

Urban Debris

and the architectural stage

for Leslie

Urban Debris

and the architectural stage

Cassidy Bolger

This thesis submitted to the Faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of Master of Architecture.

V. Hunter Pittman, *Chairman*

William U. Galloway

Mario C. Cortes

May 10, 2000
Blacksburg, Virginia

keywords: Frame, skin, hierarchy, scale



Sandwich Gelati

e Sandwich Gelati

Per Caffè Pasticceria

CAFFÈ

CAFFÈ

CAFFÈ



Verona, Italy
1999

Urban Debris

and the architectural stage

table of contents

abstract	2
precedent	4
project site	10
work	20
product	30
conclusion	62
notes	64
bibliography	66
vitae	68



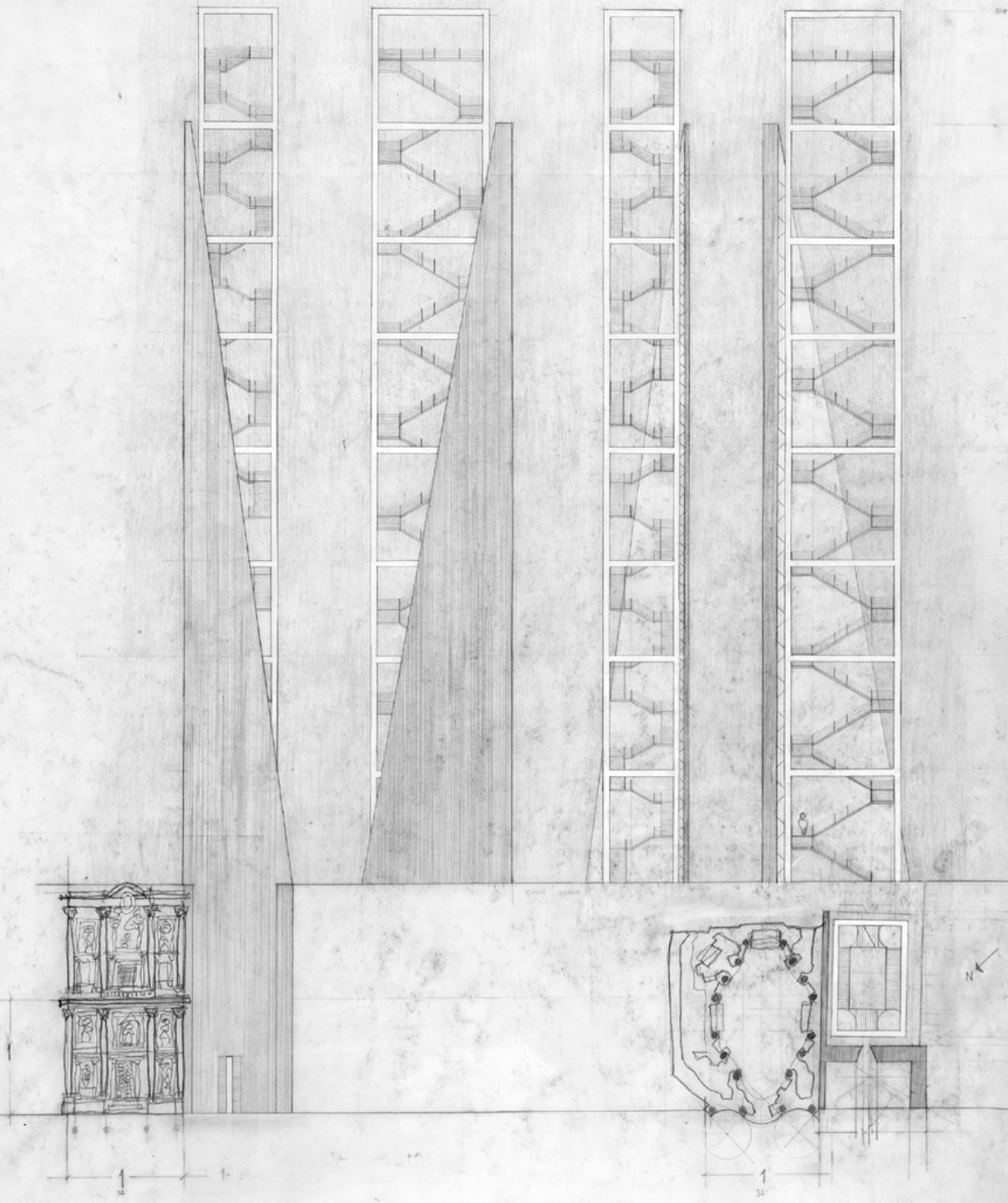
Urban Debris

and the architectural stage

abstract

The thesis is an investigation into the discipline of architecture. A building project serves as a tool in this investigation. The building project uses frame and skin elements to study the means of articulating a wall. Hierarchy, urban debris and scale relationships control this articulation.

The design intentions are rooted in an understanding of architecture as the stage for the life of the city.



Second year tower project. Rome, Italy.

precedent

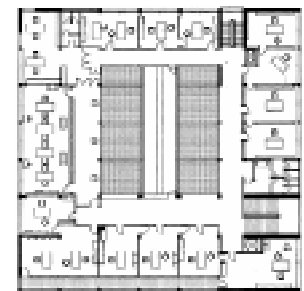
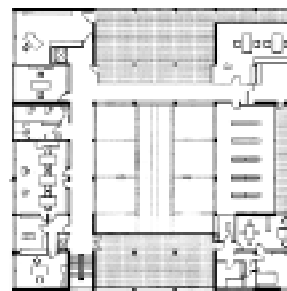
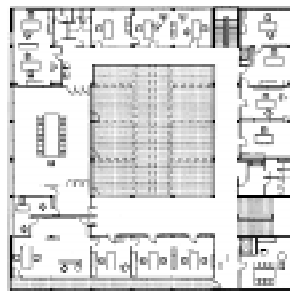
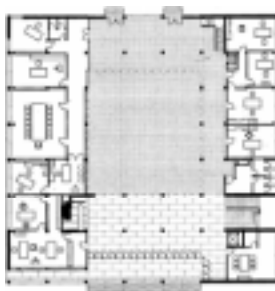
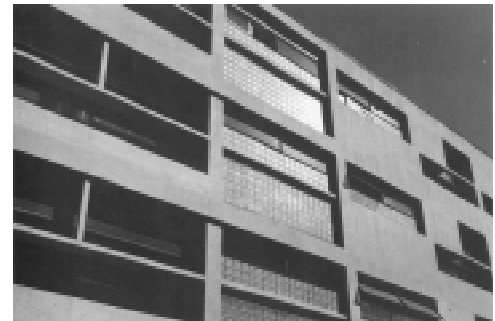
The thesis project is a continuation of an investigation into the means of articulating a wall. A wall must provide both structure and enclosure. These requirements can be expressed through differentiated frame and skin elements. A position was taken to accomplish an articulation of scale relationships through the differentiation of the architectural elements of frame and skin.



A gathering at the House of Fascism.

Como, Italy. 1936 (1)

Giuseppe Terragni's Casa del Fascio was examined as a precedent that embodies a highly developed skin and frame relationship. This relationship is hierarchical. The frame is used to order the structure of the building. The skin is manipulated to accommodate needs generated from the site, program, and orientation of the building. As the secondary element, the skin is free to change material, cover the frame, reside within it, or disappear completely. The frame, as the primary element, is not modified.





For Aldo Rossi; "the city...is to be understood here as architecture. By architecture I mean not only the visible image of the city and the sum of its different architectures, but architecture as construction, the construction of the city over time." (2)

The Little Scientific Theatre, 1978 (3)

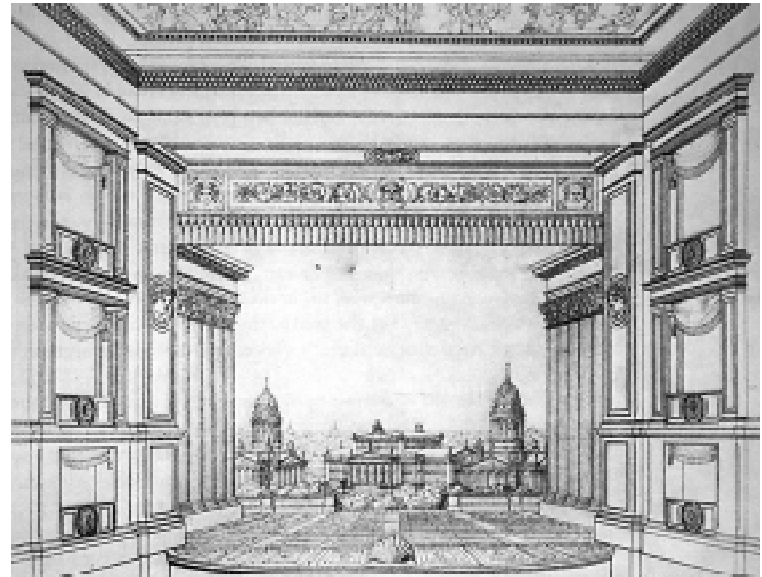
These architects expressed the role of architecture in the life of the city.

Andrea Palladio uses forced perspective to construct a miniature city within a theatre. The audience is able to imagine that they are watching the action unfold in the streets.



*Teatro Olimpico; Vicenza, Italy
1580 (4)*

This drawing of the stage and set constructed by Friederich von Schinkel shows an image of Berlin and the Schauspielhaus. Upon entering the theatre, the audience makes a transition from the city outside to the imaginary world inside. Schinkel reflects the role of architecture as the stage for the life of the city by representing the city as a stage for the play.



*Schauspielhaus; Berlin, Germany
1821 (5)*



project site

the stage



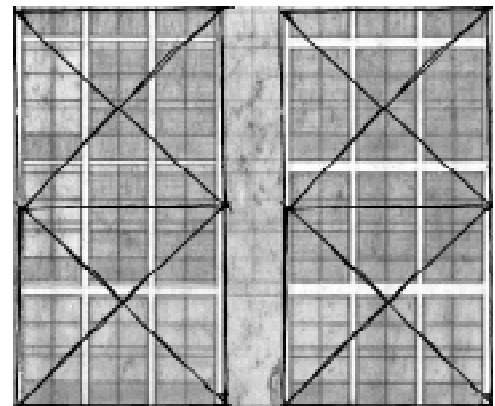
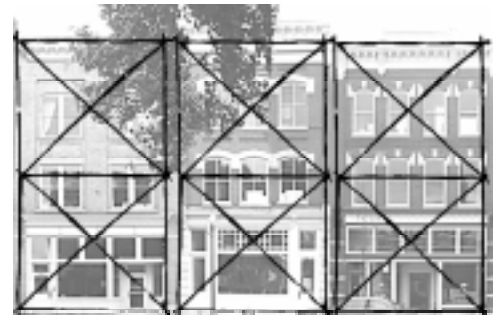
Venice, Italy
1999



The site for the thesis project is in downtown Roanoke, Virginia. This city contains many brick bearing-wall structures that were constructed in the late 1800's. These buildings are a Roanoke model. They use a classical language to articulate several relationships of scale. The primary scale relationship of the city block is established by a 2:1 proportion in the building's massing. Fenestration is used to create a secondary rhythm within this mass. The scale of the street level is indicated by an openness created by large windows. The top of the building is closed with a cornice.



The stage set on Campbell Avenue.





1892

FUNERAL DIRECTORS

SALE - LEASE

980-2844

THOMAS HARRIS

Campbell Avenue contains several examples of the Roanoke model. The buildings are set directly on the sidewalk and line up to form an urban wall. The regularity of construction and placement is necessary to retain a weave of scale relationships established by the building's articulation. Such regularity, however, does not allow for a place of repose along the street.

An actor plays a part in the life of the city. The audience observes this action. The rigidity of the set on Campbell Avenue does not reinforce the individual's transition from actor to audience and back again.





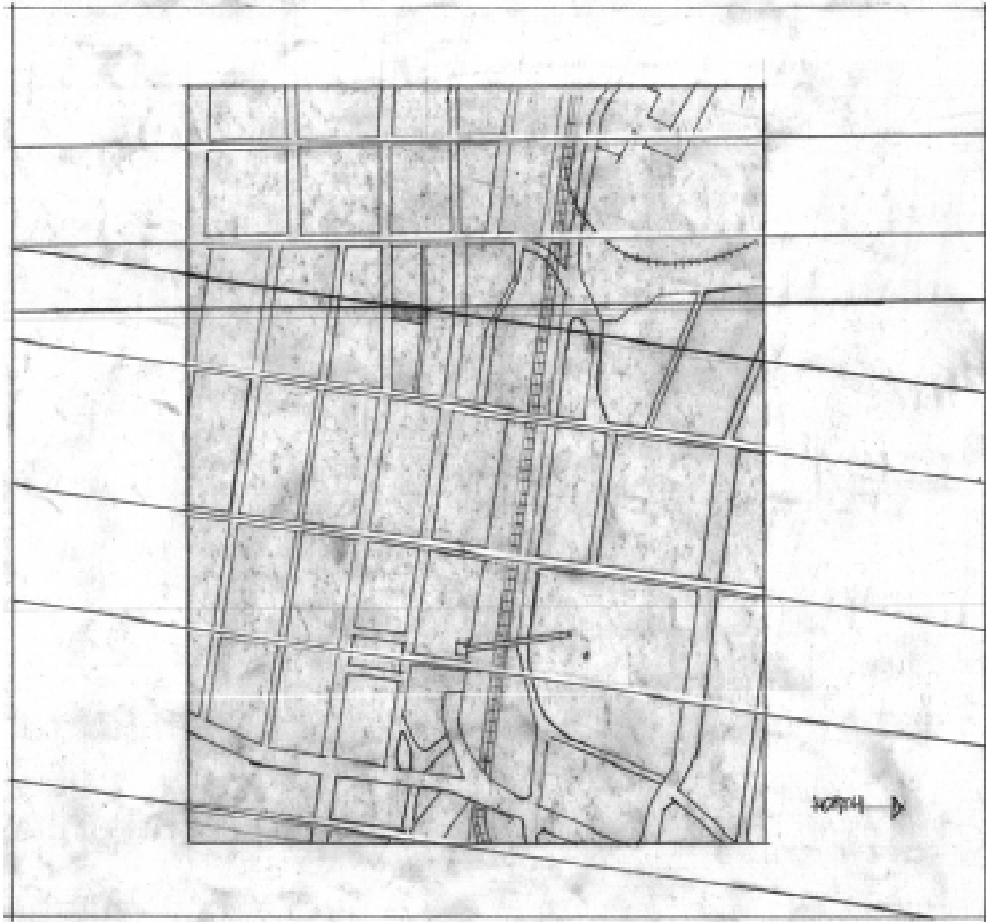
The site of the building project is currently a parking lot at 127 Campbell Avenue. Newer buildings border the west side of the lot. They attempt to weave into the existing fabric by replicating the Roanoke model's historic style. The translation of this style to larger scale buildings resulted in relationships of proportion and scale that are not successful. The building project intends to reaffirm the established qualities of Campbell Avenue without resorting to the reproduction of an historic style.

The stage is an historic record of the city.



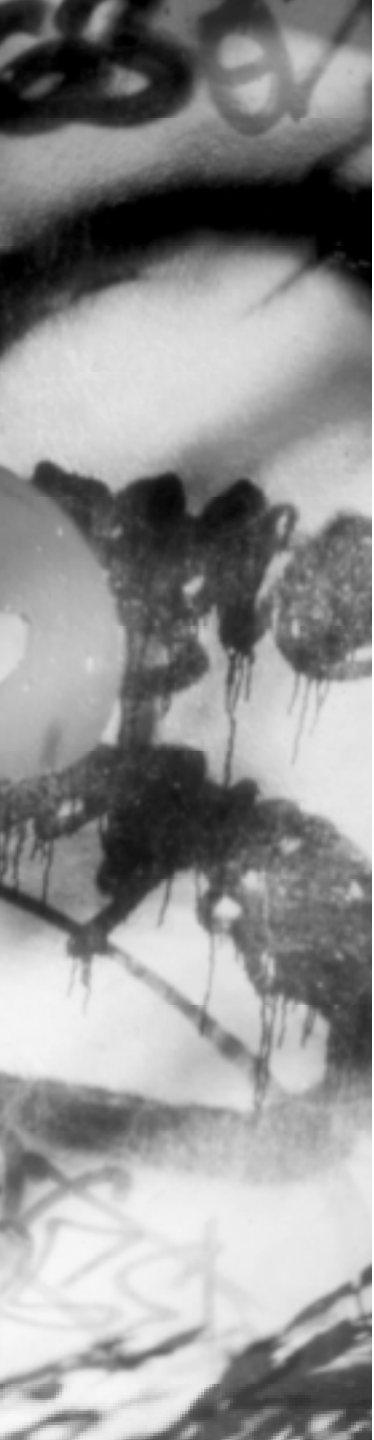
debris

In the 100 block of Campbell Avenue a shift in the city grid creates a confused relationship between the buildings and the street. The street turns nine degrees as it travels west. The buildings' facades follow the direction of this shift while their longitudinal walls maintain the direction established on the east end of the street. This shift in geometry of the city grid results in a condition in which the building sites are nine degrees out of square. This nine degree incongruence is the urban debris present in the 100 block of Campbell Avenue. The debris becomes buried within the massing of the buildings as they take on a trapezoidal form in plan. The debris is present, yet it is hidden.



The city contains complexity, discrepancy, and incongruence. These conditions are the debris created from years of use and construction. Debris is a product of the city's history.



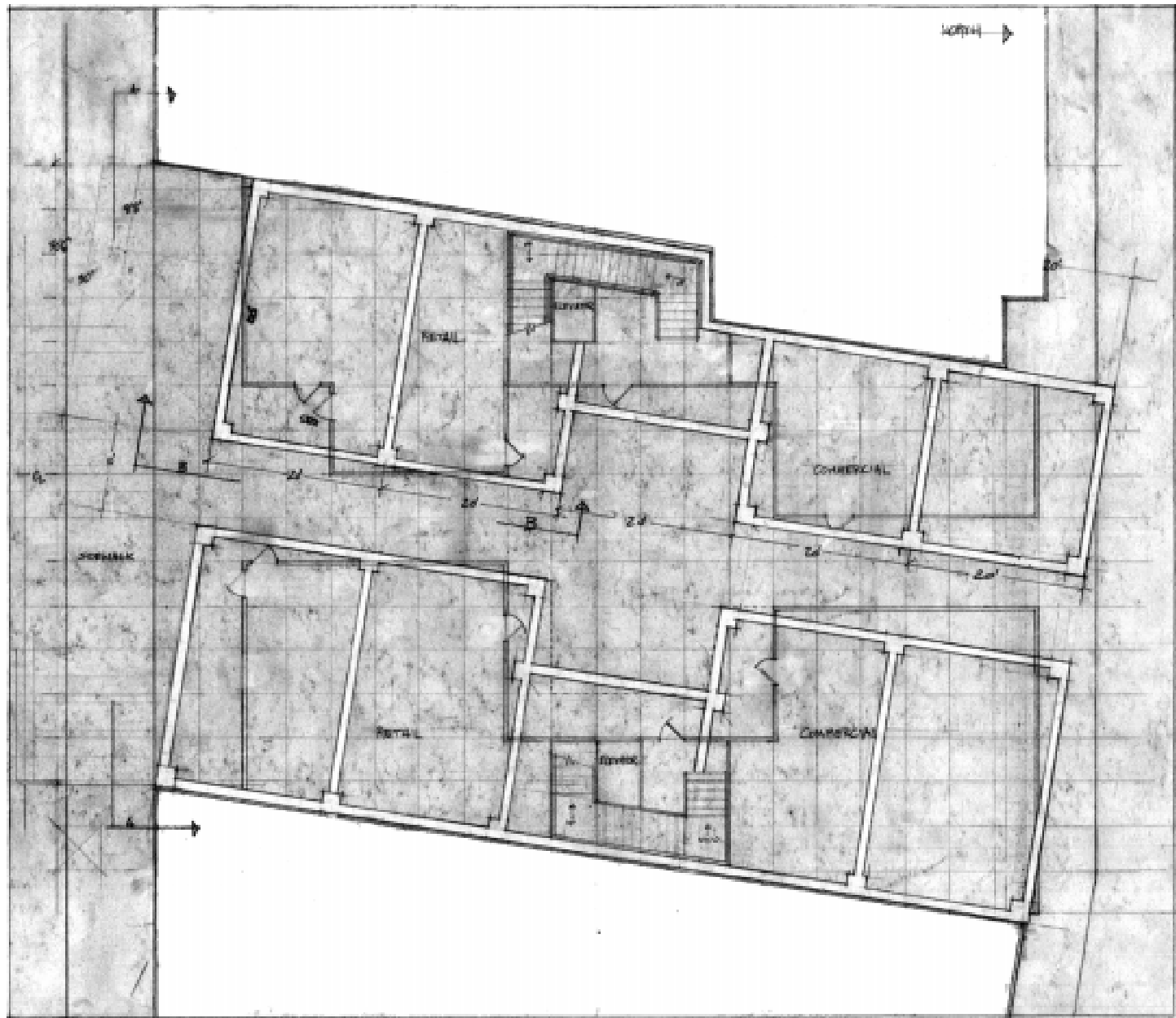


work

frame and skin

hierarchy

weave



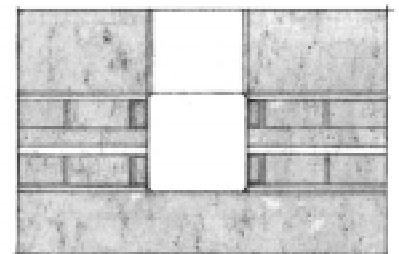
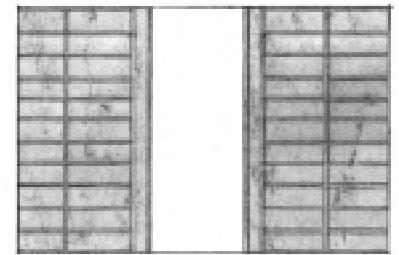
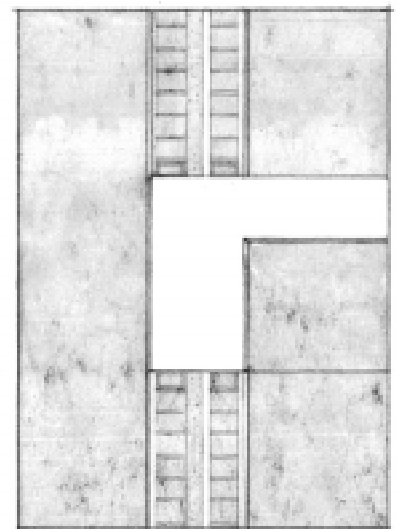
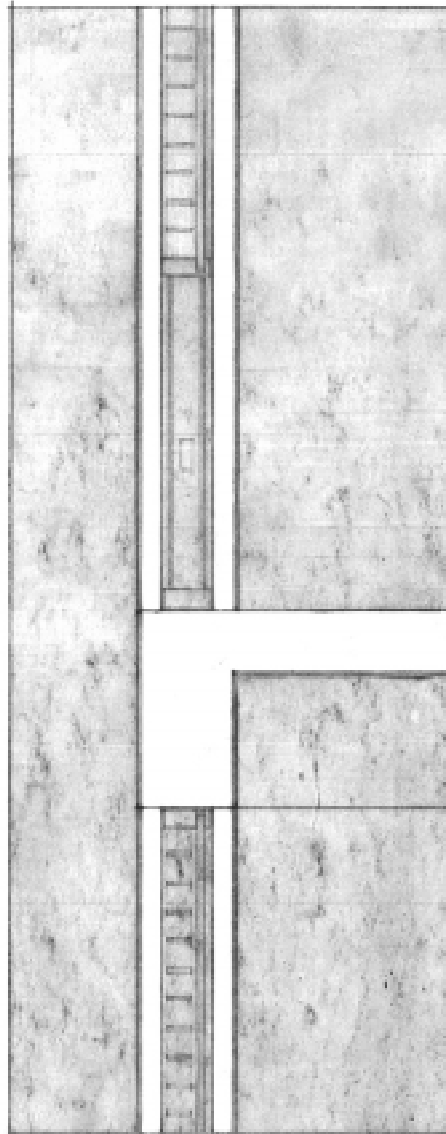
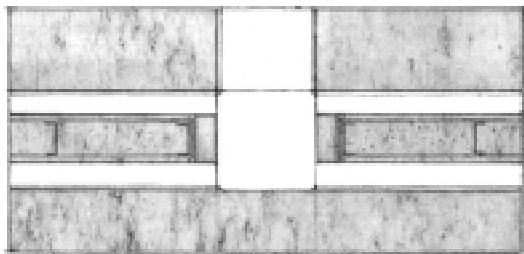
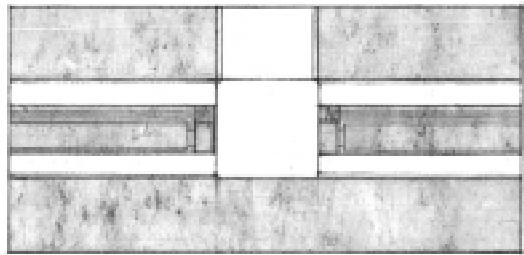
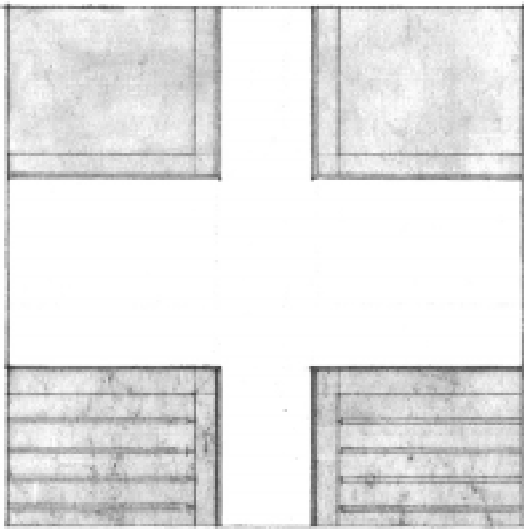
5'

early plan drawing

The frame and skin of the building project articulate the discrepancy of the debris in the site. The nine degree shift informs the building's lineaments. These lineaments, in turn, create possibilities in the construction of the building's frame and skin.

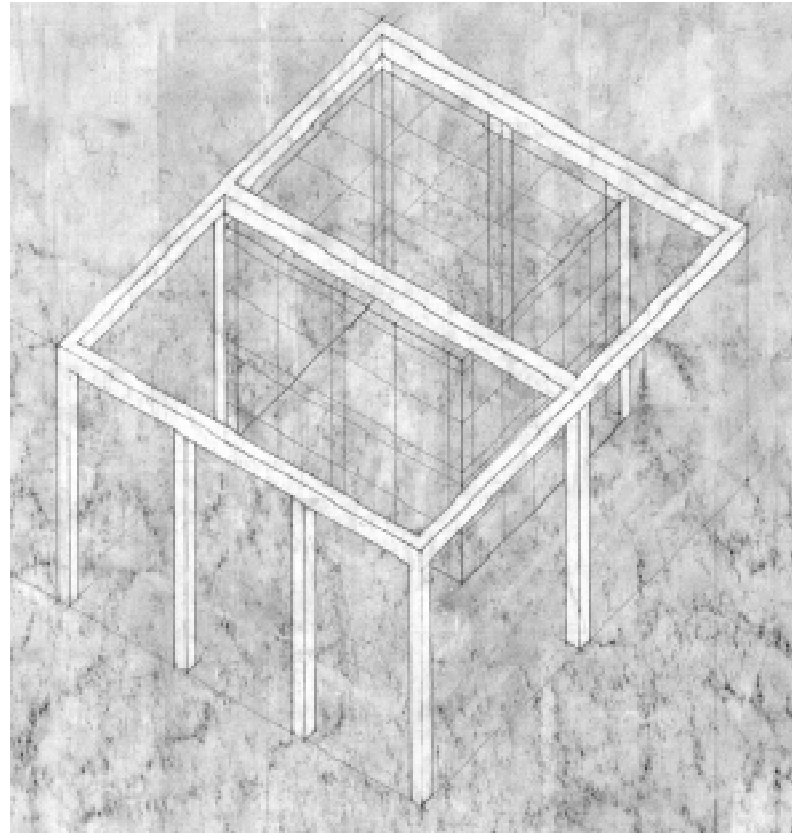
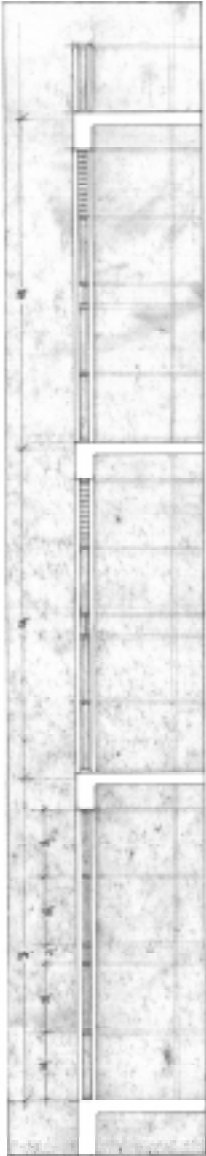


The frame is set in a normal geometric relationship to the direction of the city grid to the east of the project site. This direction is currently maintained by the longitudinal walls of the buildings in the block. The skin is allowed to conform to this established direction, or to follow the nine degree shift maintained by the street and sidewalk.



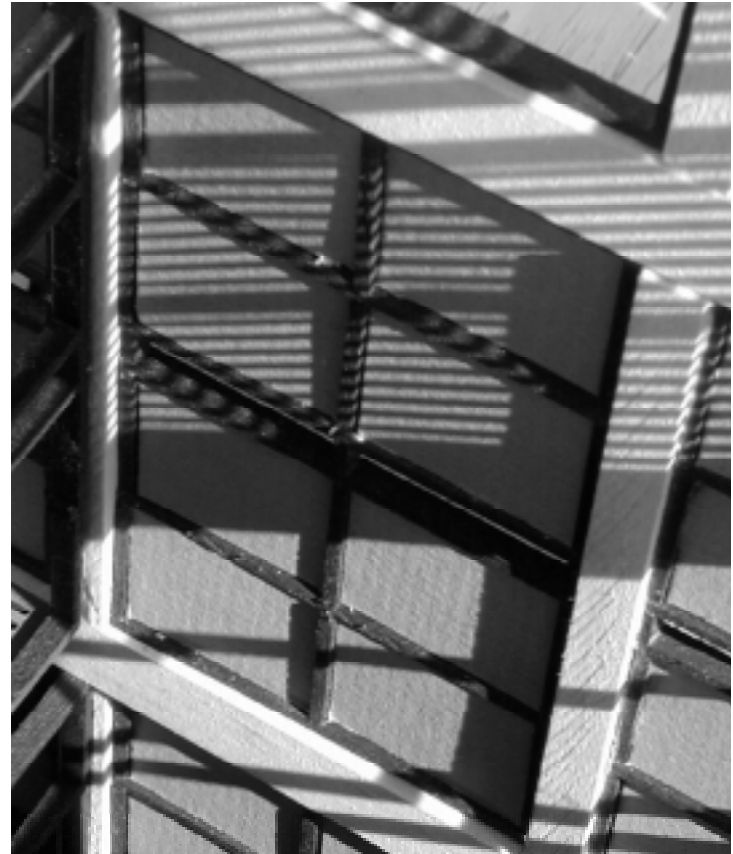
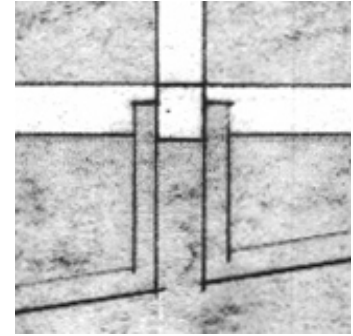
hierarchy

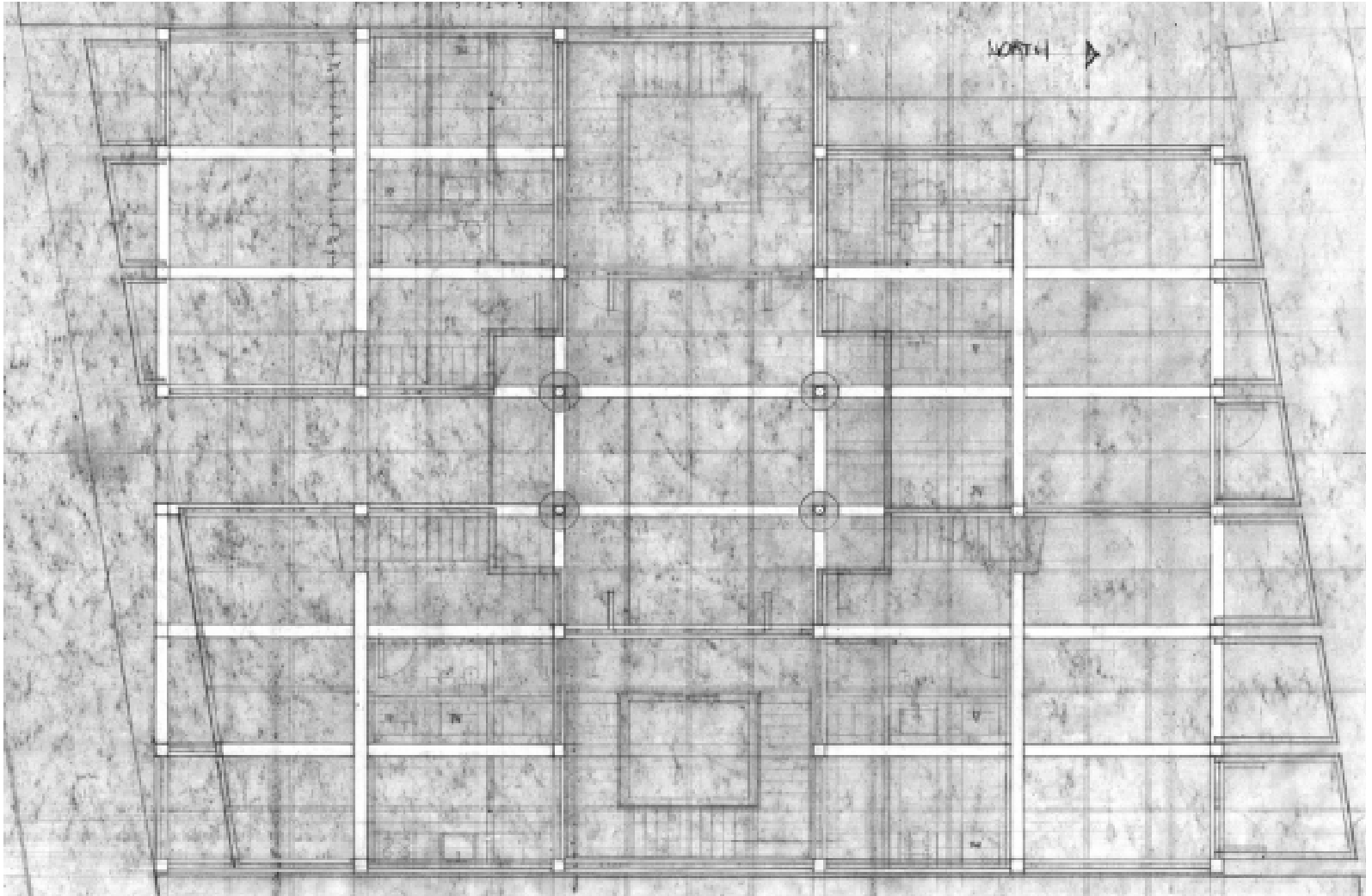
The relationship of elements within the project is hierarchical. Each element resides within confines established by its dominant element.





The elements are manipulated to accommodate the needs of the site, program and orientation of the building. These manipulations accommodate irregularity, give the building its massing, define place, and control light.

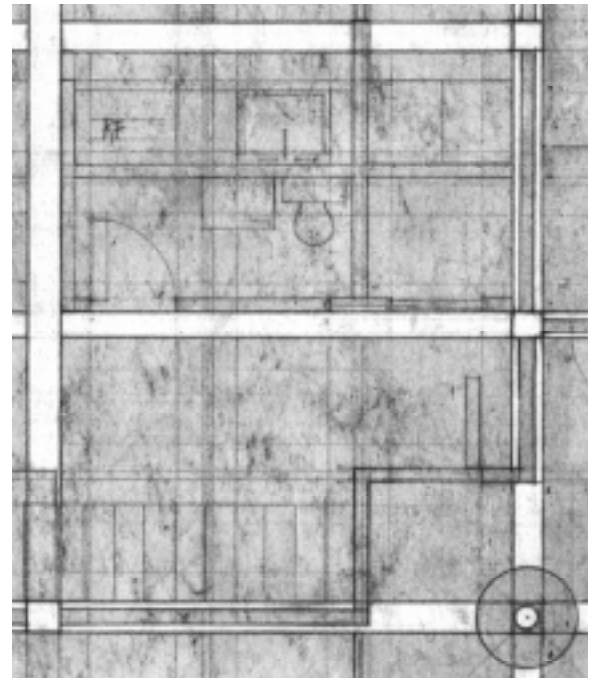




5'

final plan drawn at 1/4" scale

A correspondence of the elements is achieved by a constructed weave of lineaments. The primary, secondary, and tertiary are all constructed with this weave. The building is tied to itself and to the site.







product

organization

facade

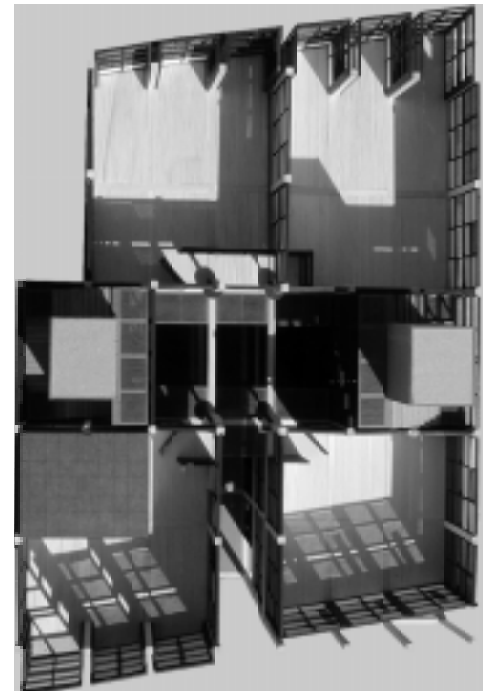
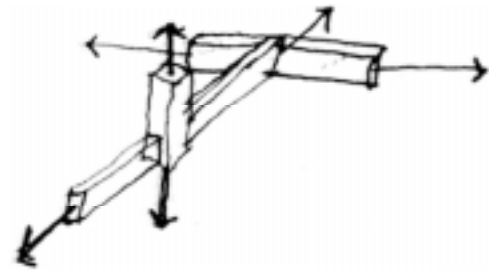
alley

core

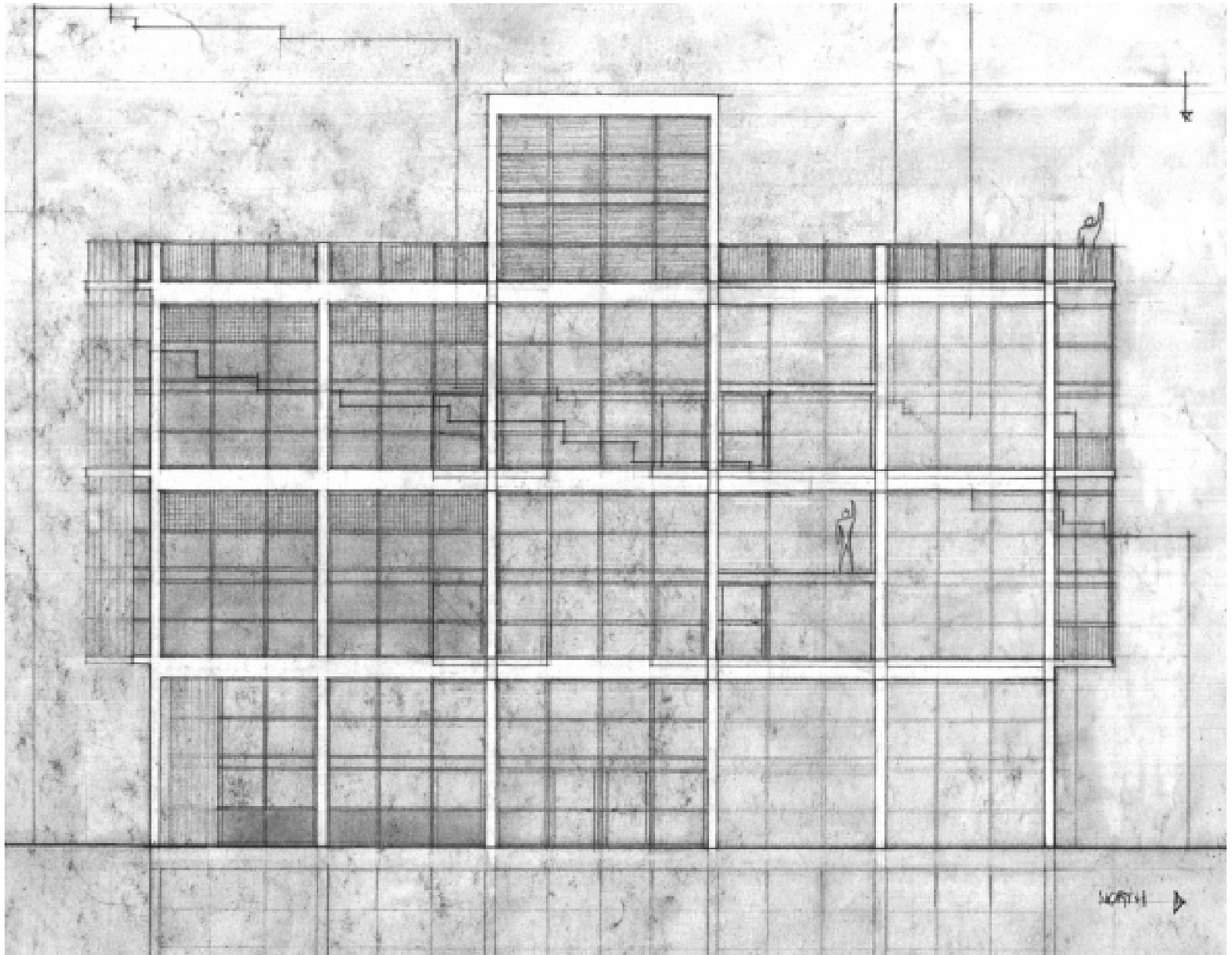
roof



The building's organization creates four major exterior zones. These are the facade, alley, core, and roof.



The organization presents the possibility for several stages at different scales

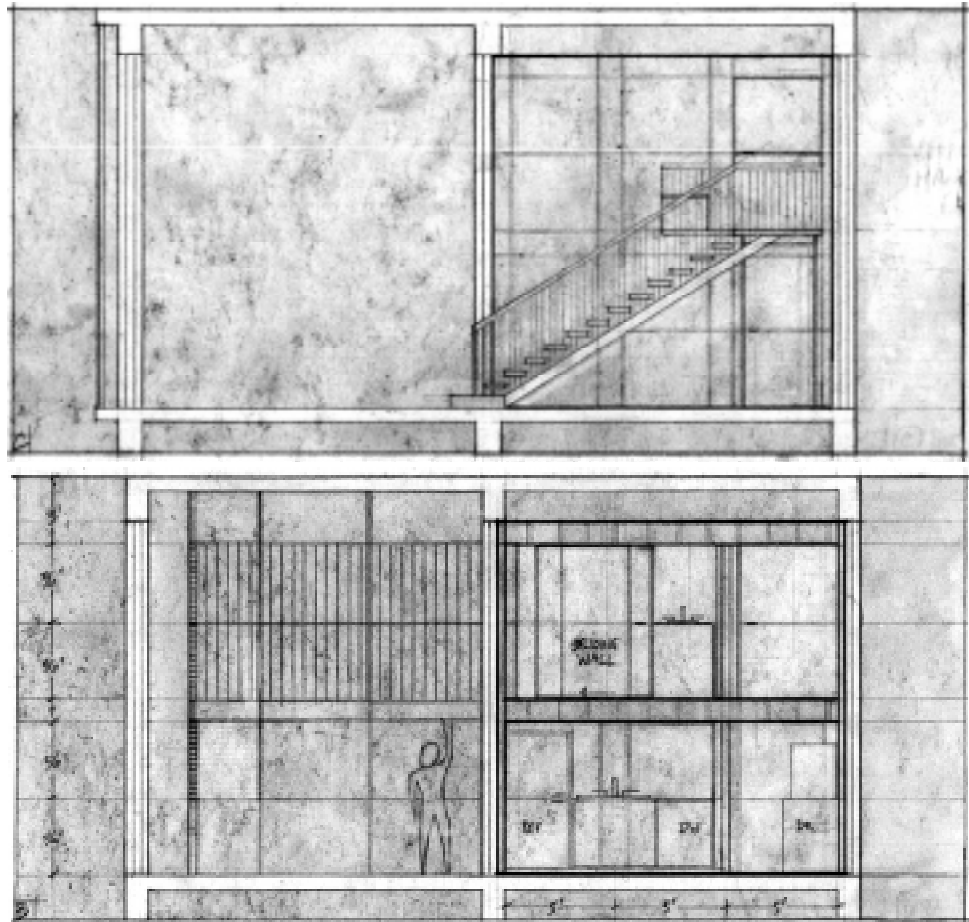


5'

final section drawn at 1/8" scale

The primary frame establishes the order of the spatial organization. The frame's vertical increment accommodates a double height apartment.

The apartments are private stages for the individual and family.



Apartment sections drawn at 1/4" scale



facade



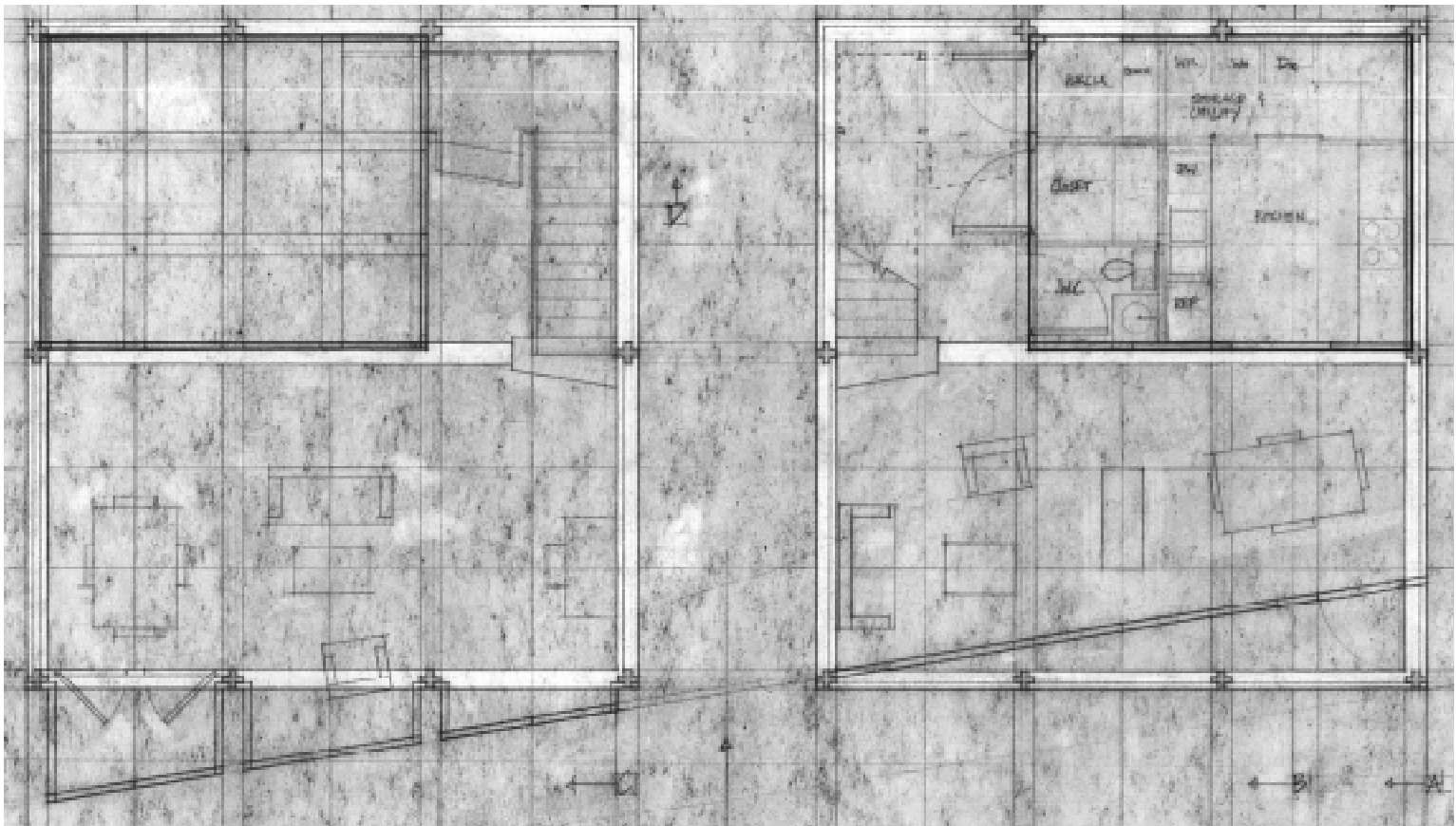
*Vatican City
1999*



The threshold between the audience and actor is articulated in the facade.

The front and rear facades of the building are articulated through the manipulation of the skin and frame. They use the geometric shift of the urban debris to create a possibility for depth and layering in the facade.



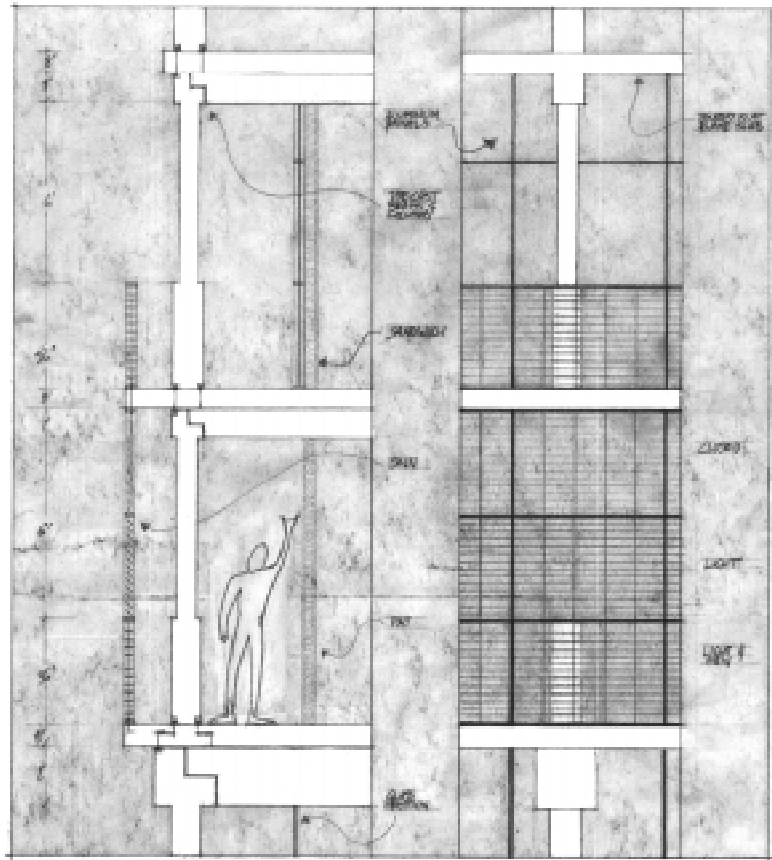


4'4" 

Apartment sections drawn at 1/4" scale

The apartment balconies occupy this space between the layers of elements.

They offer the possibility to observe the scene taking place in the city and to act in it.

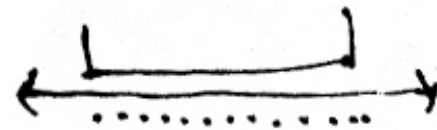


2'

early section drawn at 1/2" scale



An arcade answers the need for a place of repose and habitation along Campbell Avenue. This arcade is created by pulling the skin wall to a position parallel to the sidewalk and behind the frame. The exposed columns form a line that marks the direction of the nine degree shift in the city grid. The arcade recognizes this urban debris through a manipulation of the hierarchical elements of the building. This manipulation creates the place that the arcade provides.



The arcade facilitates the individual's transition from an observer in the audience to an actor on the stage.

The arcade accommodates the intersection of longitudinal and transversal movement. It acts as a filter between the building and the city.



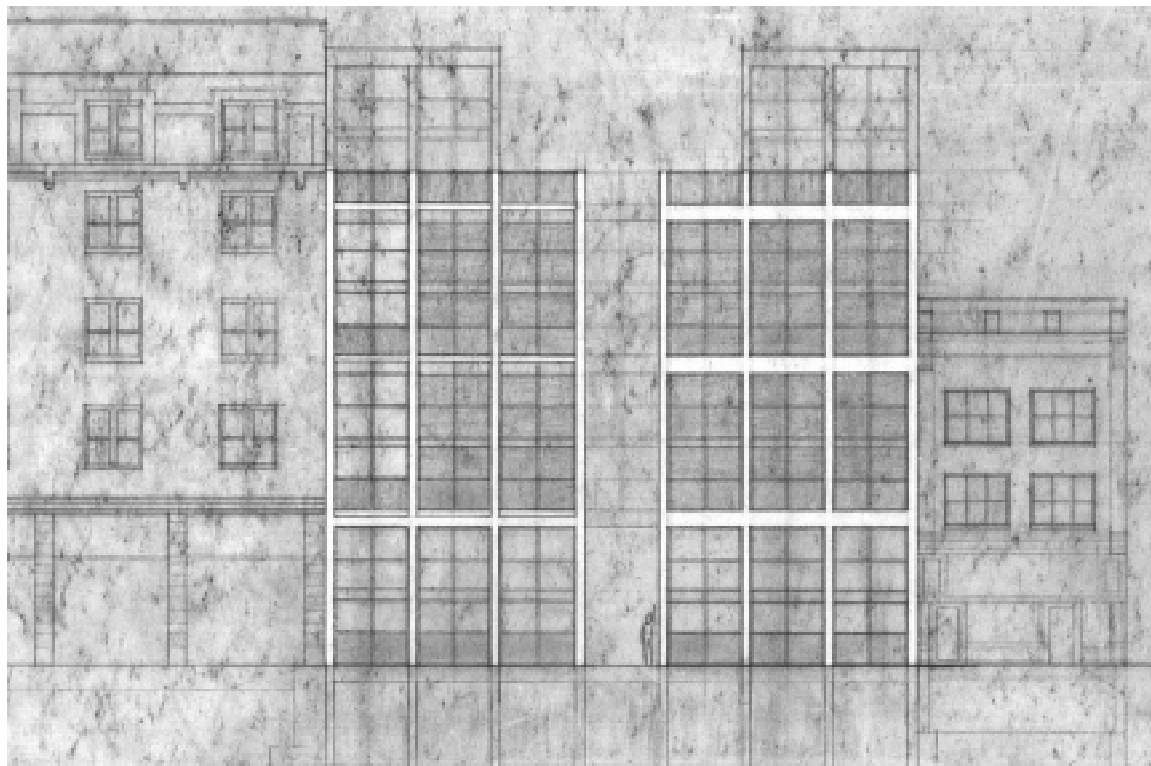
Rome, Italy
1999

alley



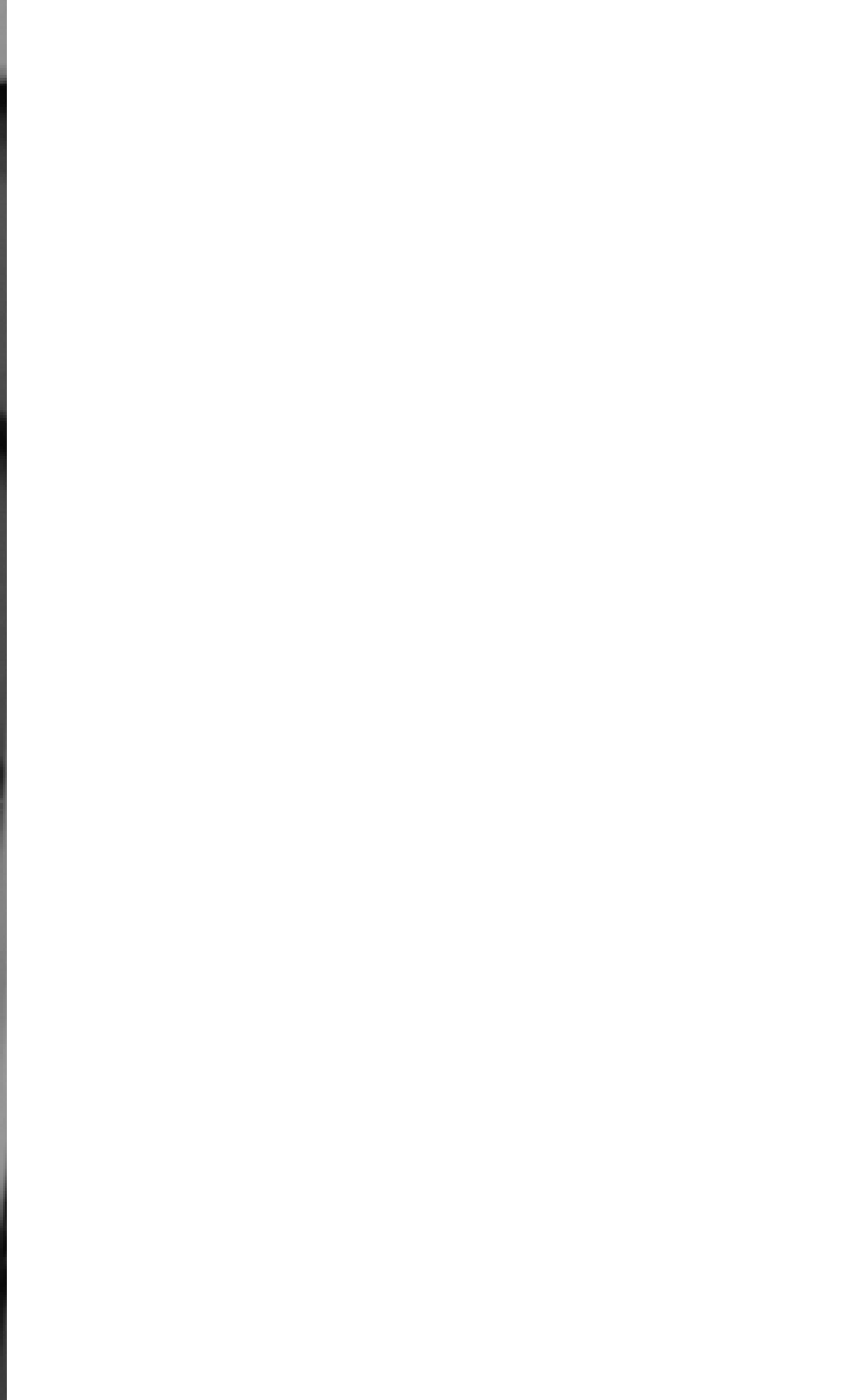
An alley cuts through the center of the facade. This cut allows the building to present itself as two masses proportioned 2:1.

The alley leads to a stage within the building.



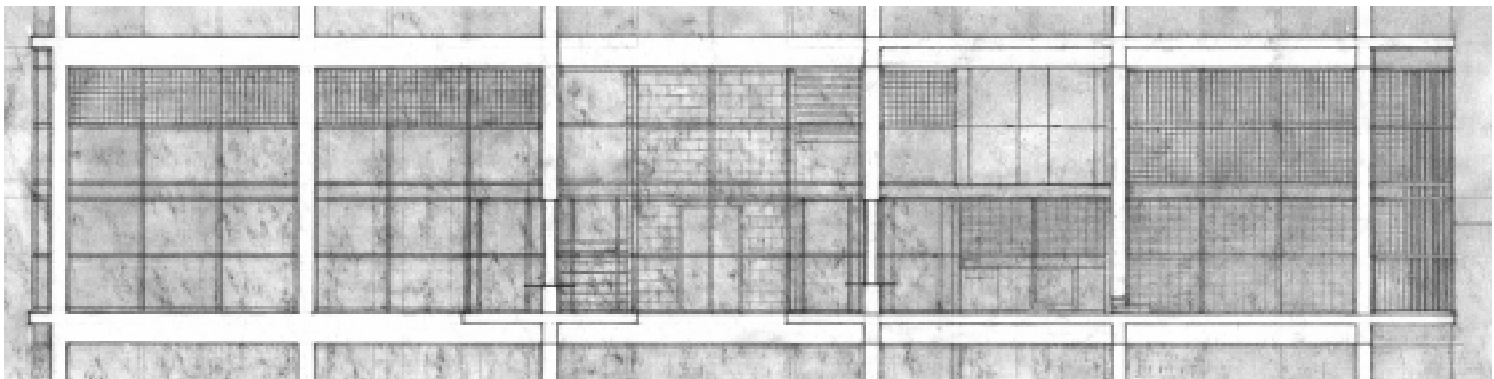
9'8" 

final elevation drawn at 1/8" scale



This alley creates a path to the central core and through the site. The vertical nature of this cut allows for the penetration of light and a complexity of view within the building.

This interior stage is presented for the building's inhabitants.



16'

longitudinal alley section drawn at 1/4" scale

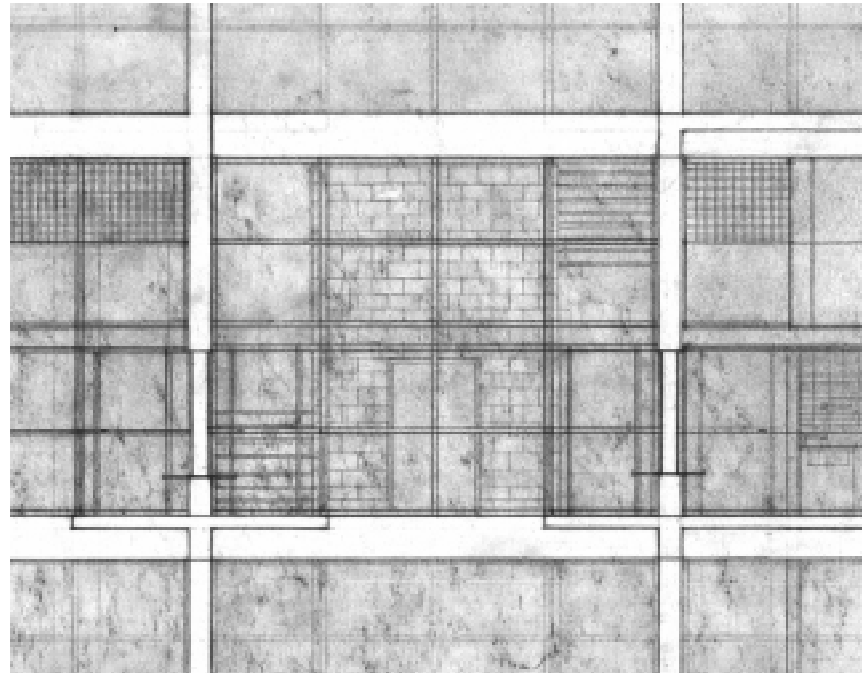


*Debis Immobilienmanagement
Berlin, Germany
1999*



A central core forms a vertical street for the apartments. The void is created by omitting the secondary and tertiary wall elements.

This internal stage allows for a complexity of interaction in three dimensions.

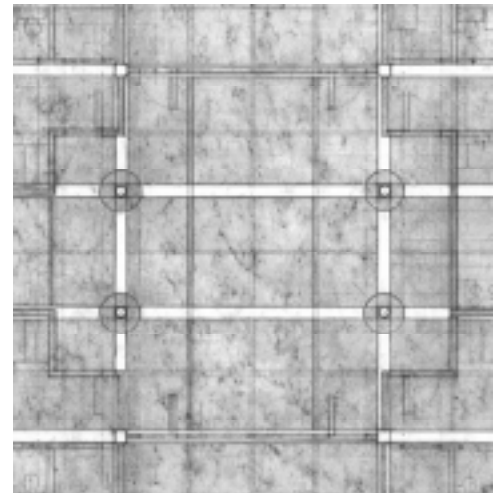






Stairs and apartment entries surround the core.

Layers of elements give the small stage its depth.



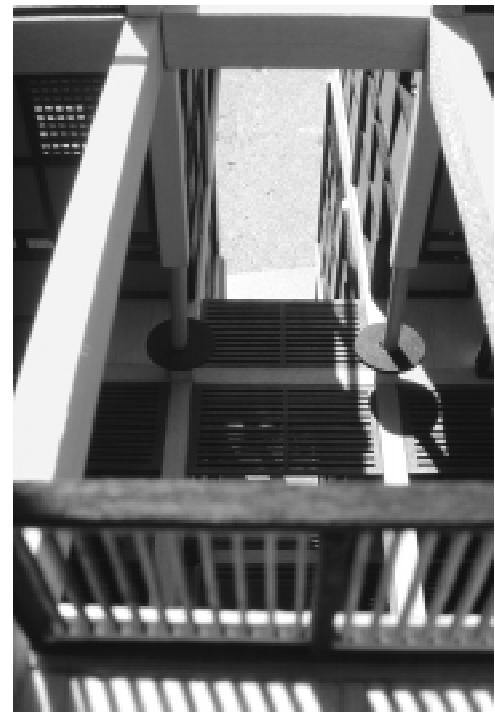
plan at core drawn at 1/4" scale



The apartments face each other across the vertical opening. Bridges facilitate horizontal movement. Stairs and elevators allow vertical movement.

The core is not a stage for the public realm of the entire city, nor is it a private place intended only for the individual. The city that exists within the building requires a stage at a smaller scale.

The core is an internal stage for action and observation within the building.

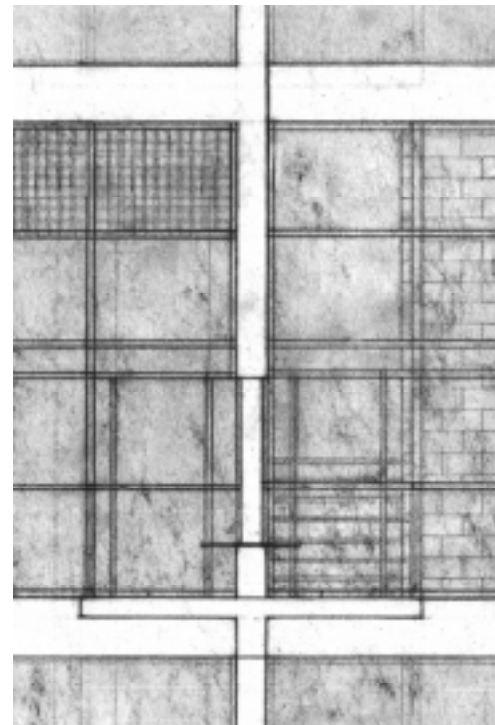






The frame is distorted to create a seat at the place of entry for the apartments. The skin wall pulls back from the column to give a front porch.

The frame and skin are manipulated to create a stage for action, interaction, and observation at the scale of life within the building.

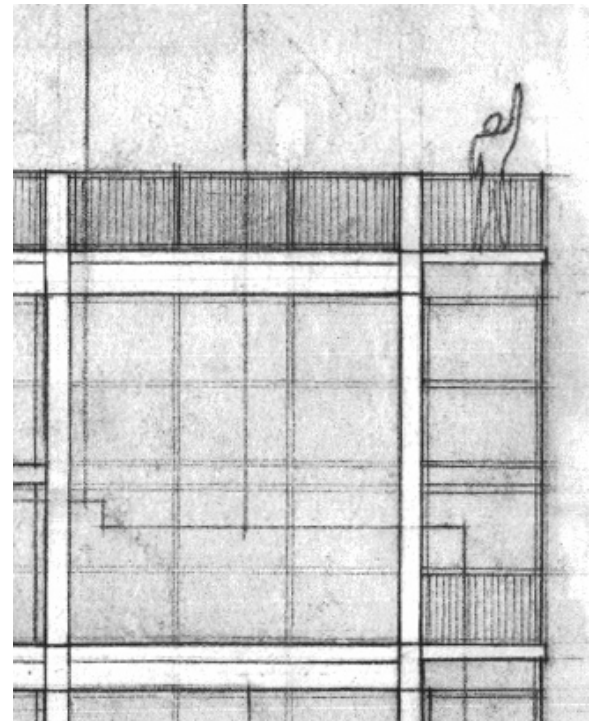




La Tourette, France
1999

roof

The roof is a habitable place for the occupants of the building.



section

The scenes occurring at the largest scale of the city beyond the building can be observed from above.





conclusion

The thesis began as an inquiry into a specific question: What makes a building able to address the many scales of its context simultaneously? The conclusion of the thesis does not present a definitive answer to that question. Instead, the thesis is concluded with reflection, documentation and articulation of the work generated from the consideration of many issues resulting from the project.

The articulation of frame and skin, the possibilities resulting from the recognition of urban debris, hierarchical relationships and scale relationships were the primary issues investigated through the building project. The project seeks to recognize the presence of the city as an historic continuum without resorting to a replication of an historic style. These issues are tangible concerns in architecture that were addressed directly through the process of design.

The thesis also raised questions and discussion in the broader realm of architecture as a discipline: What is the role of architecture; whom does it serve? Inquiry into these questions led to an understanding of architecture as the stage for life. This stage supports life from the scale of the individual to the scale of the city as a whole.

The conclusion of the thesis presents a direction for the future. The struggle will be to achieve the integration of specific tangible questions of architecture with a more general conception of its role. This integration may lead to a way to make a building able to address the several scales of its context simultaneously.



Photographs by author unless noted

- 1 All Casa del Fascio images from:

Schumacher, Thomas L.; Surface and Symbol: Giuseppe Terragni and the Architecture of Italian Rationalism; Princeton Architectural Press; New York, NY; 1991; pages 146-151.

- 2 Rossi, Aldo; The Architecture of the City; The MIT Press; Cambridge, MA; 1982; page 21.

- 3 Manfredi, Giacinta and Biggi, Maria Ida; Architecture and Urbanism: Aldo Rossi and 21 Works; A&U Publishing Co., Ltd.; Tokyo, Japan; 1982; page 106.

- 4 Wundram, Manfred and Pape, Thomas; Andrea Palladio: 1508-1580; Taschen; Cologne, Germany; 1989; page 137.

- 5 Pundt, Herman G.; Schinkel's Berlin; Harvard University Press; Cambridge, Ma; 1972; page 231.

bibliography

Alberti, Leon Battista; On the Art of Building in Ten Books; translated by Joseph Rykwert, Neil Leach, Robert Tavernor; The MIT Press; Cambridge MA; 1988.

Laugier, Marc-Antoine; An Essay on Architecture; translated by Wolfgang and Anni Herrmann; Hennessey and Ingalls, Inc.; Los Angeles, CA; 1977.

Palladio, Andrea; The Four Books of Architecture; translated by Isaac Ware; Dover publications, Inc.; New York, NY; 1965.

Rossi, Aldo; The Architecture of the City; The MIT Press; Cambridge, MA; 1982.

Schumacher, Thomas L.; Surface and Symbol: Giuseppe Terragni and the Architecture of Italian Rationalism; Princeton Architectural Press; New York, NY; 1991.

Venturi, Robert; Complexity and Contradiction in Architecture; The Museum of Modern Art; New York, NY; 1966.

Vitruvius; The Ten Books on Architecture; translated by Morris Hickey Morgan; Dover Publications Inc.; New York NY; 1960.

Cassidy Bolger

*December 20, 1971
Portland ,Oregon*

Virginia Polytechnic Institute and State University

*Master of Architecture; May 10, 2000
Blacksburg, Virginia*

The Colorado College

*Bachelor of Arts; June 14, 1994
Colorado Springs, Colorado*