

# CULTIVATION FOR GENERATIONS

A Family Farm House in Blacksburg Virginia

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Approved by:

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Hans C. Rott

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Steve Thompson

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William Galloway

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## ABSTRACT

### CULTIVATION FOR GENERATIONS A Family Farm House in Blacksburg Virginia

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This thesis represents a series and hierarchy of architectural ideas explored through the vessel of one design project: a multi-generational family farm house in Blacksburg, Virginia. The relationship between ideas of courtyard and farmyard, as joined and segregated spaces, is one level of exploration. Another is the relationship between such spaces, joined and segregated, within the interior of the main house. From these primary ideas emerged several other ideas related to nature and qualities of these spaces as built entities, such as meaning, proportion, pattern, and material.

## ACKNOWLEDGEMENTS

This book is dedicated to my parents, my great grandparents, and the many generations that came before them. To them I am deeply indebted for a life made possible for me through their hard work, sacrifice, and love. This book is also dedicated to generation that may come after me. I hope that I will be as good a parent and grandparent to them as mine have been for me.

There are a great many other people to whom I owe thanks for what they have contributed to my work and to my life generally.

To my faculty, especially the members of my committee - official and unofficial: Thank you for offering your wisdom, experience, and patience to me through this process.

To my colleagues and friends: Thank you for offering the warmth and coolness of your companionship and critiques. Over the course of the past few years, several of you have become so dear to me your presence in my thoughts has been indelibly marked. There will always be a place for you there.

To the rest of my family, especially my sisters and brother: Thank you for the love and affection you've shown me.

To my husband: Thank you for helping me to see the world through the eyes of an Architect. Thank you for warning me how hard these years of study would be and for so fully supporting me when I decided to do it anyway. In this profession, as in this life, I am very happy to share it all with you.

## TABLE OF CONTENTS

ii	Abstract
iii	Acknowledgements
iv	Table of Contents
vi	List of Illustrations
1	Introduction
2	Meaning and Number
3	Site
5	Remnants and New Material
7	Living and Working
8	Sketches
13	Drawings
25	Perspectives
30	Vitae

## LIST OF FIGURES

4	Site plan sketch
4	Panoramic site photo
6	Collage of site photos
8	Sketch of site elevation series
9	Sketch of site plan / section series
10	Sketch of site plan proportion study and resultant patterns
11	Sketch of site plan / axon series
12	Sketch of house form development
13	Sketch of house form iteration
14	Site Plan
15	Basement Plan
16	First Floor Plan
17	Second Floor Plan - dimensioned
18	Roof Plan
19	East Elevation
20	South Elevation
21	Section A
22	Section B
23	Section C – dimensioned
24	Section D
25	View from farmyard toward main house
25	View across farmyard toward double silos and barn
26	View between barn and milking parlor toward main house
27	View of main house
28	View from courtyard of main house looking south toward milking parlor

## INTRODUCTION

More than simply a project aimed at demonstrating architectural competence, a thesis provides the opportunity for a designer to say something they feel needs to be said; to show something they feel needs to be shown. One begins by setting the context within which they will take a stand. Then, they must make a proposition by setting the subject matter through which they wish to prove their point. And then, they must set about the work of bringing this matter into the world so that they themselves, and others, may fully deal with and judge it. At least, this is my view of what this thesis is all about and this in the manner in which I have progressed.

My statement is part of a larger socio-economic and ecological view of what is good for all people. I believe man's life blood emerges from the soil and is fueled by the sun. I believe relationships with other humans, creatures, and one's own understanding require time and energy to become mutually beneficial. I believe each generation is responsible for ensuring there is a place for the next and enough of it to go around. And, I believe the enjoyment of the everyday tasks of life; eating, drinking, breathing; is a conscious act best played out in the company of friends and family.

My proposition; the design of a multi-generational family farm house for the town in which I live. The house serves as a vessel through which I explore the polar relationships between spaces; joined and segregated; enclosed and undefined. On one level, these relationships are explored on the site plan through the relationship between the courtyard of the main house and the farmyard, which is established by the arrangement of the other farm buildings around it. On another level, these relationships are explored inside the main house through the arrangement of apartment dwellings for various family members with those spaces of the house that are open and common to everyone involved with the farm.

## MEANING AND NUMBER

Symbols, in architecture, have a presence so long standing with us they often go unnoticed in daily life. Whether formal in nature or merely applique, symbolic representations offer us ideas of how men and women, who have come before us, viewed the world around them and their place within it. In turn, it is through this offering of symbolism that we have opportunity to make our ideas present. In this project, the two symbols, found in many civilizations around the world, the circle and the square are given a primal symbolic value; the circle as symbolic of the heavens and the square as symbolic of the earth. These primary ideas serve here as *a priori* starting points for the layout and arrangement of the various buildings of the farm - around the farmyard - as well as the formal constitution of the main house - around the courtyard.

At a slightly more obscure level of symbolic ideate, within the dimensions of both the main house and the farmyard, there is an encoding of the word *family*. The method for this type of encoding was used by gothic church builders of the middle ages whereby a term, or single word, is used as the primary mathematical dimension of construction, from which all others subordinate.

The application of this idea is simple: a significant word is chosen; then each letter of the word is correspondent to its position in the alphabet (a=1, b=2, etc.); then each corresponding number is summed to give one number (1+2... = n). In this instance, the word family corresponds to the number 65, and this number is the dimension of one side of the square that is the main house plan and is one half the side of the square of the farmyard paving.

That this encoding exists within the corpus of the farm is a matter that may never be noticed bodily by any one. However, its existence may well be a matter known and translated by the minds of many as a story to be told and retold in time.

## S I T E

The site selected for this project is a former farm of just over 160 acres located within the northwestern town limits of Blacksburg, Virginia. Currently, the site is not in use for any agricultural purposes, beyond the cutting and bailing of grass hay in the summer, but is in use as a community park open to pedestrians, bicyclists, and picnickers. That the site is located so close to the heart of downtown Blacksburg and is of a significant and contiguous size made it an ideal location for the exploration of the ideas of this thesis.

Upon further examination of the site, and the farm building fragments that still remain there, decisions about how to proceed with the design of new buildings seemed to emerge de rigueur from both a historic and a contemporary perspective. That the buildings of the old farm were located in the center of the property seemed, to me, the most appropriate place for such buildings to be now. That the orientation of those buildings was a deviation from the cardinal directions by twenty-six degrees seemed, to me, the most appropriate orientation for optimal sun lighting of those buildings. That there were buildings still in relatively good condition on site seemed, to me, an opportunity for providing the initial design constraints of the project. And so, the design began with a few ideas, a site, and its remnants.



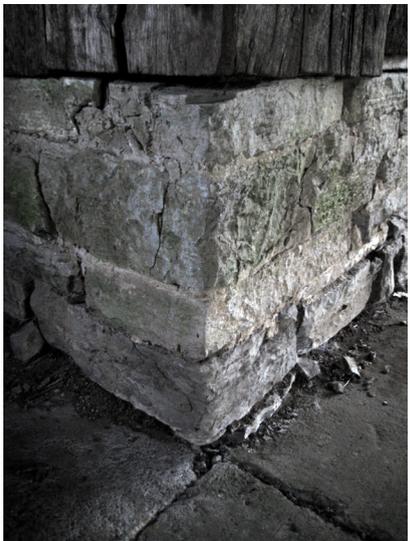
## REMNANTS AND NEW MATERIAL

The four remaining structures from what was the old farm - three silos and a milking parlor - all of concrete block construction, are present in the new farm master plan. Further, their implied axial arrangement on the site has been maintained and has served as the major orientational force around which all new buildings and spaces align or disalign.

The materials selected for the new structure are in sympathy with the old. Stuccoed and plastered aerated autoclaved concrete block is proposed as a load bearing material for the construction of the main house. Doors, windows, flooring, and pergola structure all are to be of hardwoods native to this region.

A paving pattern was also developed for the surface of the farmyard. This was derived through geometric operations based upon the proportions of the silos and the symbolic number 65. It is imagined that small stones - river rock perhaps - be fitted together on a gravel and sand substrate to form the pattern as shown in the site plan.

That this encoding exists within the corpus of the farm is a matter that may never be noticed bodily by any one. However, its existence may well be a matter experienced by the minds of many as a story to be told and retold in time.



## LIVING AND WORKING

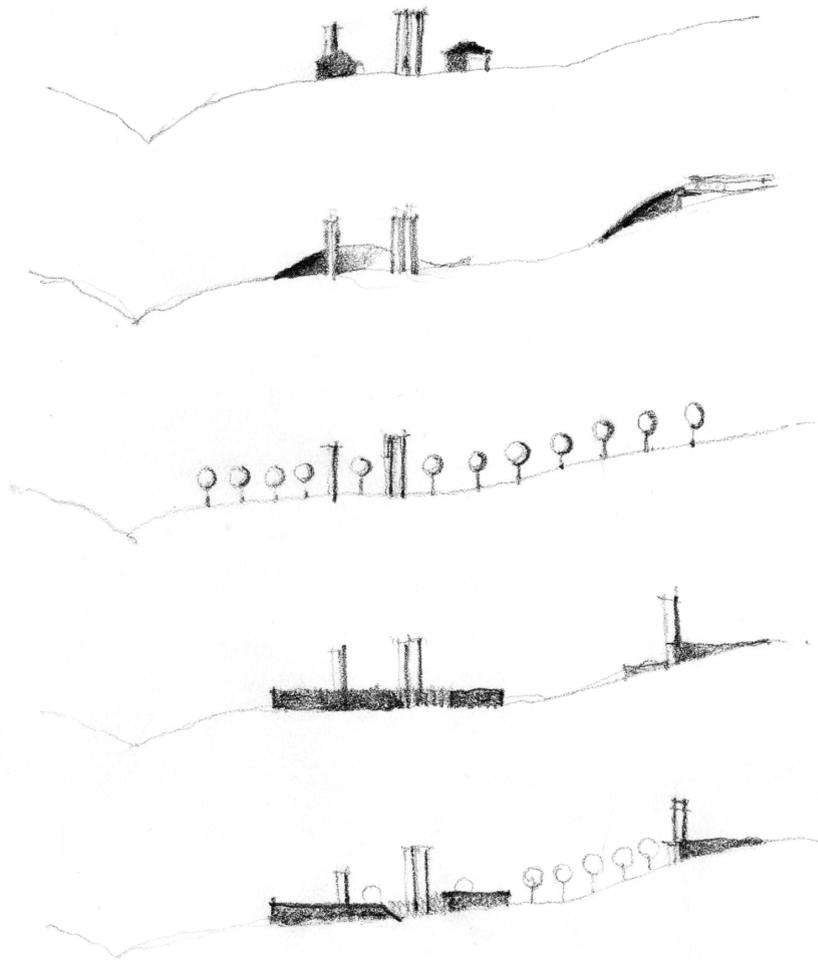
From a conceptual point of view, it is imagined that this farm be a sheep dairy primarily and a diversified market farm and orchard secondarily. The number of people required to work such a farm is only generally speculated here; fifteen, perhaps twenty people at the height of the season. One can imagine on a busy day that there would be a hum of activity; people moving about the farm – converging and dispersing about the center of the farmyard and passing through or pausing in the courtyard. Though static in plan, by its very nature, this farm is a place for living and working.

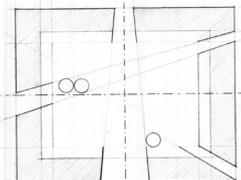
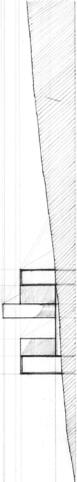
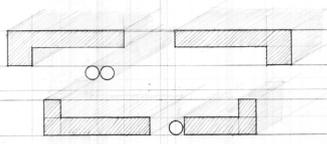
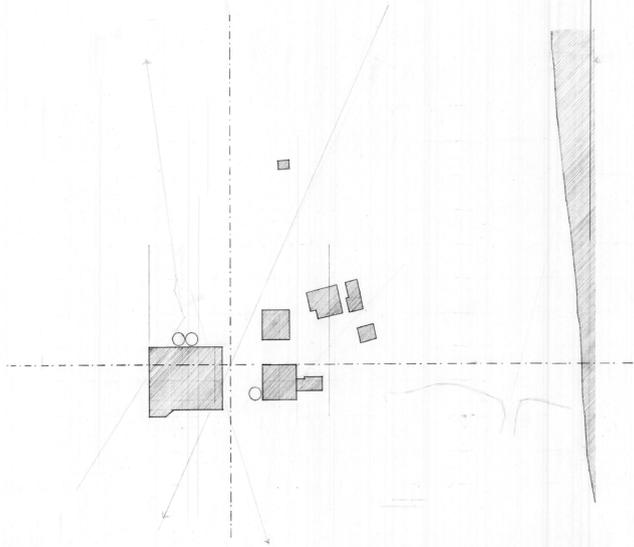
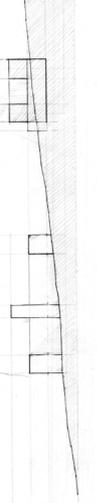
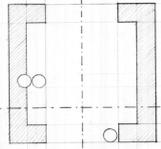
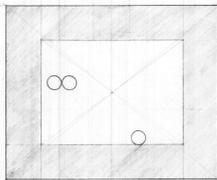
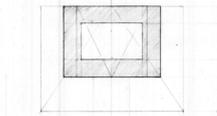
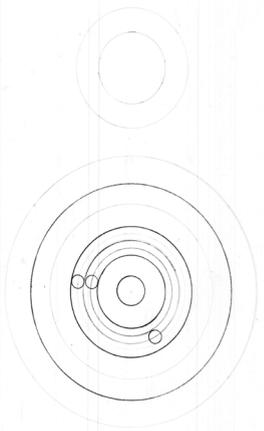
The main house is one intended to accommodate four generations of the same family, or perhaps unrelated persons involved in the life of the farm, in a way that provides both common space for group interactions and secluded space for individual to inhabit alone or intimately with another.

In the vertical dimension, the spaces become more segregated as one moves up through the house. At the very ground level is the cellar where the products of the farm are processed and stored. This level is devoted to the seasonal and day-to-day operations of the farm and, as such, is heavily trafficked. One level up is the piano nobile. Here one finds the spaces also commonly held; the farm office, kitchen, dining, and salon, as well as one apartment – perhaps the grandparent apartment. On the top level it is only dwelling.

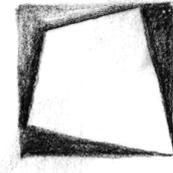
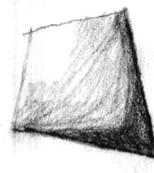
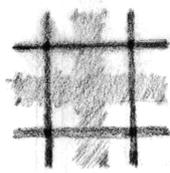
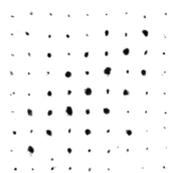
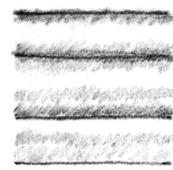
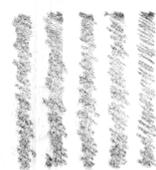
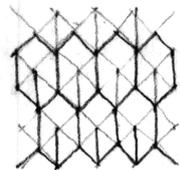
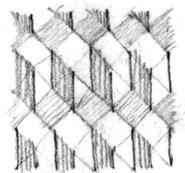
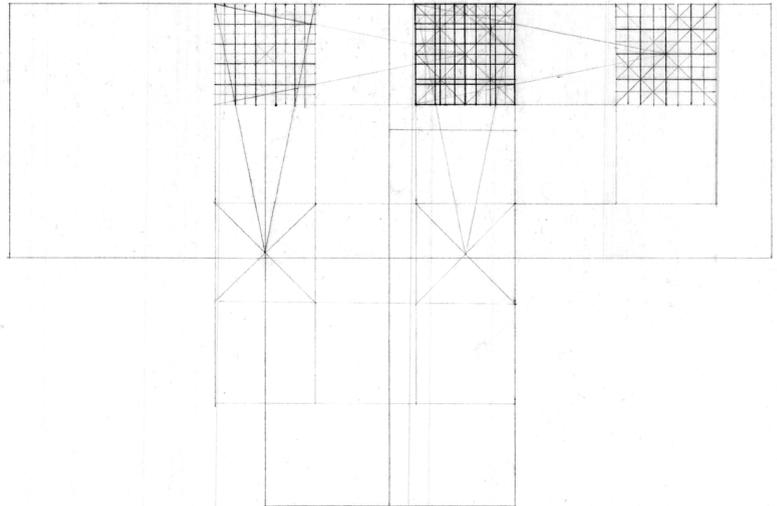
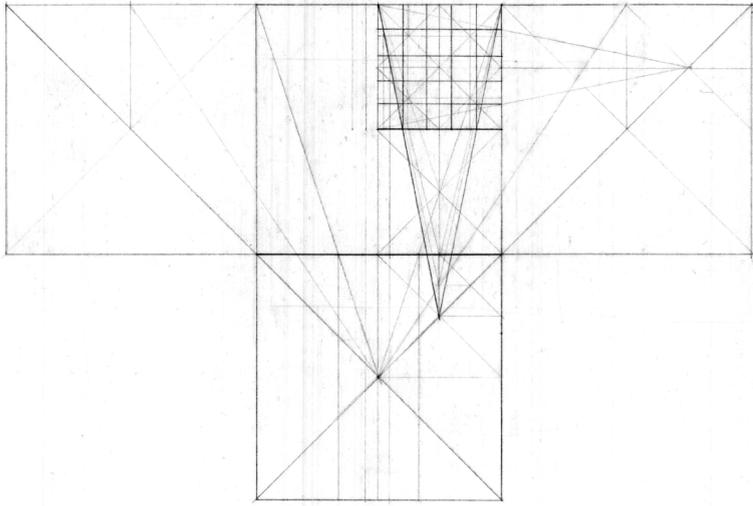
There are two autonomous apartments – each with its own stair and entrance – and two guest rooms accessible through the stair leading up from the kitchen. Within the layout of each apartment, special attention has been paid to the needs of each generation. For example, there are small bedrooms and a larger dining space in the apartment of the generation raising small children and the terrace is given to the older generation.

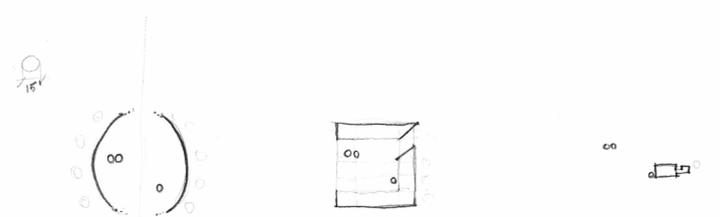
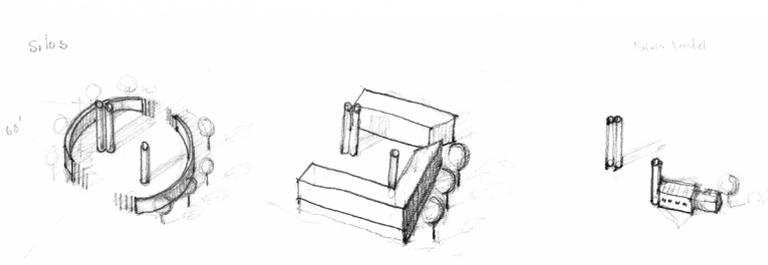
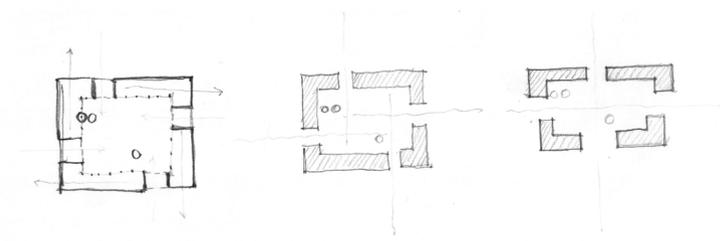
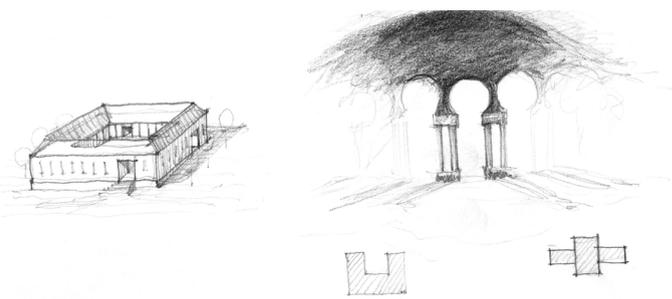
SKETCHES



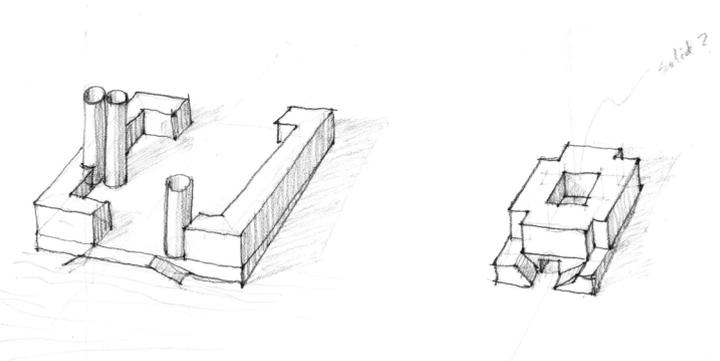


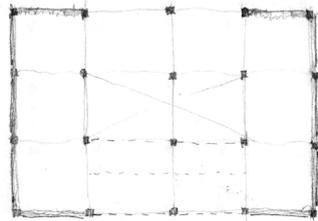
Handwritten text in the top right corner of the rightmost diagram.





old buildings  
"ruins"  
concrete block construction  
beautiful!





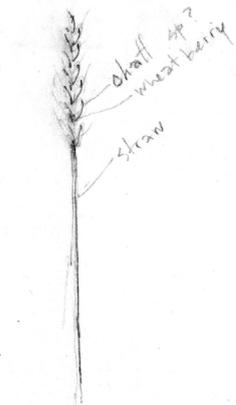
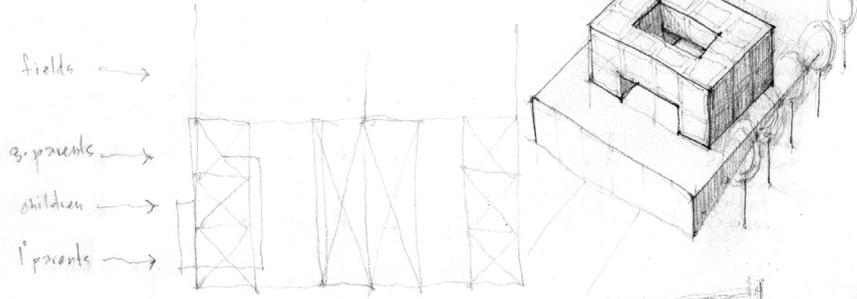
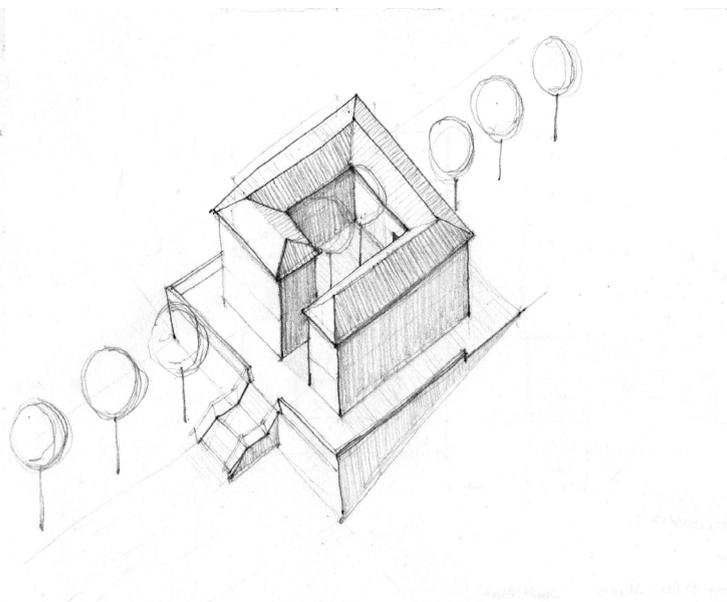
To live is to breathe [Le Corbusier]

"Sentimental Education" [Flaubert]  
 • Family situations during  
 7. French Revolution (1800s)

[Pasta Lozzi]  
 How Gertrude Thacher her children  
 Memoires of a country school teacher

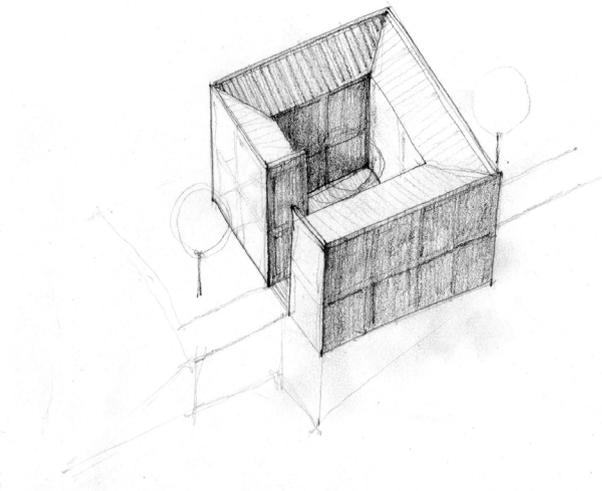
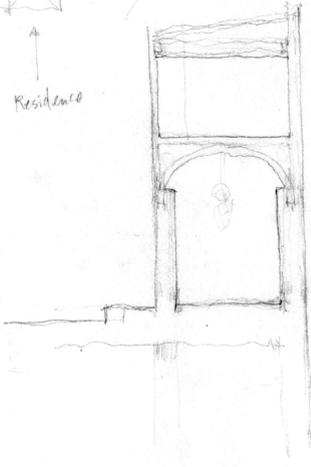
[Rousseau ?]  
 "Emile"

Appropriate

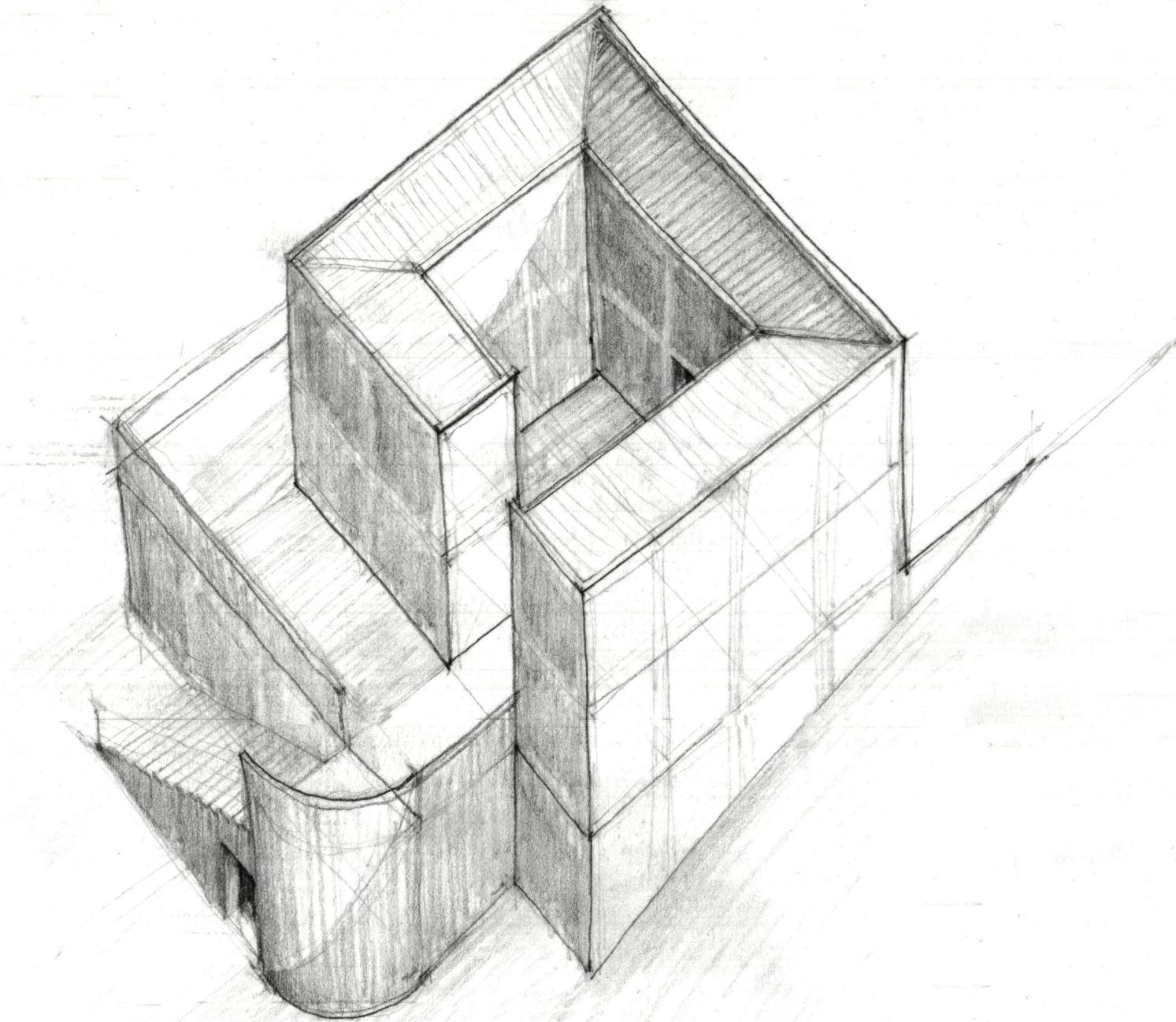


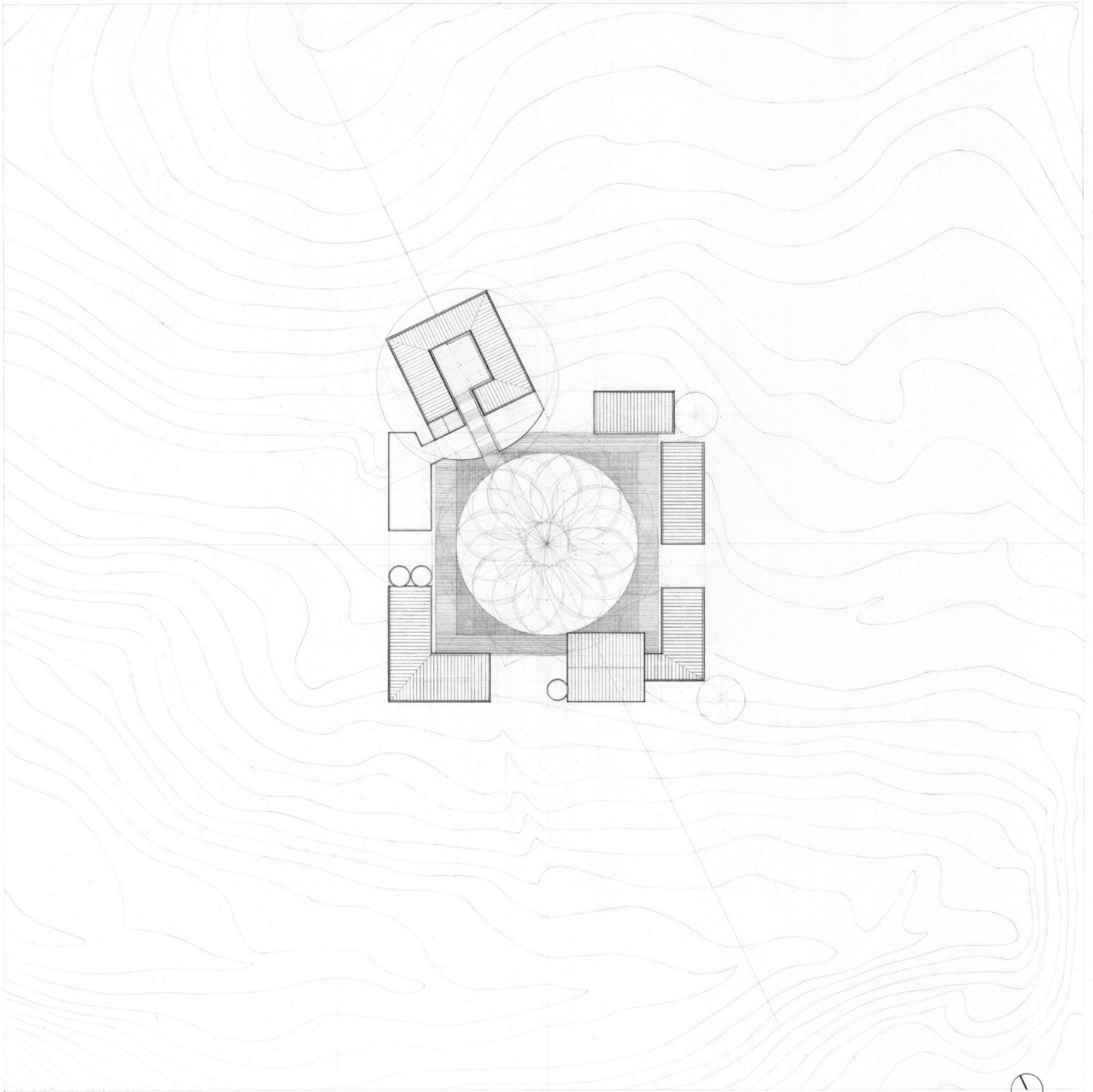
↑  
 Stables

↑  
 Residence



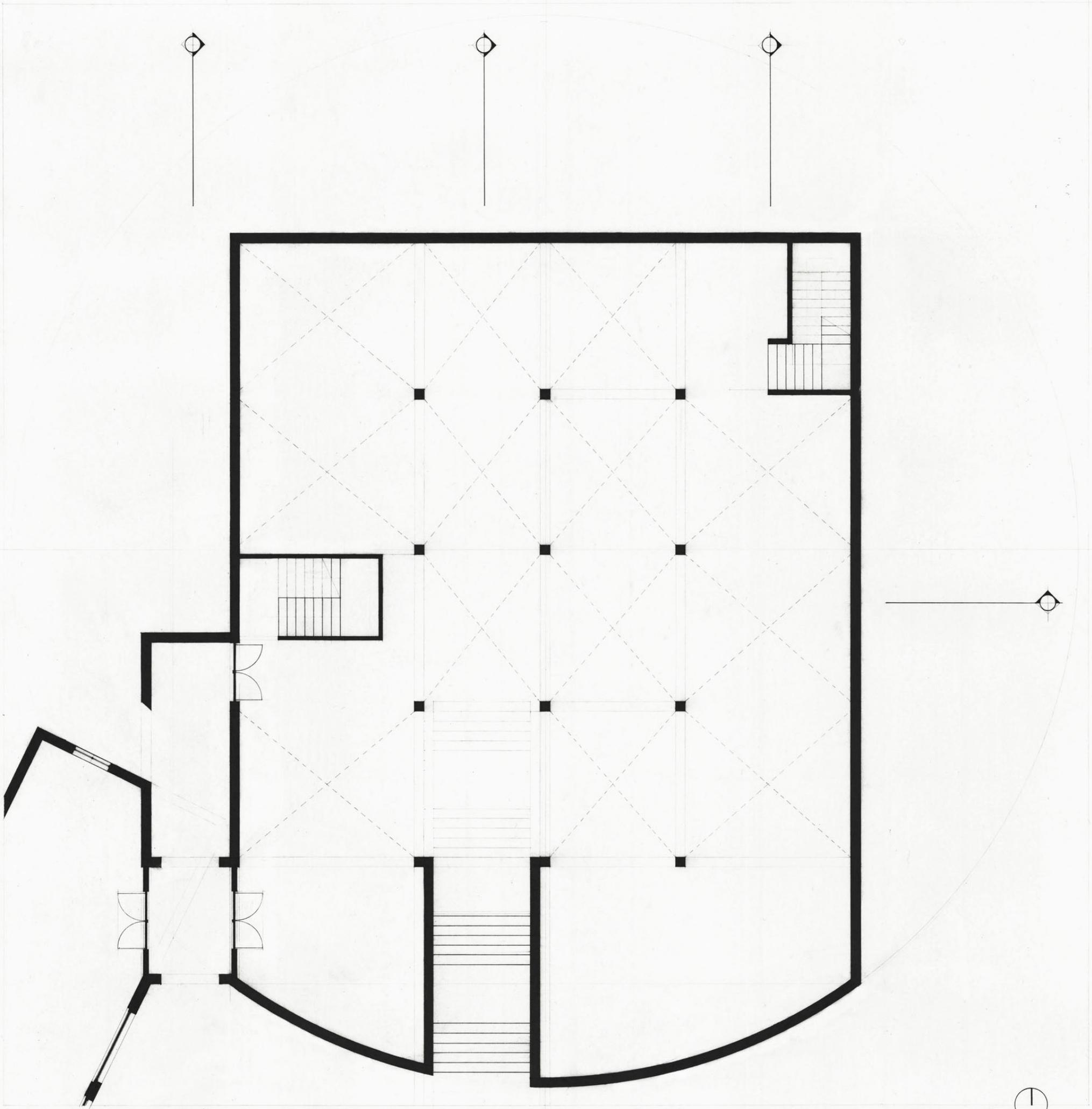
DRAWINGS



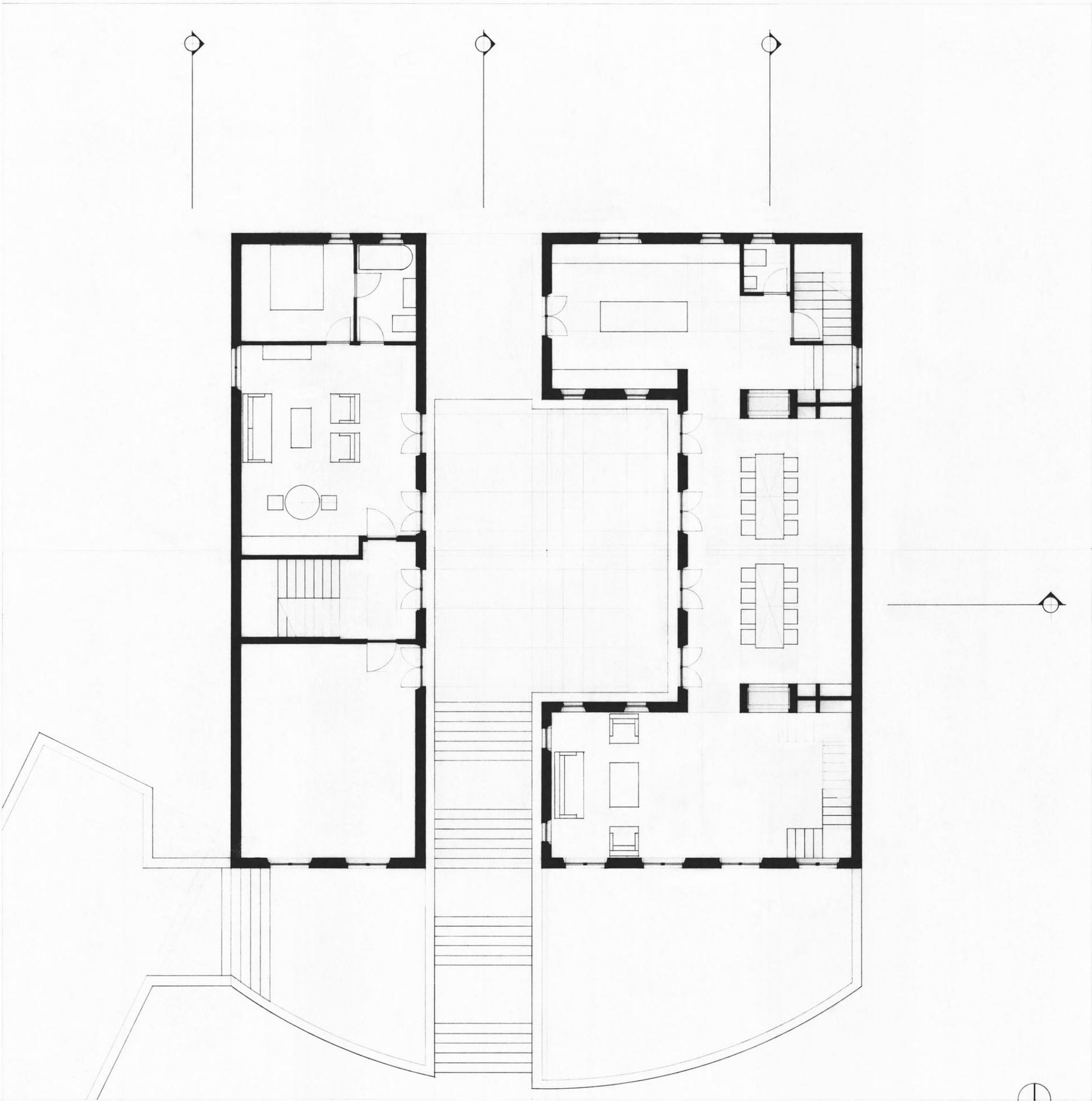


Site Plan

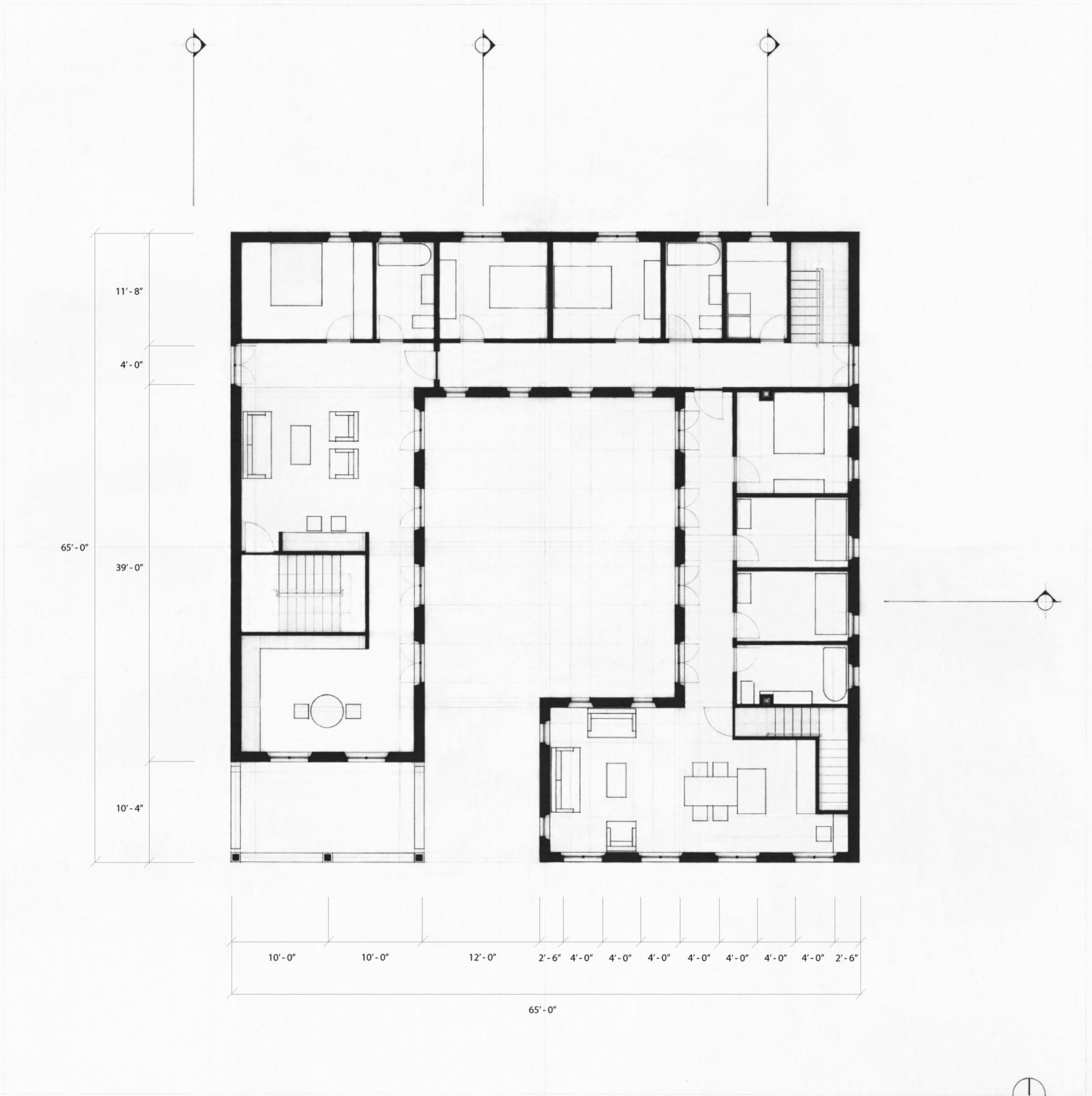
65' 12'



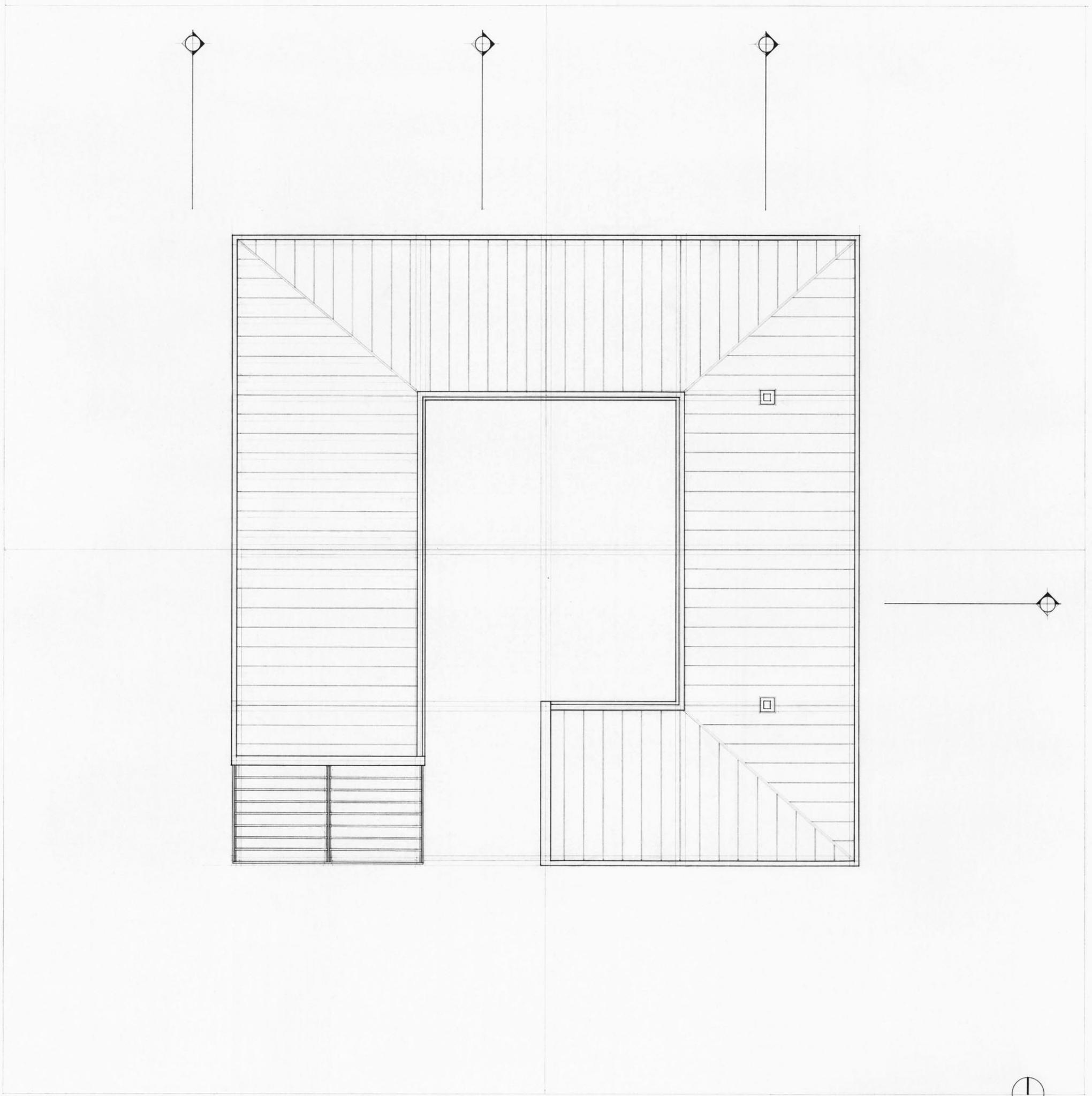
Plan - Basement



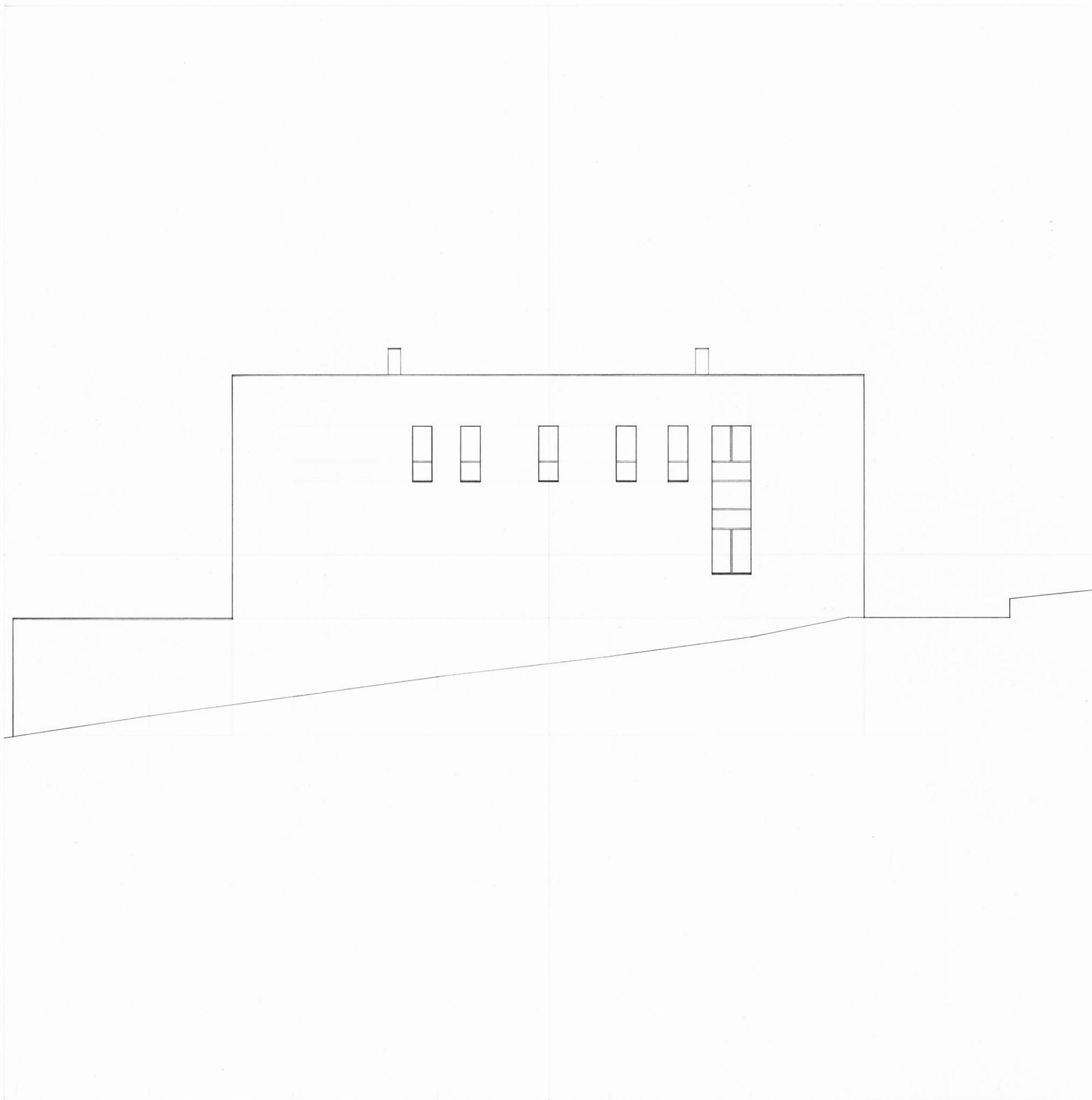
Plan - First Floor



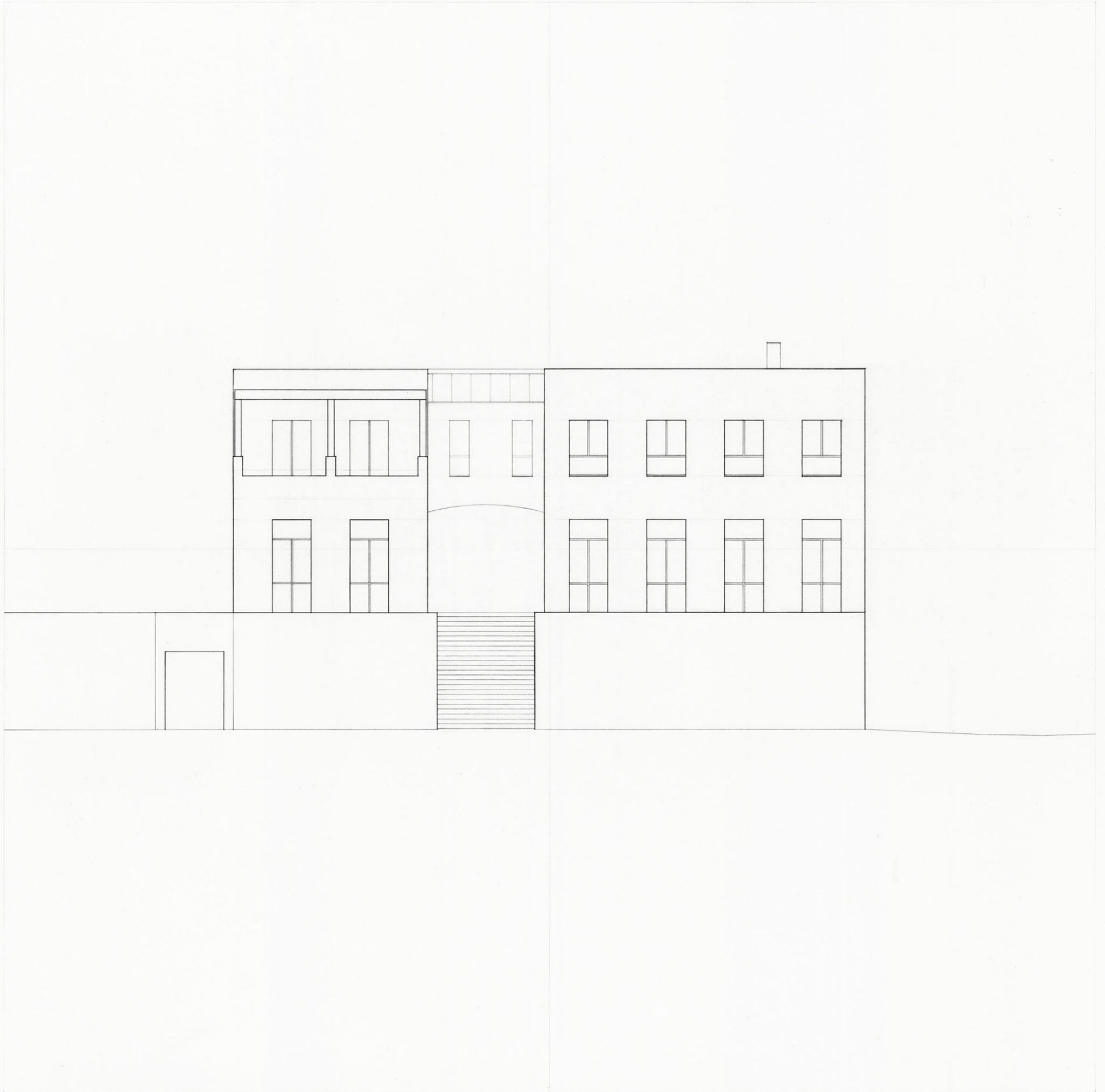
Plan - Second Floor



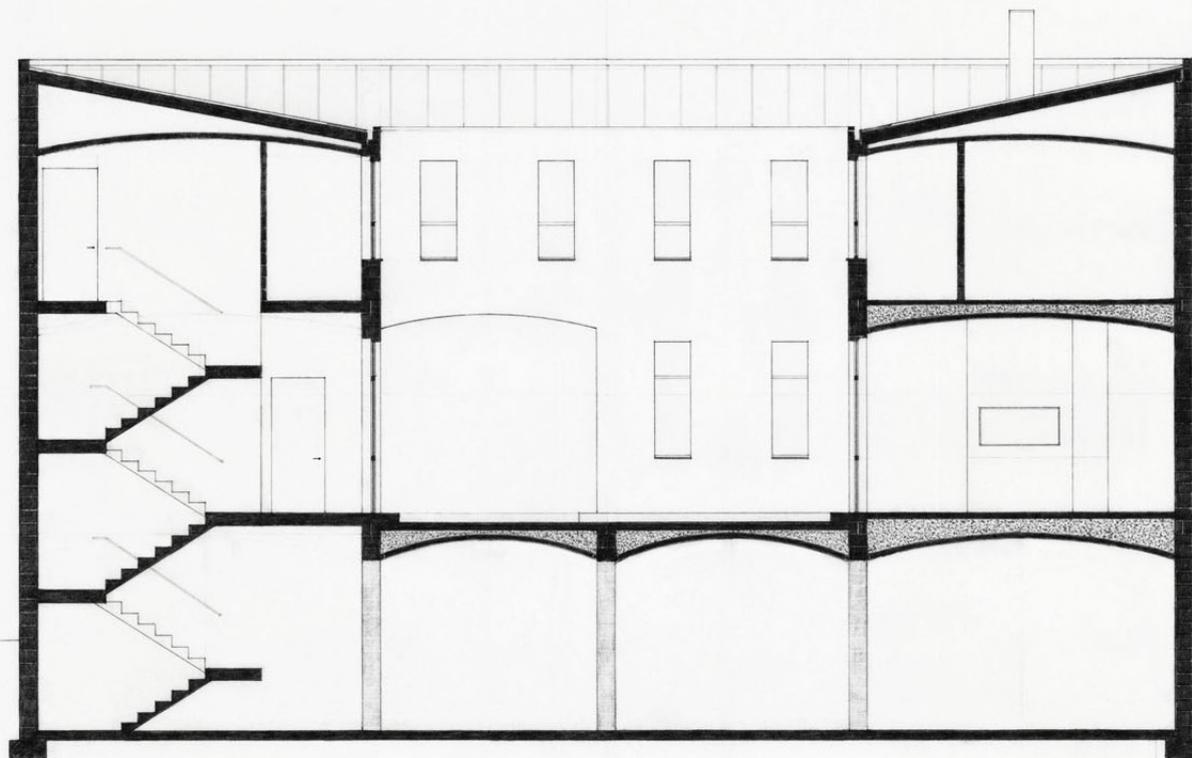
Plan - Roof



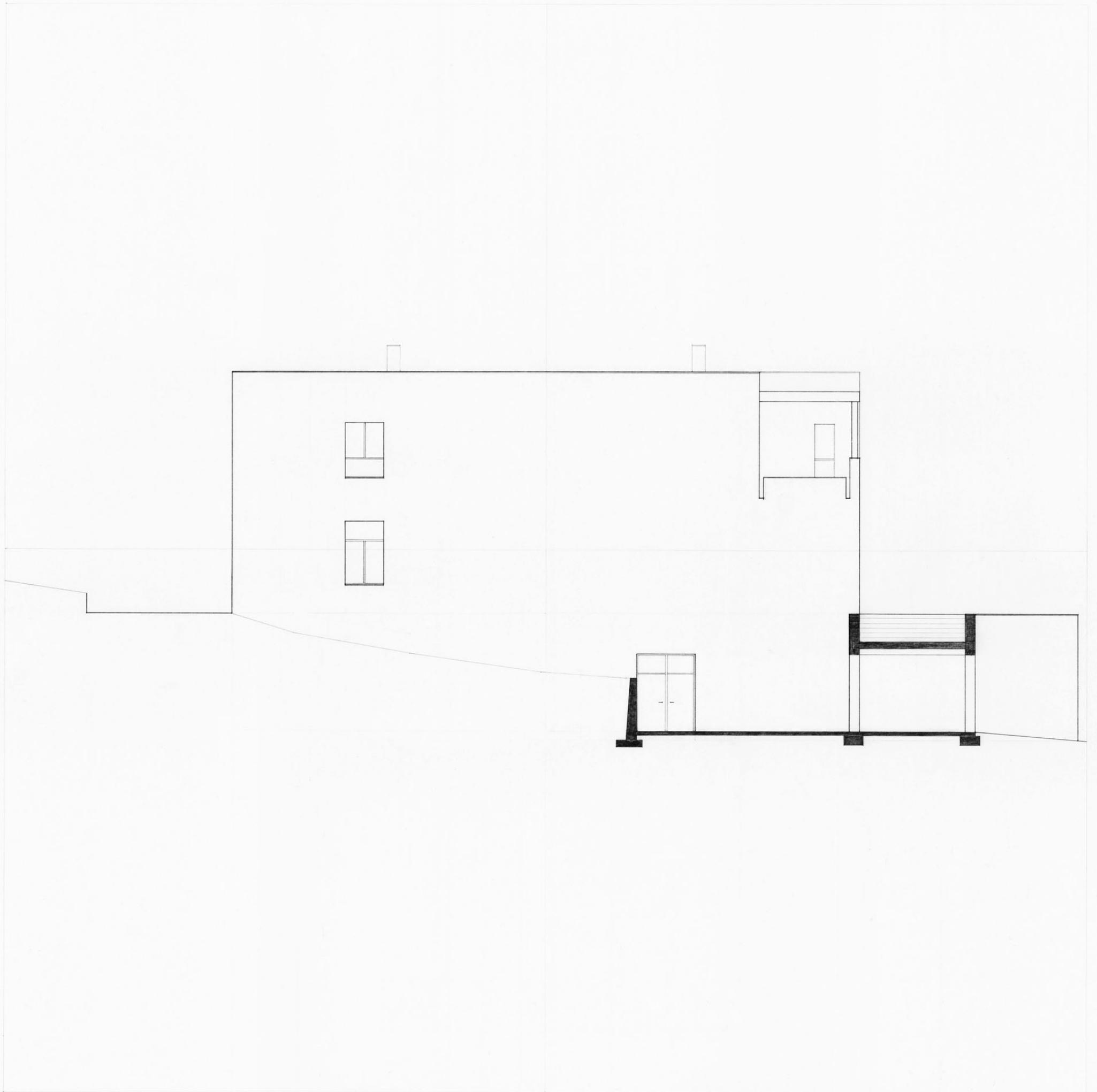
Elevation - East



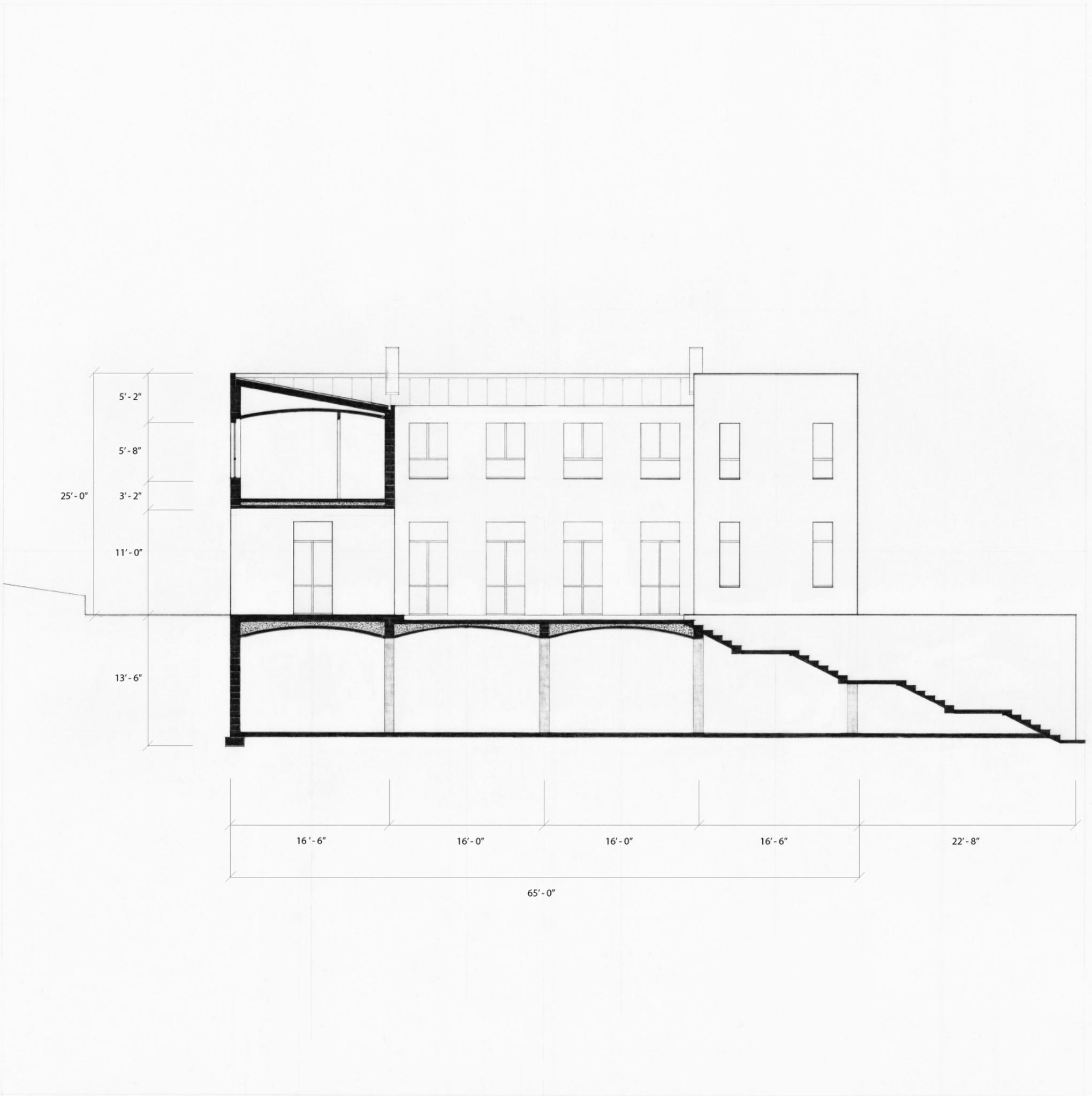
Elevation - South



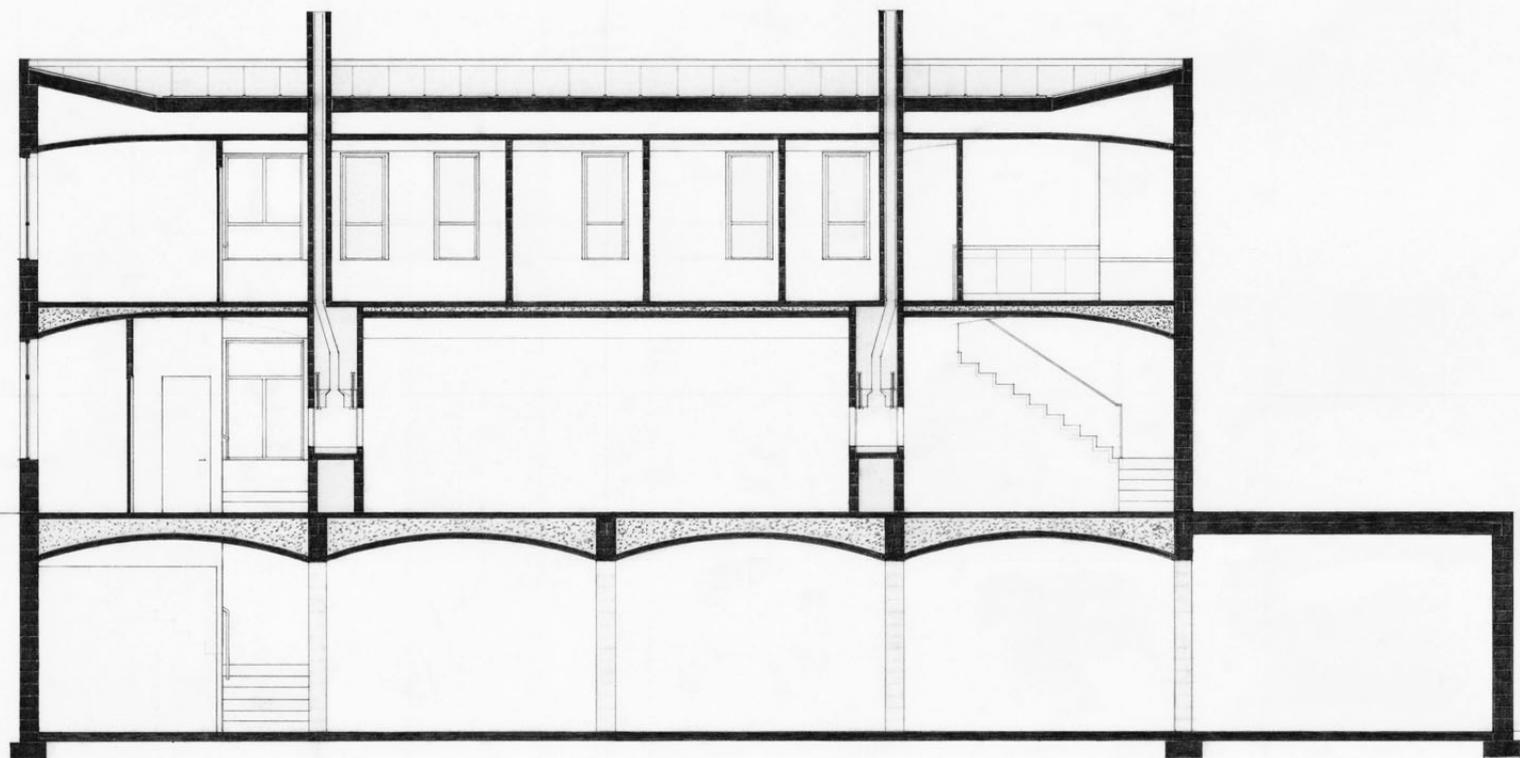
Section - A



Section - B

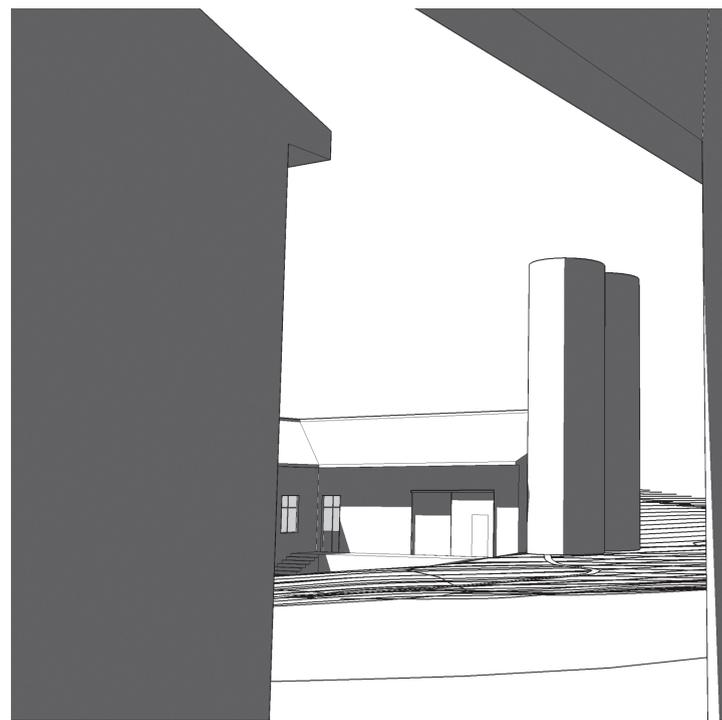
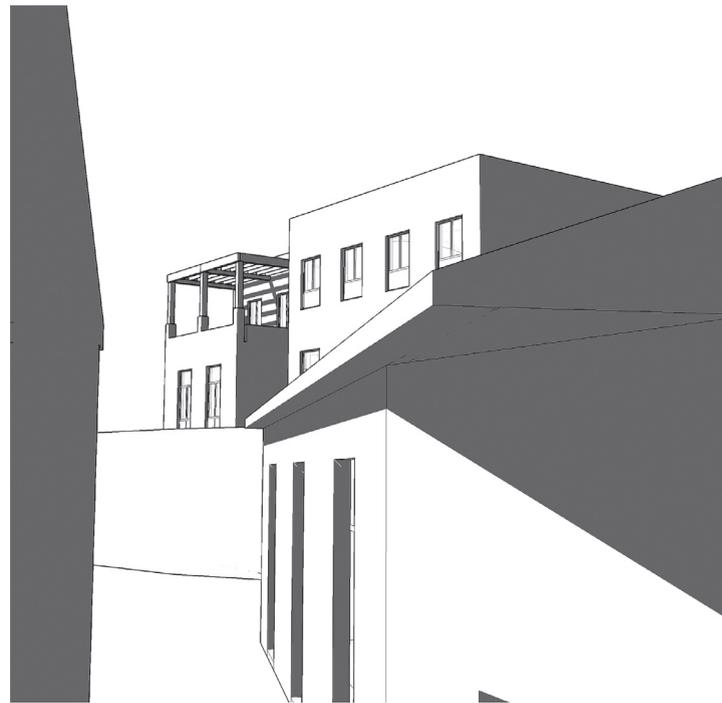


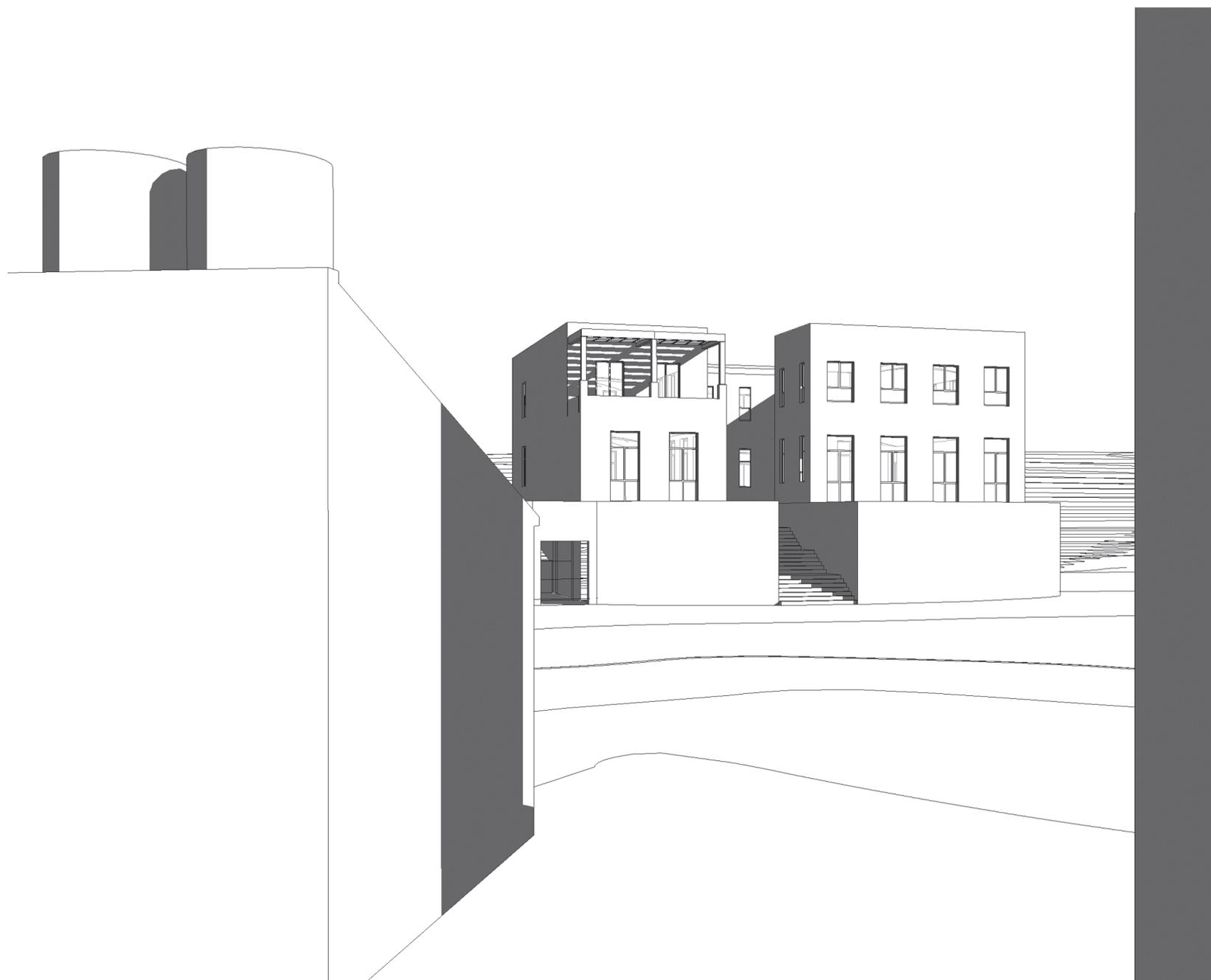
Section - C



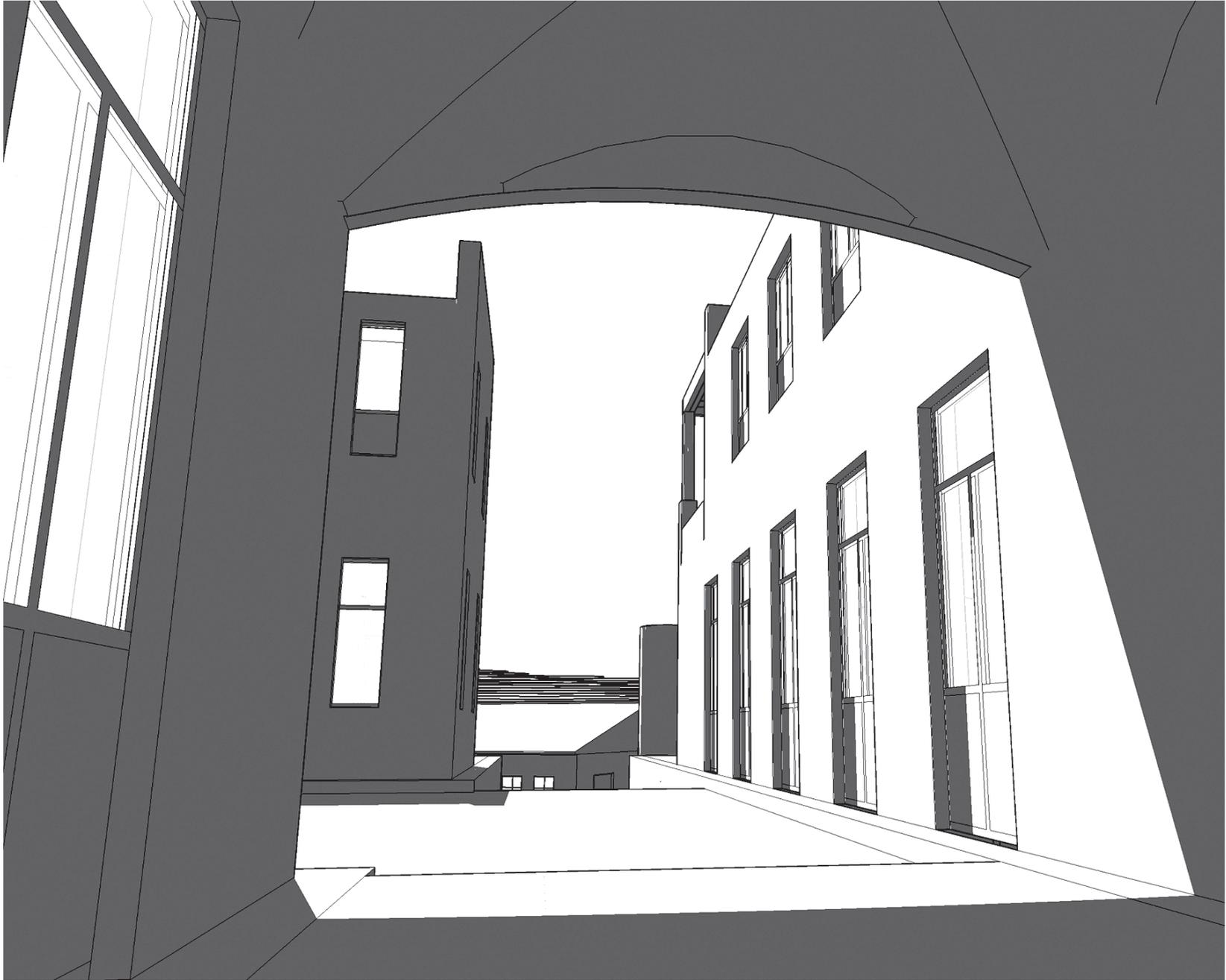
Section - D

PERSPECTIVES











## VITAE

2006 - 2009	Virginia Polytechnic Institute, Blacksburg, VA Masters in Architecture
2004 - 2005	Blekinge Institute of Technology, Karlskrona, Sweden, Master's in Strategic Leadership toward Sustainability [MSLS]
1998 - 2001	Montana State University, Bozeman, MT B.S. in Biology, concentration in Cell Biology
1999	University of Wollongong, Wollongong, New South Wales, Australia, Study abroad semester