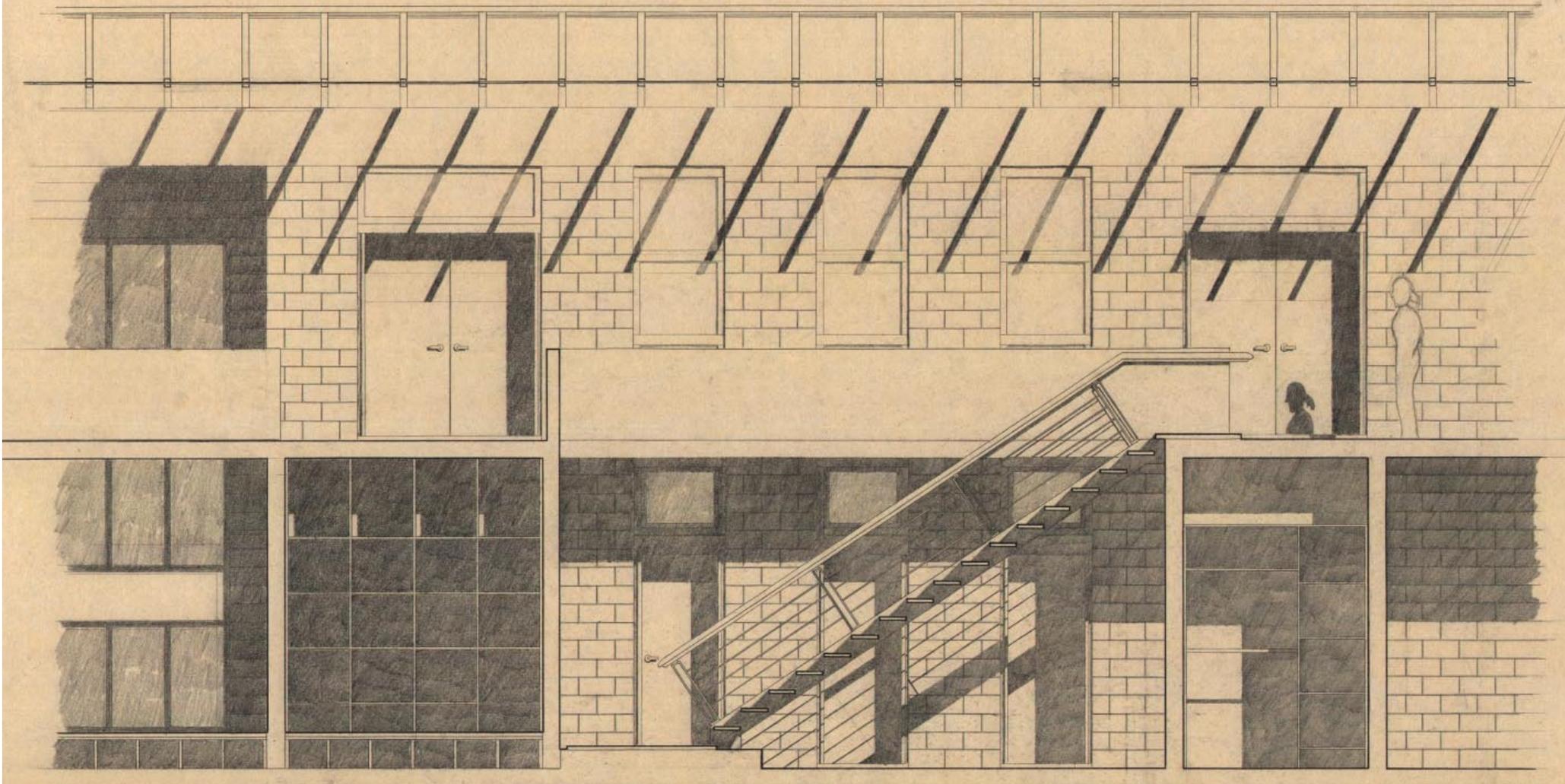




right
elevation

facing page
interior elevation





Handwritten notes or a signature at the bottom center of the drawing.

Small handwritten mark or signature at the bottom right of the drawing.

The house is built of masonry, concrete, steel, wood and glass. It is rooted in the earth. The sun, wind, and rain will exude their toll and the building will age and deteriorate.

Our lives are not defined by sound bites or extravagant experiences - aesthetic acts that can be framed in glossy images. It is rather the rigour of the everyday of which our lives are composed: a tapestry of conversations, meals, work and play, day to night and season to season. It is not a measure of means that makes each of these threads of more value, but the appreciation which we bring to each opportunity.

Our built environment is the physical manifestation of our needs, desires and values. Architecture does not exist on paper, in words or in images. Architecture is corporeal. It is the places that allow our daily lives, the mundane and the routine, the celebratory and the tragic alike, to unfold with dignity.

1974

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1997

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Greenville, North Carolina
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