

45 King: A Story of the Southern Home

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ABSTRACT

The house at 45 King St. in Charleston, South Carolina is more than a home. It is a story of the home. A story told through history, through a vision exhibited in architectural drawings, and through the social heritage closest to my heart. 45 King is a story for the South; the story of its grandeur, its climate, its natural beauty, its hospitality, its comfort, and its veils. It is a story that was told yesterday and one that is still told today. Like an oral history, the telling of it may change over time. The story changes as people change. The economy changes, the land develops, technology rolls ahead, and the story, which was informed by a heritage of living history, begins to take a modern form. 45 King is today's story of the Southern home.



ACKNOWLEDGMENTS

For my father, an Italian yankee who raised his son to be a gentleman in the South, for supporting me even against his own beliefs, and giving me the road map to happiness.

For my mother, for teaching me to value order and correctness, and to have strength in my convictions.

For my brother, of whom I am most proud.

For Darnell, Calvin, and Shaun, whose courage emboldened me to be myself, and continues to inspire me.

For Jono and Lindsey, for supporting me more than they even know, and for giving my life a sense of levity.

For my mentor, Clyde Carpenter, for teaching me that my work can have value even without artistry, and for instilling me with a passion for the preservation of history and heritage.

For studio professors Steve Thompson, Scott Gartner, Markus Breitschmid, Greg Luhan, Clyde Carpenter, and Steven Deger, for seeing the road ahead of me and leading me along with honesty over affirmation.

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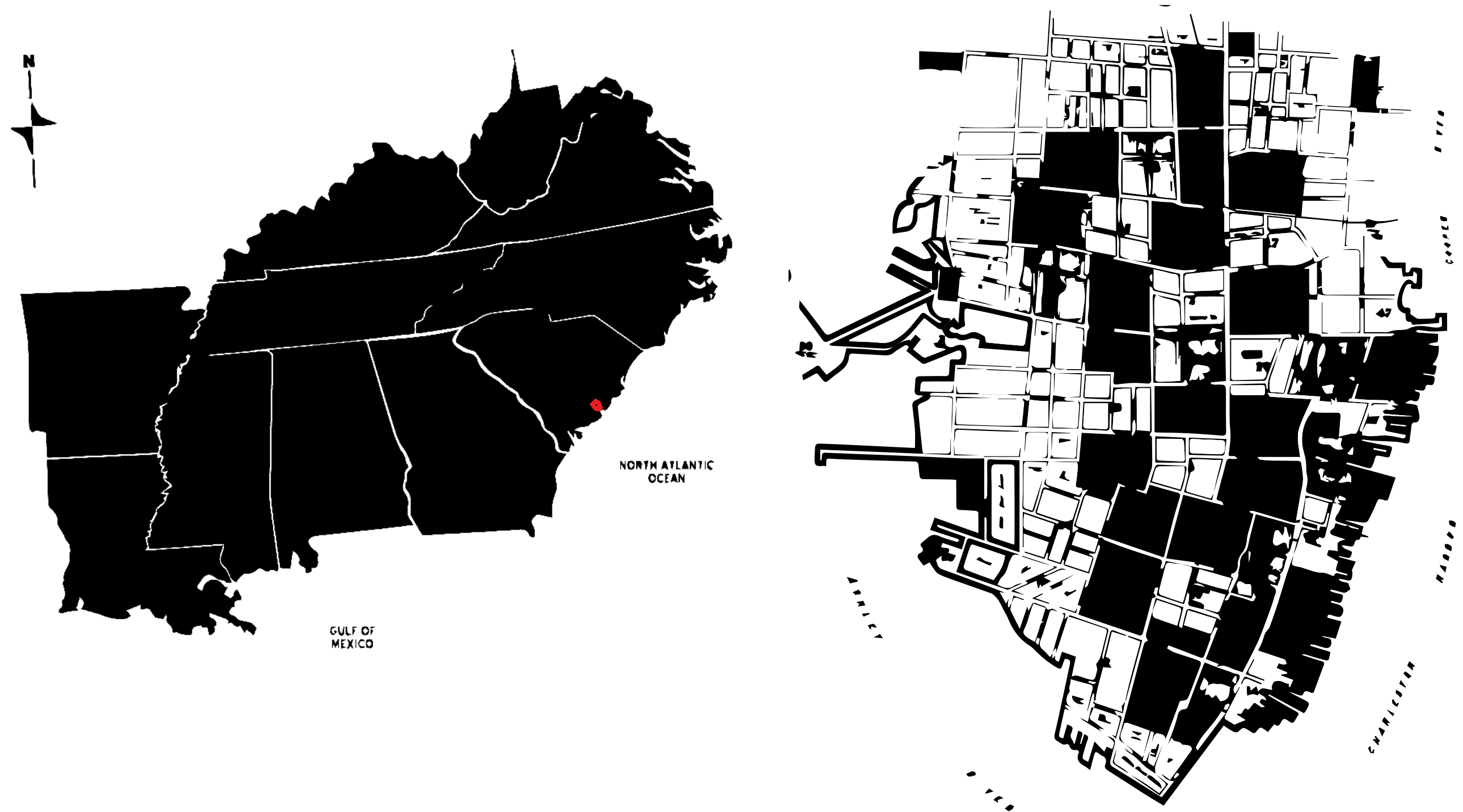
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INTRODUCTION

Following the Civil War the Southern United States fell into a period of economic downturn from which much of the South has still not recovered. In the lowcountry, considered the area of Georgia and South Carolina characterized by marshlands and sea islands, citizens historically enjoyed the most economic prosperity in the 18th and 19th Centuries due to the areas potential as trade cities and agricultural hotspots. Because of this unique situation, and likely their regional pride, many of these cities surrendered to the Union troops during the Civil War, for fear of the destruction of their cities, in order to protect their cities' heritage. Many cities in the lowcountry, including the author's birthplace, Savannah, Georgia, and Charleston, South Carolina, are considered financial success stories following the economic downturn, as they were able to capitalize on the heritage they sought to preserve and thus became centers of tourism by the mid-20th Century, maintaining a grasp on historical architecture by presenting them as museums. Because of the protected heritage, as well as the financial opportunities, this area of the South seemed to be the perfect grounds for an experiment in presenting a new architectural object to the region by maintaining a connection to context, as well as a grasp of contemporary construction and architectural details. The approach to this project, which is a custom home in Charleston, SC for a wealthy couple and their adult son, is an experiment in which the conclusion will definitively answer whether one can stay loyal to the architectural heritage of the South-keeping in mind type, craftsmanship, and social influence-by following a modern architectural chronology of type, object, form, site, and material.

The domestic architecture of the region varies highly in terms of stylistic language, but architectural microcosms exist in which architectural types are maintained throughout the years, creating an aesthetic narrative. High style was transplanted in terms of Georgian Palladian house types that were built on the highly profitable agricultural plantations. In more urban areas, such as Charleston, the domestic vernacular of architecture followed a language of type, rather than style. In particular, the Charleston Single House is Charleston's answer to the layout of the early colonial port city. Historically, the house type consists of a long main elevation on the broad side of the building lot, which runs perpendicular to the street and often faces South. The narrow side facing the street marks the house as one room deep, similar to a detached shotgun style house. The broad elevation faces a garden, which takes advantage of direct sunlight. Architecturally, the type is not unique to any particular style. In fact, the first known single house, built by Colonel Robert Brewton in 1733, was built in the federalist style, popular in the colonies as a transplant of the British Georgian style. As the Greek Revival swept through the United States in the early 19th Century, however, single houses began to be built with pedimented porticos and greek orders. The openness of stylistic interpretation makes the Charleston single house a perfect subject to explore contemporary techniques while staying loyal to a historically recognized arrangement of architectural ordering.



Map of the American South (Left), Map of Charleston, SC ca. 1885 (Right) [Public Domain]

TYPE

A schematic study of the plans of one of the most notable Charleston houses, Drayton Hall, was important in the final design of the home. Drayton Hall was built in 1737 by Charles Drayton and is considered one of the first domestic palladian housing types in the Americas. The plan of the house is markedly similar to plate 58 of James Gibbs *A Book of Architecture*, a British stylebook from the 18th Century that was likely referenced in the house's design. Architectural Historians call out important similarities between these plantation homes and Andrea Palladio's Renaissance villa designs. The features include bilateral symmetry and, most importantly, the whole-number ratios present in the room layouts. These included ratios of 1:1, 1:2, and 3:4. The plan grids, shown at right, are also markedly similar and, surprisingly, are carried through history to the plan of the typical Charleston Single house, which also includes the same ratios in the general plan. The important heritage of these room ratios can influence the design of the contemporary house, while avoiding issues of stylistic imitation.

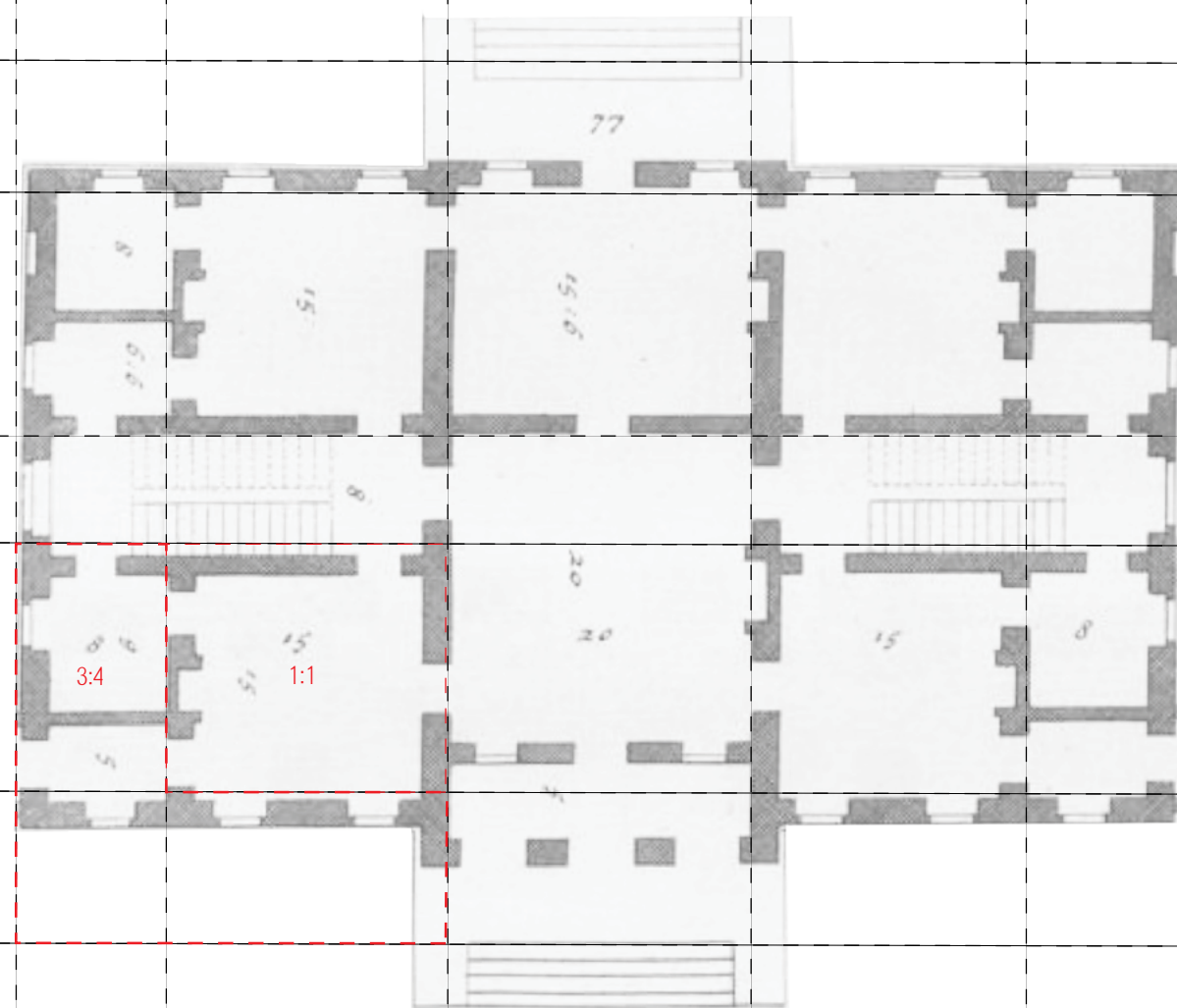
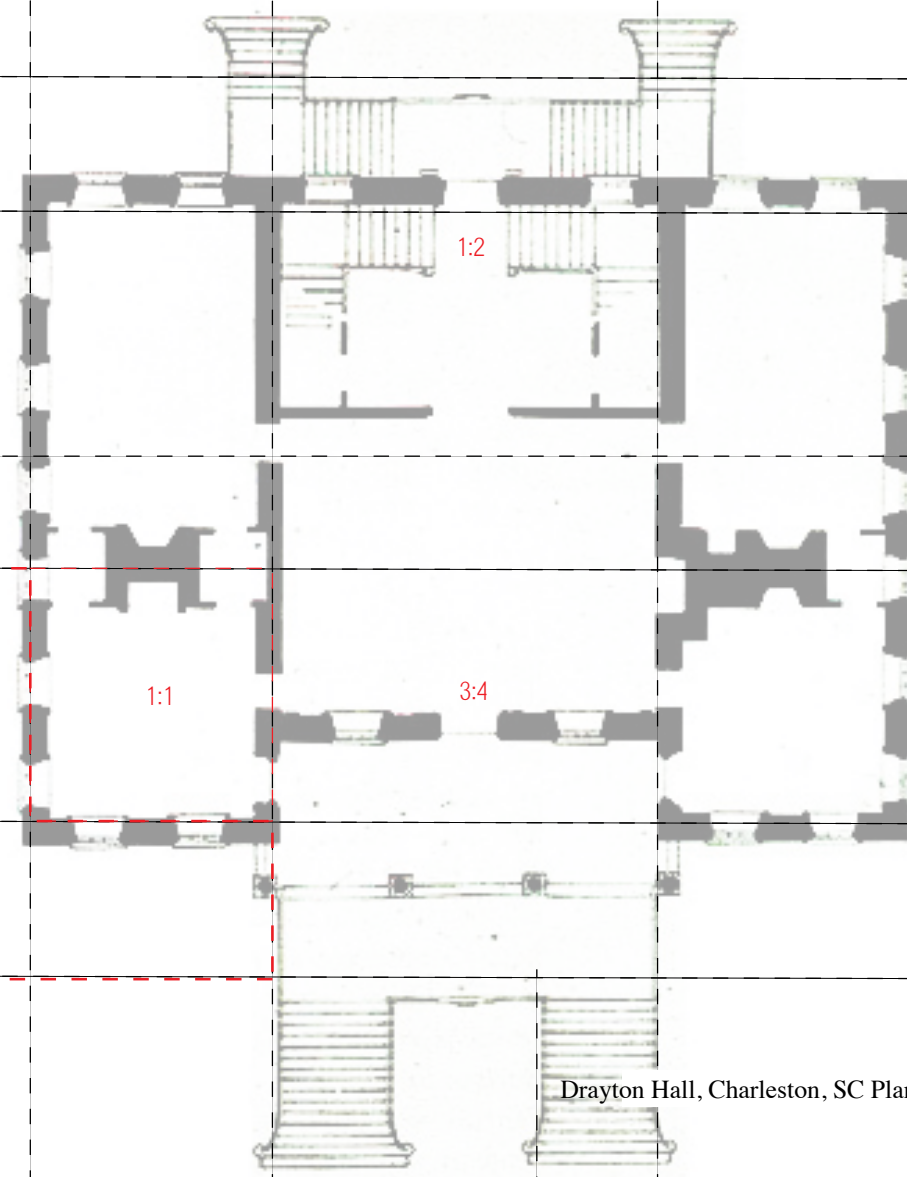
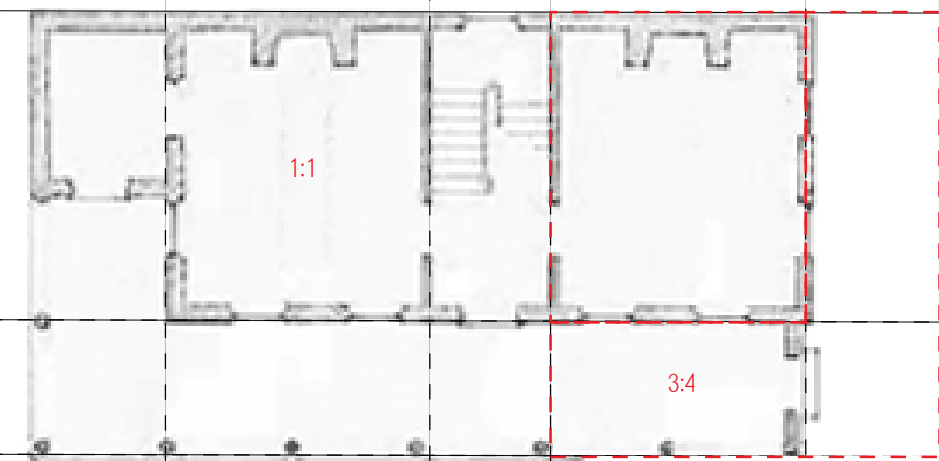


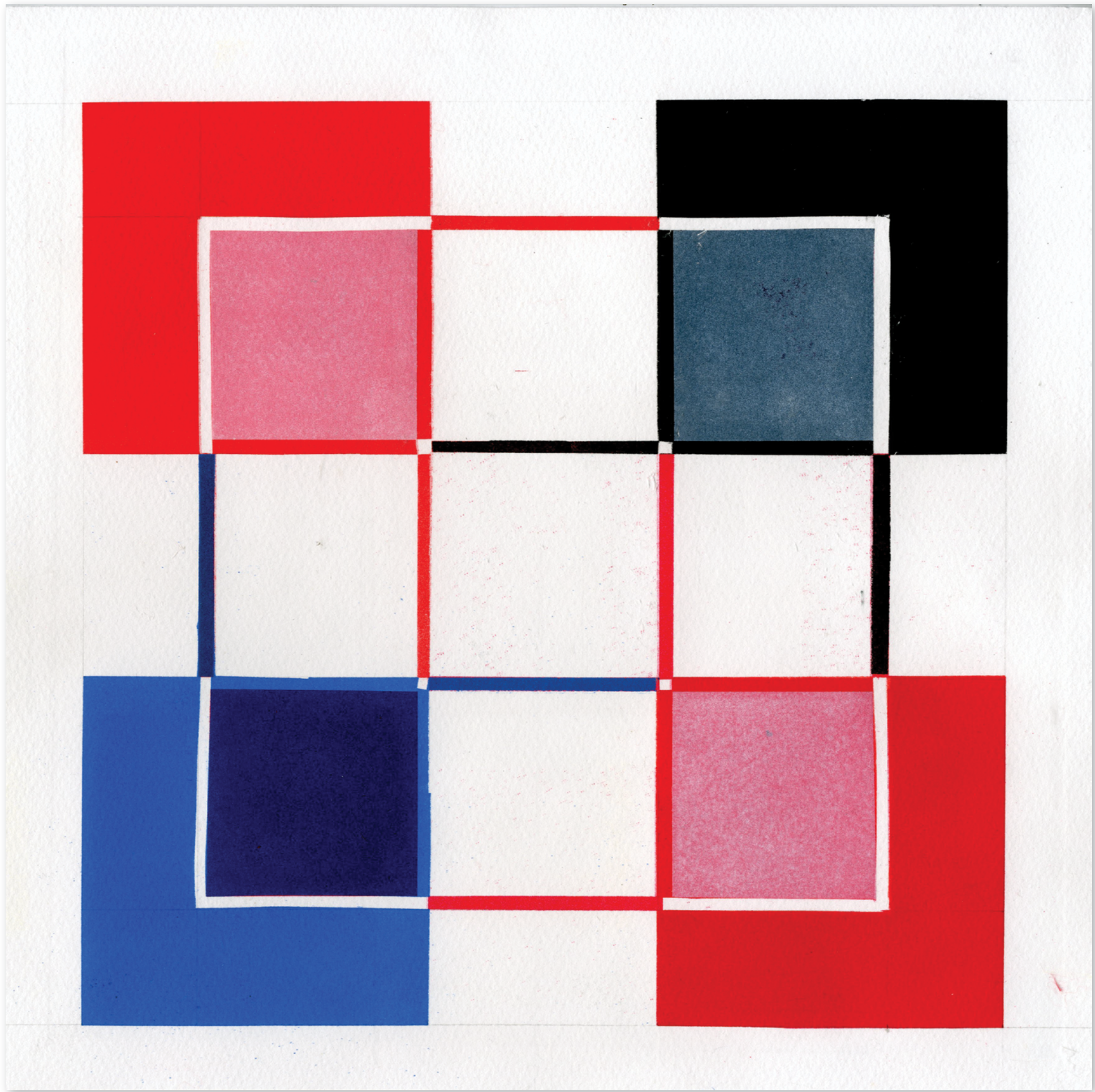
Plate 58 from James Gibbs' *A Book of Architecture* [Public Domain]



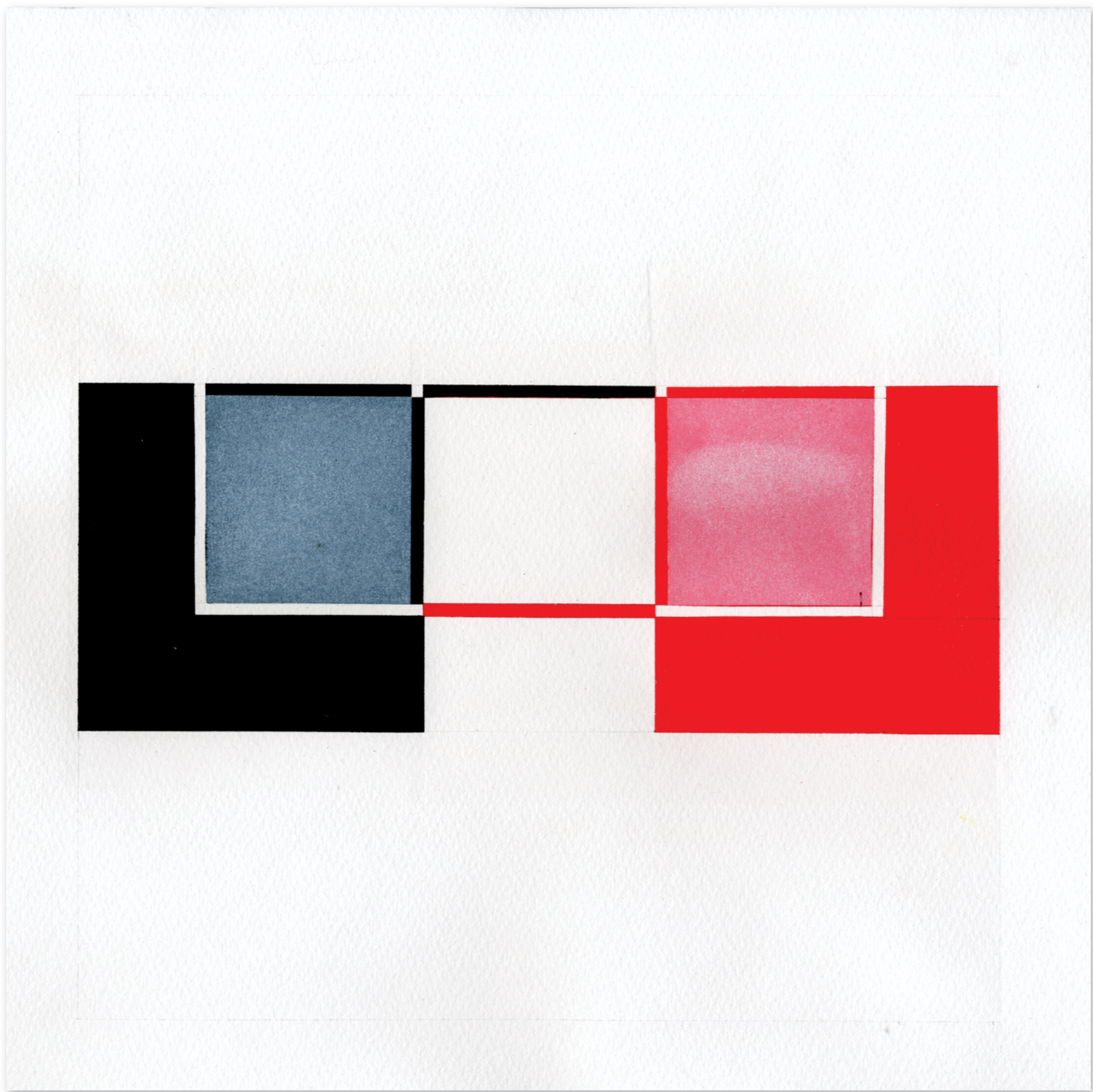
Drayton Hall, Charleston, SC Plantation Home



Typical Charleston Single House Plan



Monotype Ink Print on Textured Paper (ii)



Monotype Ink Print on Textured Paper (iii)

OBJECT

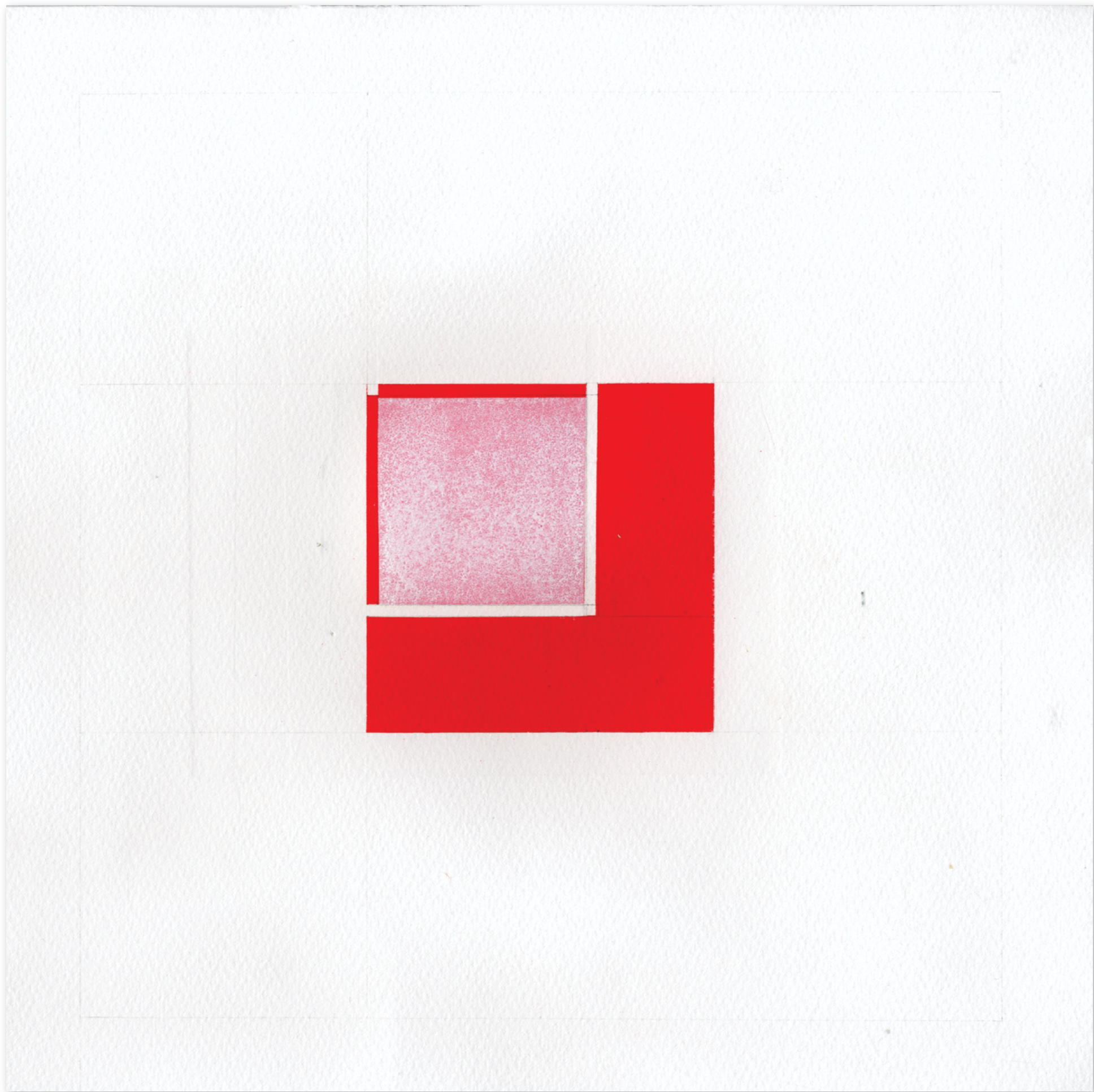
The type of the Charleston Single House materializes as an object in the aesthetic form of the domestic structure and its many architectural elements. Piazzas became an important architectural feature of the single house, to combat the harsh climate, including the direct sunlight on the typical southern faces of the building. In order to both create a transparent connection between the house and the garden and protect the house from the hot climate and the harsh sun, layers were applied, creating interstitial spaces between indoors and outdoors, itemized as covered porches, locally called *piazzas*. The following photos show a few of the options explored to create the same spatial elements of the piazza, including the climatic protection and an ordering system created in the column arrangement and its dictation of the placement of windows and doors. In general, however, an architectural issue with the layers is that they don't always read as part of the house, itself. To create a sense of completion in design, the approach henceforth could be an integrated design between the spaces, and not included as an additive element. In general, however, the interior volumes of the house are dictated by the ratios explored within the type and those ratios dictate the exterior aesthetic.





FORM

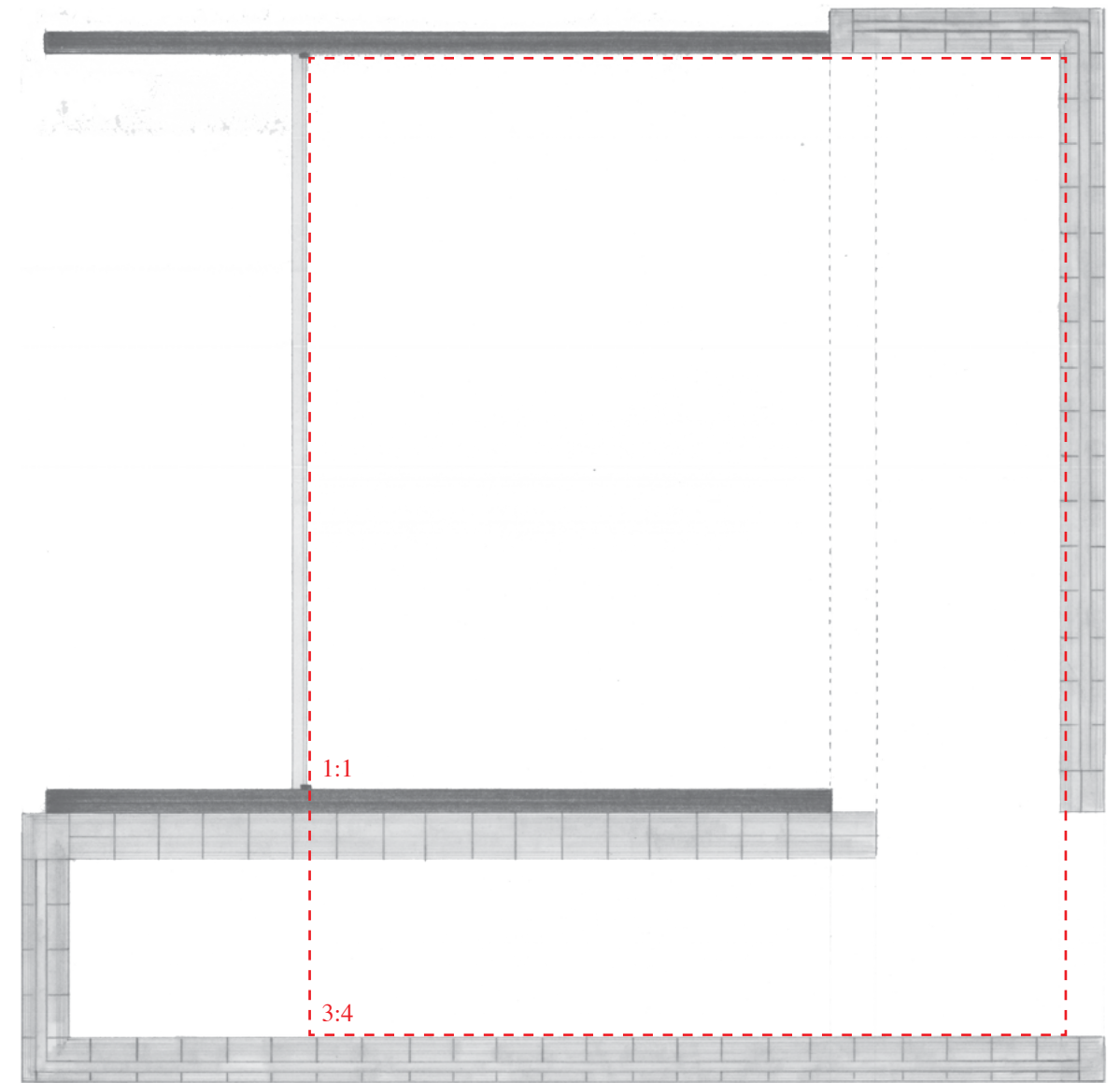
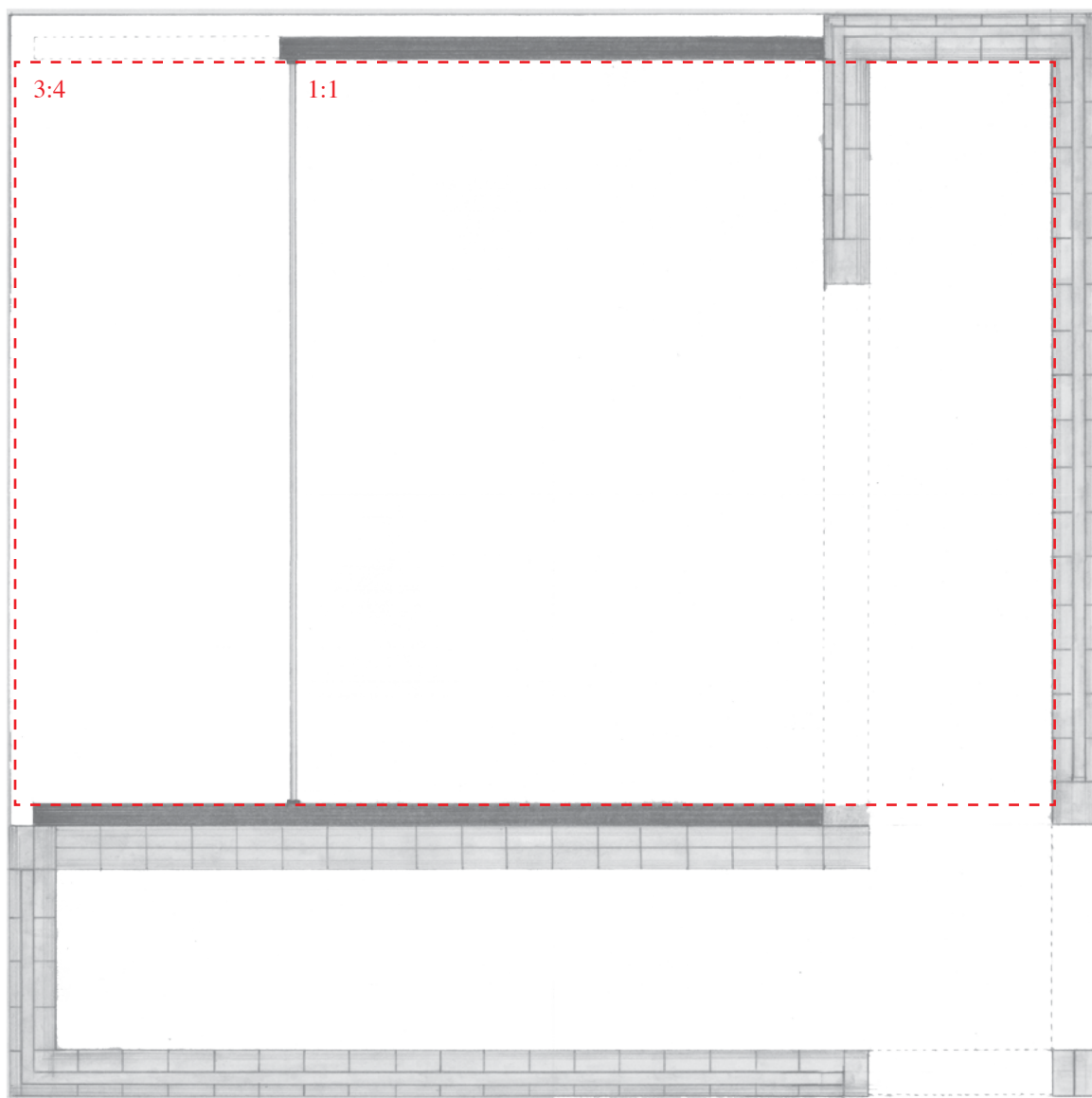
The form depicted in the following diagram is a derived type that narrows the plans of the Domestic Palladian villa and the Single House into one room. The one-room system reflects the opportunity of a geometrical module that can be used to create a larger plan, based on siting. The Quarter House is also a correction to the tendency to add “dependencies” to both Domestic Palladian villas and Single Houses which break the pattern of the original house’s grid and proportioning system. A repetition of these geometric units beyond the standard plan of a single house can bring unity to the design.



Monotype Ink Print on Textured Paper (iv)

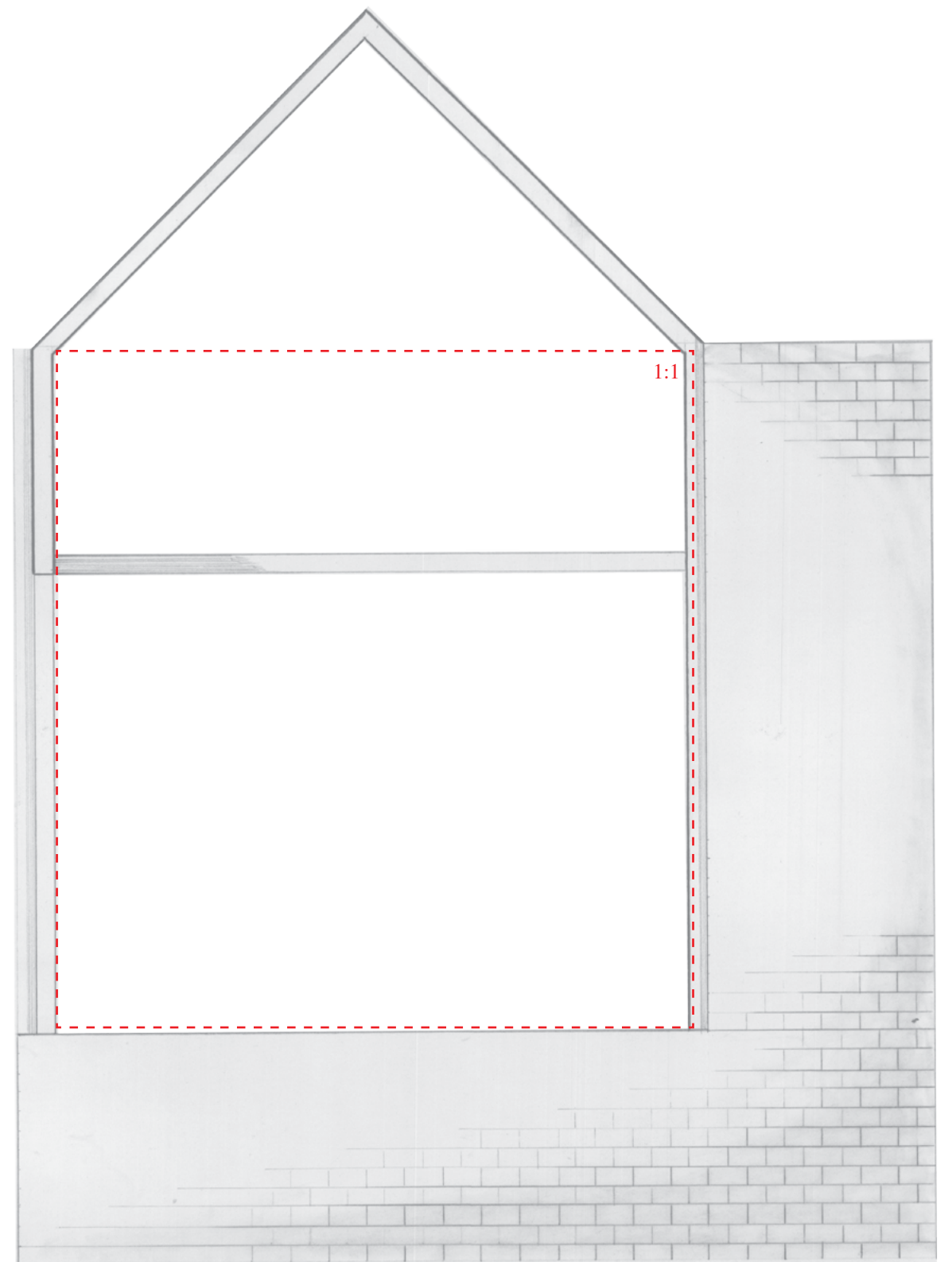
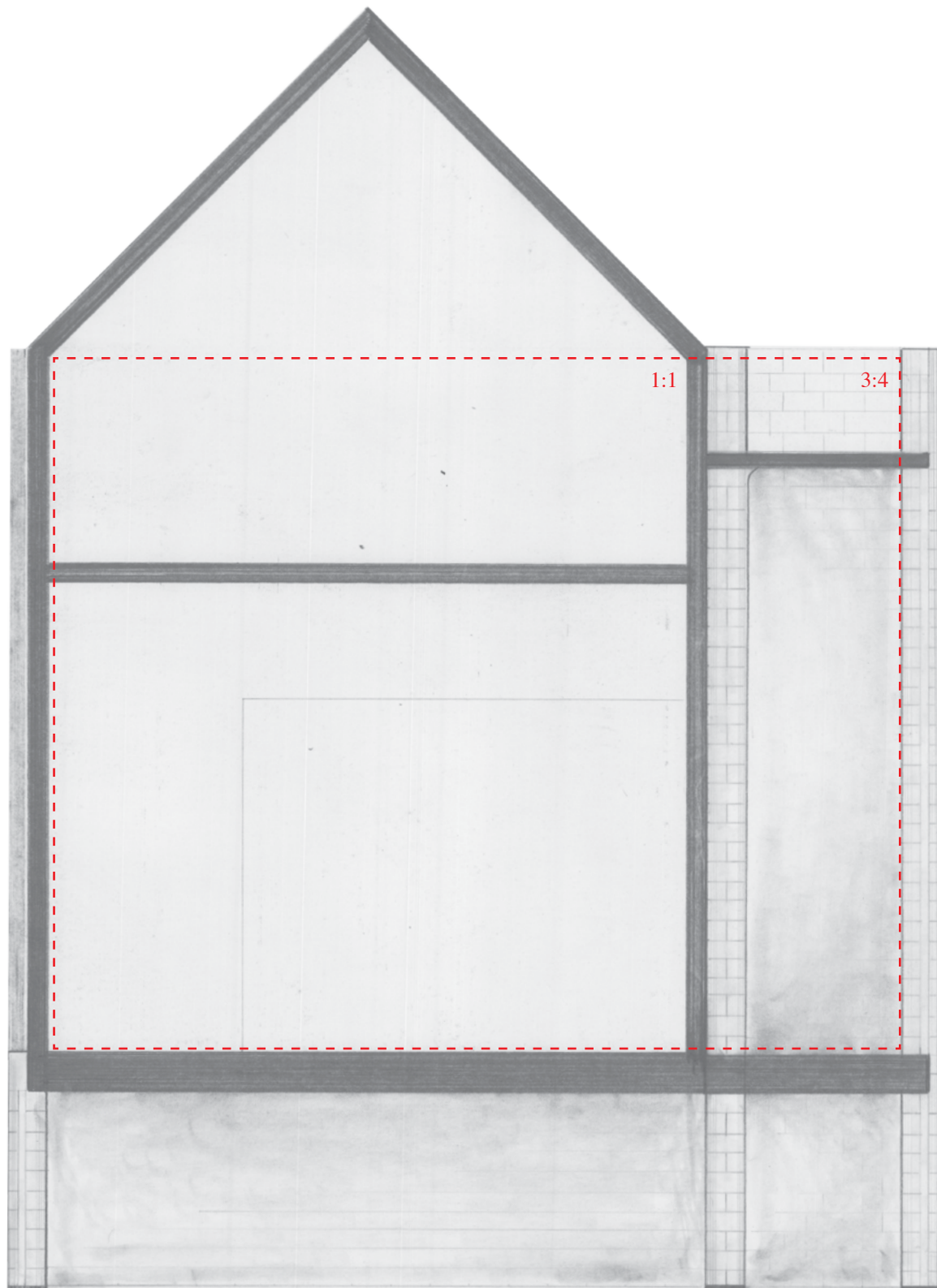
THE PLAN derived from the ratios of the domestic palladian plantation homes and the typical Charleston single house, creating a grid for the design of the house. Based on the architectural features, the L-shaped boundary grid around the square interior space formed a program for circulation and functionality (including service spaces), while social functions would populate the inner square, related through a connection on an open face, as shown. The geometries also follow the whole number ratios of 1:1 and 3:4.





THE SECTION derived from the same geometrical grid shows the use of the L-shaped boundary as the protected layer of the covered terrace as well as the raised plinth, lifting the house from the ground plane and creating a piano nobile. The inner square is the populated space, capped by a pitched roof, to signify the upper rooms of the house as utilitarian living space, differentiating it from the lower room, where social functions take place. The different spaces will, similarly reflect different materials and methods of construction between the various geometrical members of the house.





THE VOLUME of the form was conceived from an examination of the historical heritage behind the type and the ratios present in the object. As a model of social hierarchy, the module projects the main floor vertically, creating the necessary piano nobile, while the interior space is created using the historically-recognized ratios of the Charleston home, as well as confinement that is telling of its function and circulation. The module, created from a geometric scheme that is repeated in plan and section, is the driving force of the project and the architectural language of Charleston architecture.

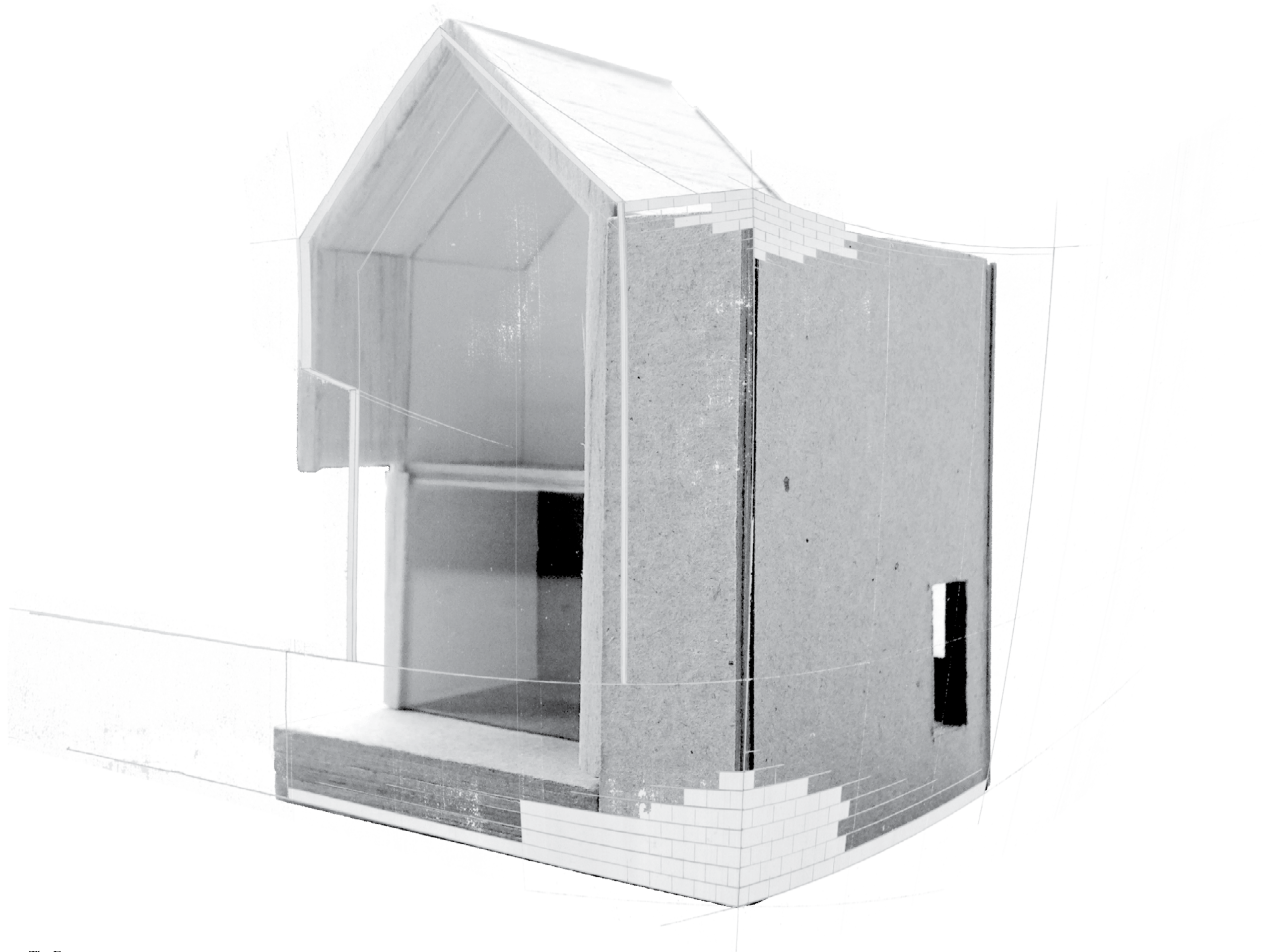
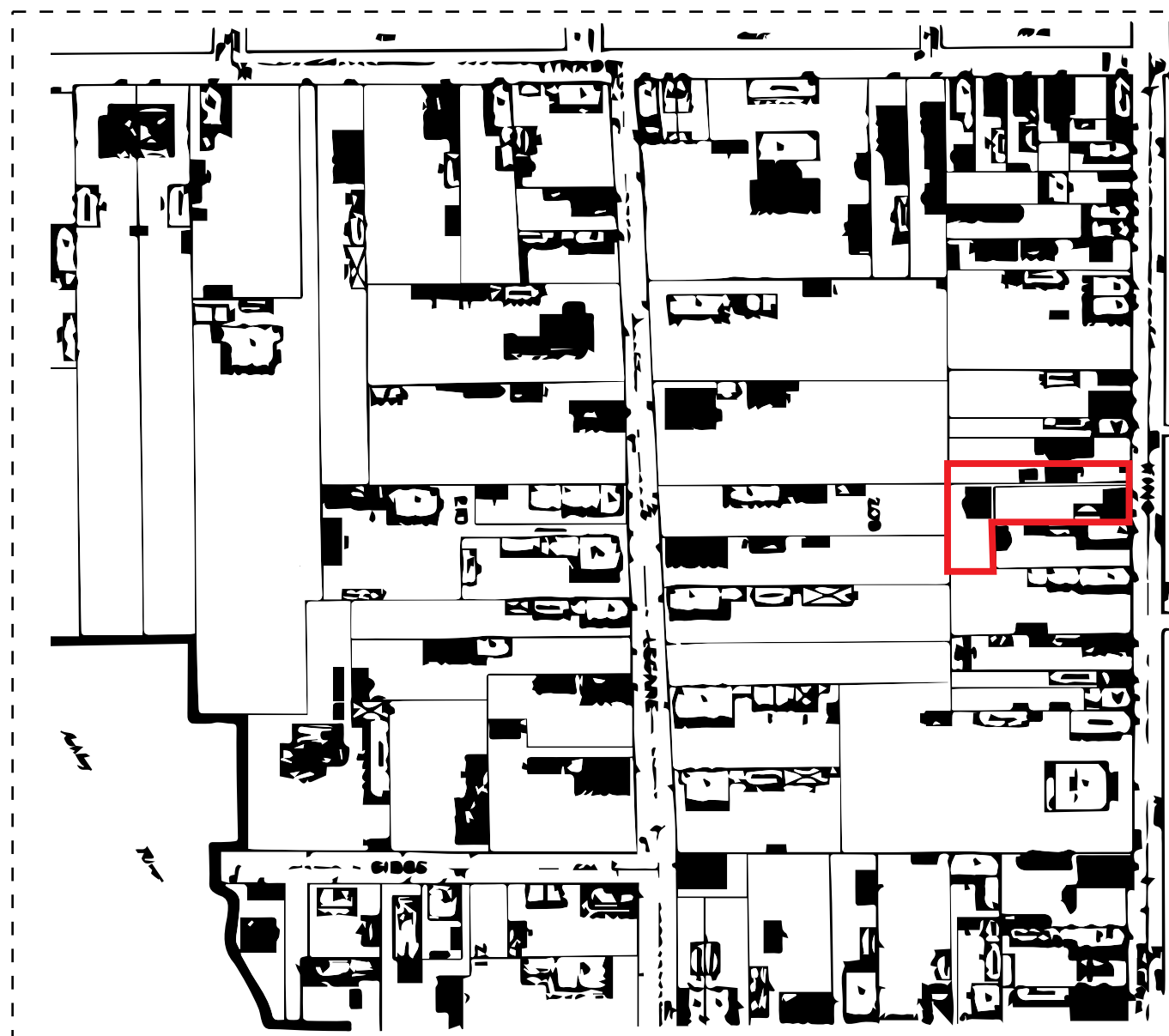
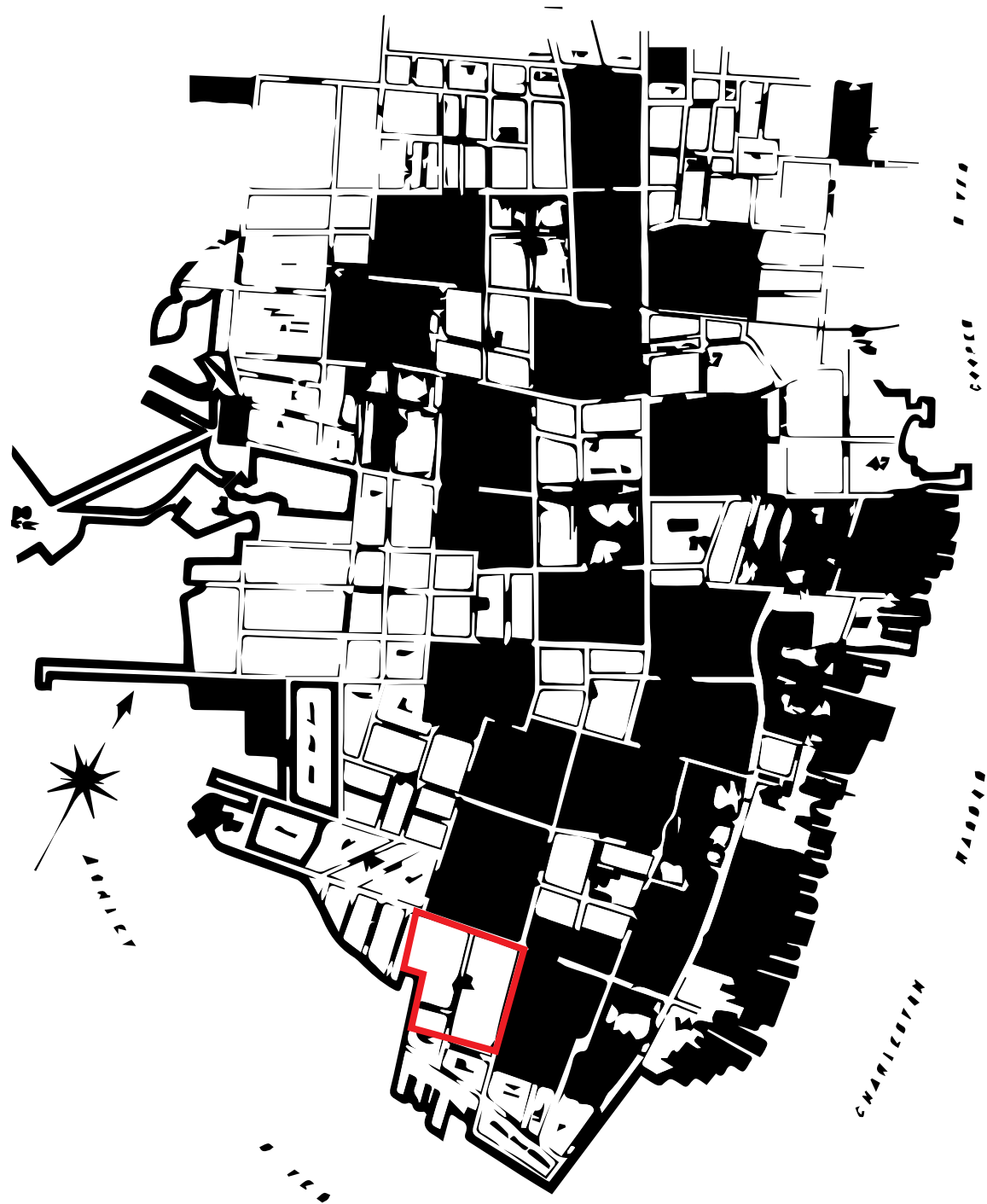


Photo Montage: The Form

THE SITE

Charleston, South Carolina is a peninsula jutting into Charleston harbor, nestled between the Cooper and Ashley Rivers. The town was settled in 1670, when King Charles II gifted it to the Lord Proprietors of Carolina. The settling of the town happened quickly when its potential as a trade city became apparent. By the 18th Century, the town was a hub of trade along the Atlantic Coast and eventually became an agricultural center of rice and indigo. The prosperity the town enjoyed extended into the main city, between the two rivers, where town planning included the necessity for large lots to contain the homes the wealthier urbanites were so fond of. Unfortunately, the main thoroughfares of the city were already paved in a North-South direction, parallel to the rivers. The early planning of the city was faced with the difficult decision of lot plans, since several salt marshes ran between the rivers, therefore rather than build the lots over the marshes, they chose to place the lots in between them, running the lots in a parallel direction. These created a rather unique condition in which the broadest side of the lots would face the North and South, while the narrowest side would face the streets to the East and West. The city enjoyed such prosperity that the houses built on these peculiar lots were able to explore high style in a unique way. For the ubiquitous spread of architectural heritage in the early years of Charleston, The National Register under the Secretary of the Interior named the city the United States' first Historic District in 1931. This honor extended to the local level, which offered protection to areas listed as "contributing sites" to the district. The site chosen is shown outlined in red. The lot at 45 King absorbed three separate lots over time and now remains vacant, as the existing house was considered a non-contributing site to the historic district and, thus, is not confined by the same strict style guidelines as contributing sites.

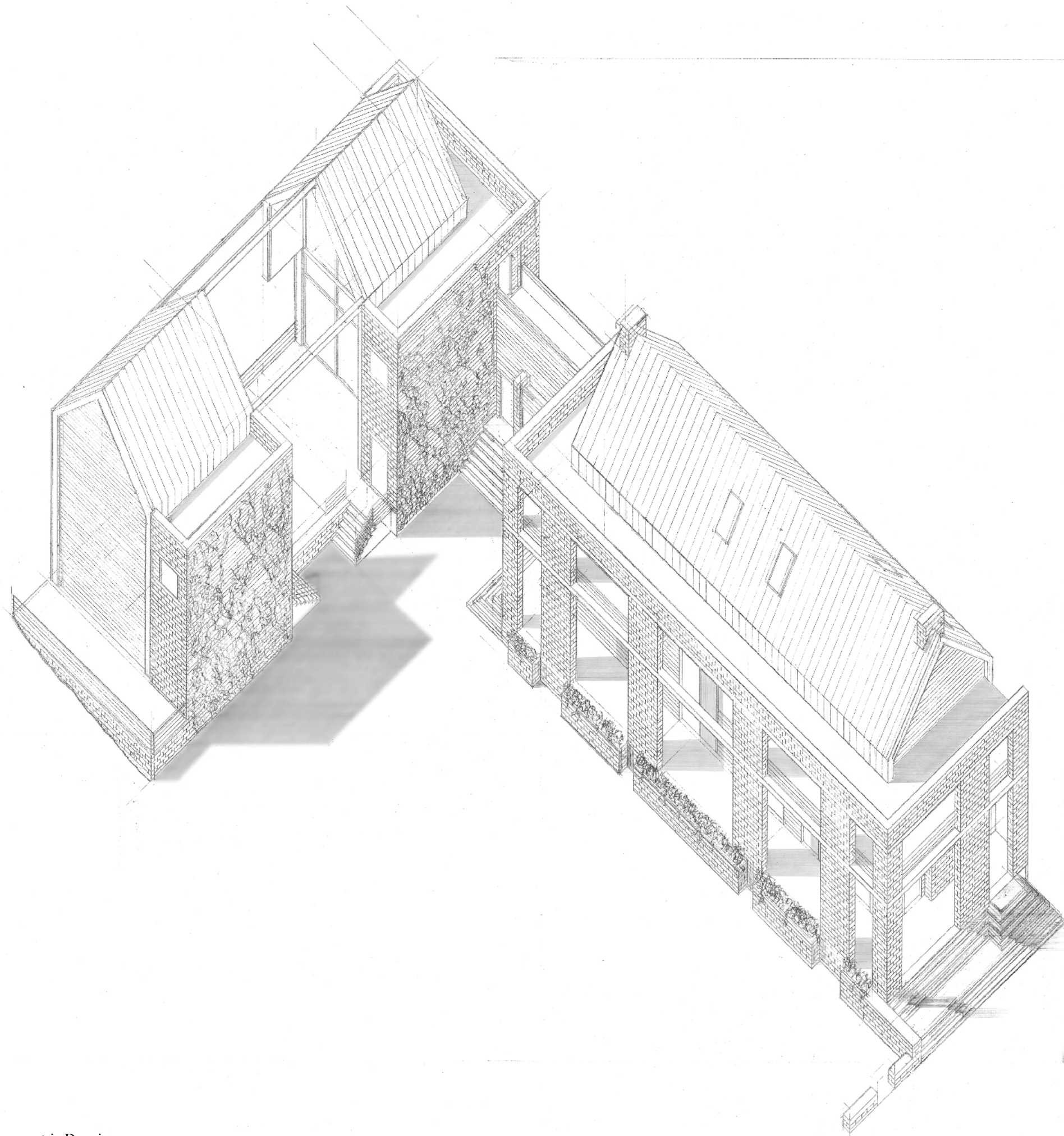






MATERIAL

The inception of the house is a synthesis and a materialization of the tenets of Type, Object, Form, and Site which inform a modern architectural project that addresses context and history. The house is seen in its entirety in the axonometric drawing at left. As a whole, the general structure of the house is evident, there are two houses, one a main house, the other a dependency. In both houses, a concrete masonry base and “mask” which act as protection from the environment, whether as a shade or a base upon which to lift the house from the flooding threat in the marsh-like environment and create a piano nobile as the main floor. The inner volumes of the house are panelized steel construction with an exterior “dressing” of red tidewater cypress. The house is then capped with a canopy which drapes itself over the “unmasked” side to meet the concrete masonry base. The canopy meets the house with the same panelized construction, shingled with a galvanized aluminum standing-seam metal roof.



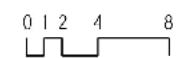
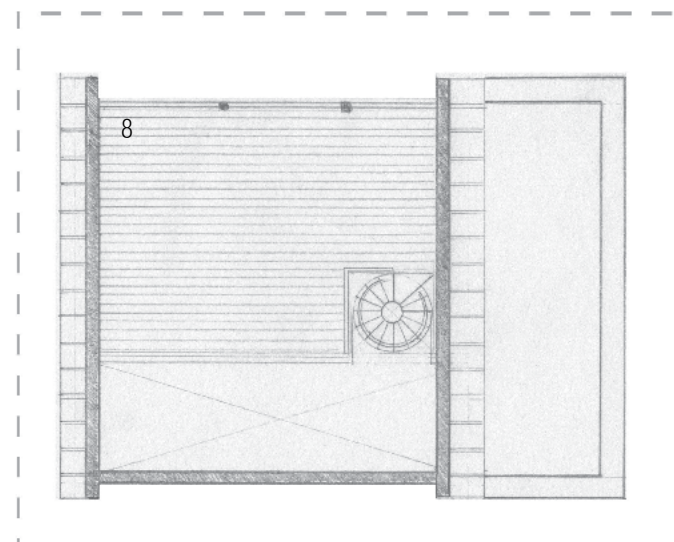
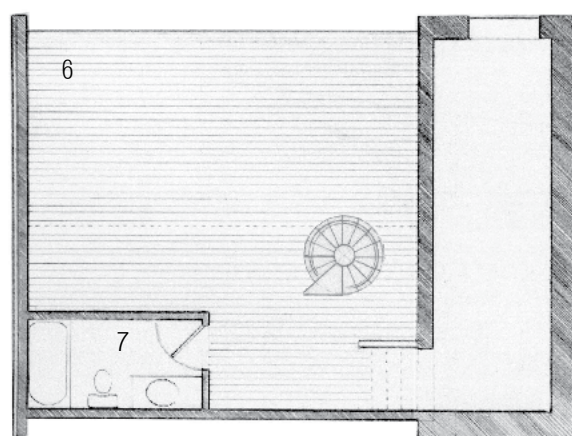
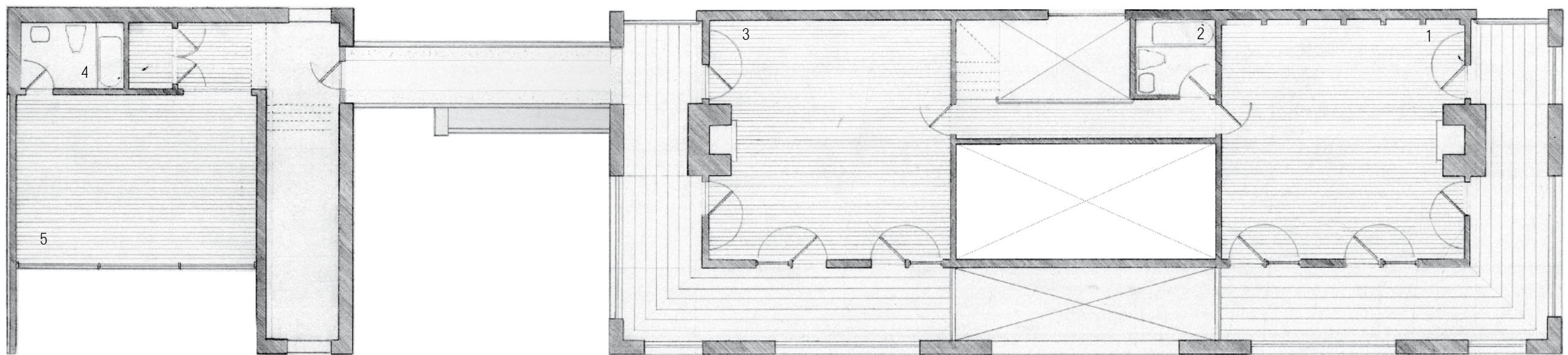
THE FIRST FLOOR is a reflection of the social ordering of Charleston homes. Friends and family will first enter through a monumental stair leading from the sidewalk to the street-side terrace, where they can circumvent the house at their leisure or enter through the central, formal entrance where they are greeted by the main staircase in the foyer. The parlor to the right maintains a connection with the street as well as the southern garden and acts as the main entertaining space where friends and family can join together. The library is west of the foyer and would serve as a more formal entertaining space or an everyday space for the family, and is thus found deeper in the house, creating a more intimate atmosphere away from the street. Formal dining would be held in the courtyard between the main house and the western dependent house. The house to the west has a space for an outdoor pool as well as a pool house and a garage.

- | | |
|------------------------|---------------------|
| 1. Parlor | 6. Pool House |
| 2.Foyer/Entrance Stair | 7. Garage |
| 3. Library | 8. Gardener’s Shed |
| 4. Kitchen | 9. Dining Courtyard |
| 5. Full Bath | 10. Pool |

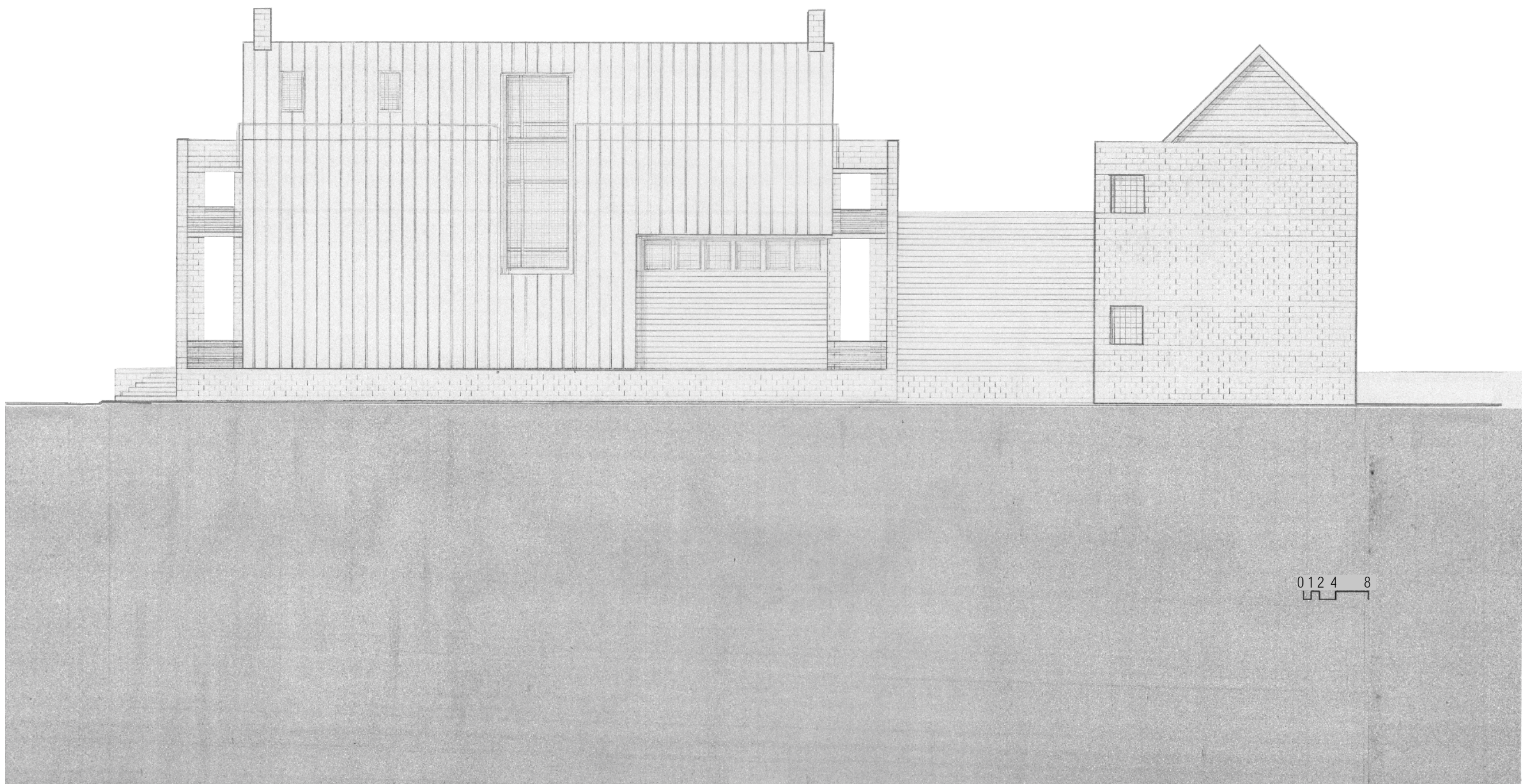


THE SECOND FLOOR is differentiated from the first floor by becoming more compartmentalized, without becoming any less grand. The profile of the pitched roof can be seen in the upper floors, becoming significant of the private home, for which the upper rooms serve a primary purpose. In the main house, the master bedroom is connected to the sitting room by a catwalk overlooking the double-height foyer. Both the bedroom and sitting rooms extend into separate upper terraces. The main house is connected to the western dependency house by an open walkway above the kitchen, leading to the guest suite overlooking the pool and garden. The upper floor above the garage is a separate two-story space reserved for the housekeeper and gardener.

- | | |
|--------------------|-------------------------|
| 1. Dressing Room | 5. Guest Bedroom |
| 2. Master Bathroom | 6. Housekeeper's Studio |
| 3. Master Bedroom | 7. Full Bath |
| 4. Guest Bathroom | 8. Gardener's Loft |



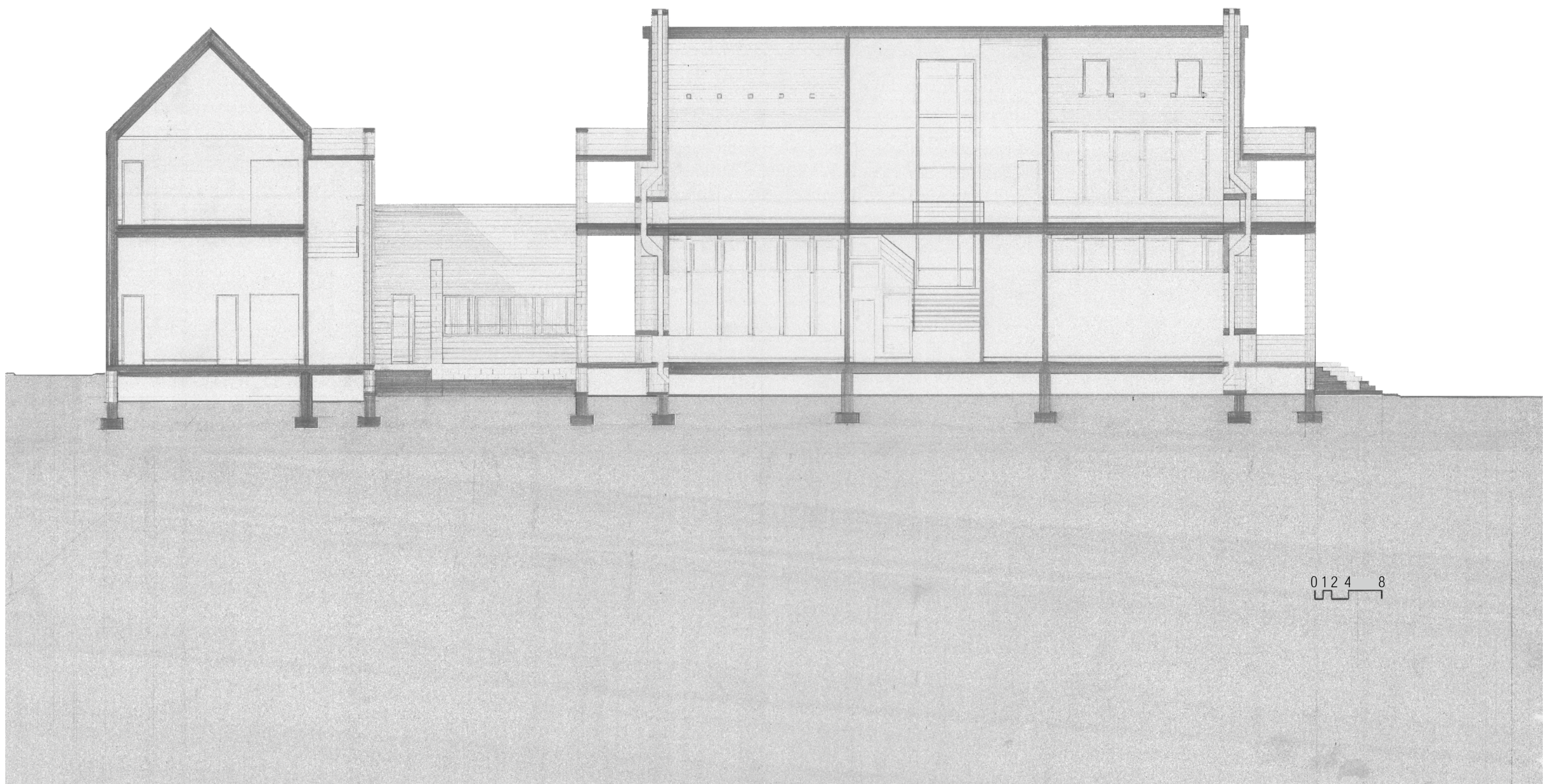
THE ELEVATIONS on the following pages give a formal tour, showing the material hierarchy of the structure, from the concrete block, which acts as a “mask” to the house raised on a plinth of the same material, to the protected layer of red cypress wood siding and glass windows with mullions and division relating to the ratios found in the house’s volumes. The unmasked north elevation is protected by draping the shingled canopy across the face, where direct sun is avoided and the galvanized aluminum of the canopy avoids overt thermal retention.



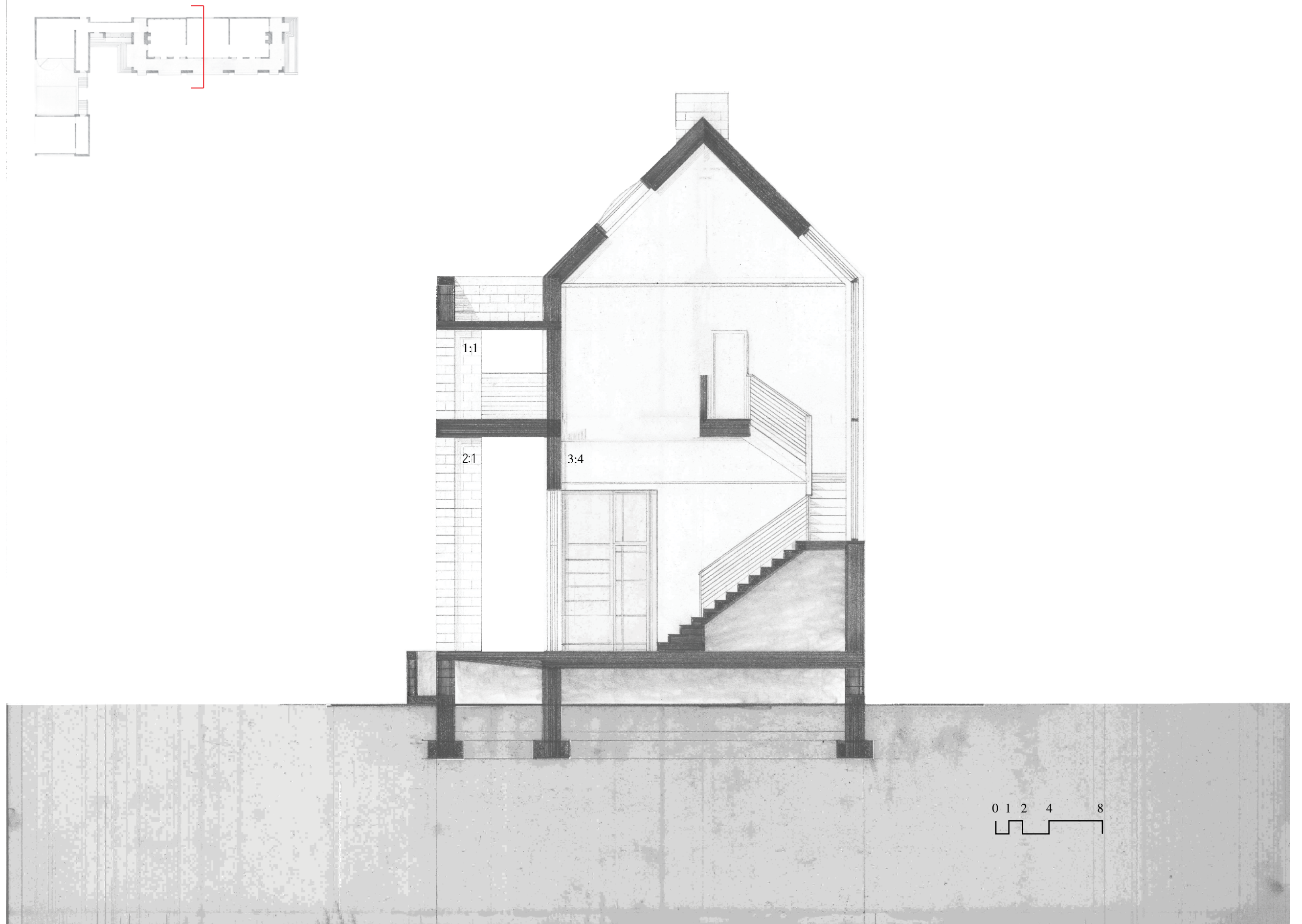
Graphite and Charcoal on Paper: North Elevation



Graphite and Charcoal on Paper: South Elevation



Graphite and Charcoal on Paper: Section (i)



Graphite and Charcoal on Paper: Section (ii)

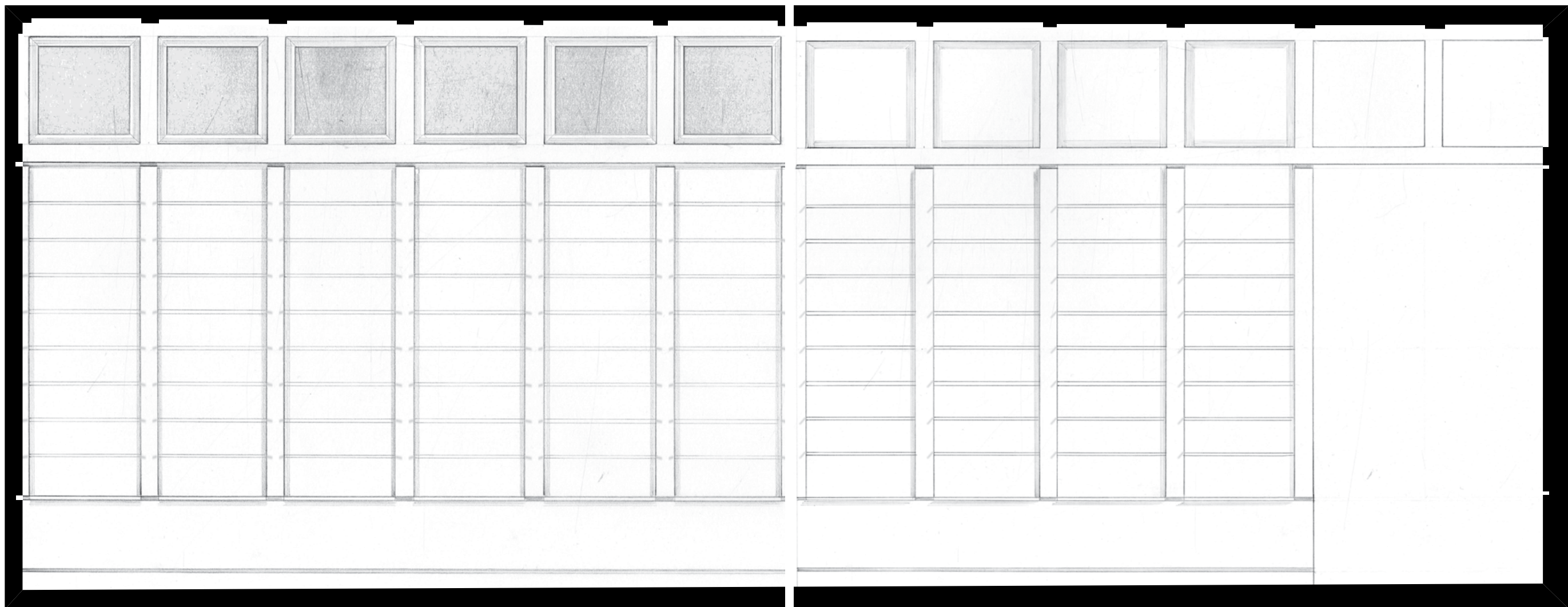


Graphite and Charcoal on Paper: Section (iii)

















THE GARDEN completes the Charleston single house and, as such, the materialization of this project. Much as the ratios of the house were derived from the plantation homes, such was the layout of the garden, albeit in a compact way. The rolling path, which contains a funnel of space between two flowering bushes at the entrance is derived from the plantation garden of Drayton Hall. The plant species chosen to populate the space were inspired by a list of the most popular Charleston plants.

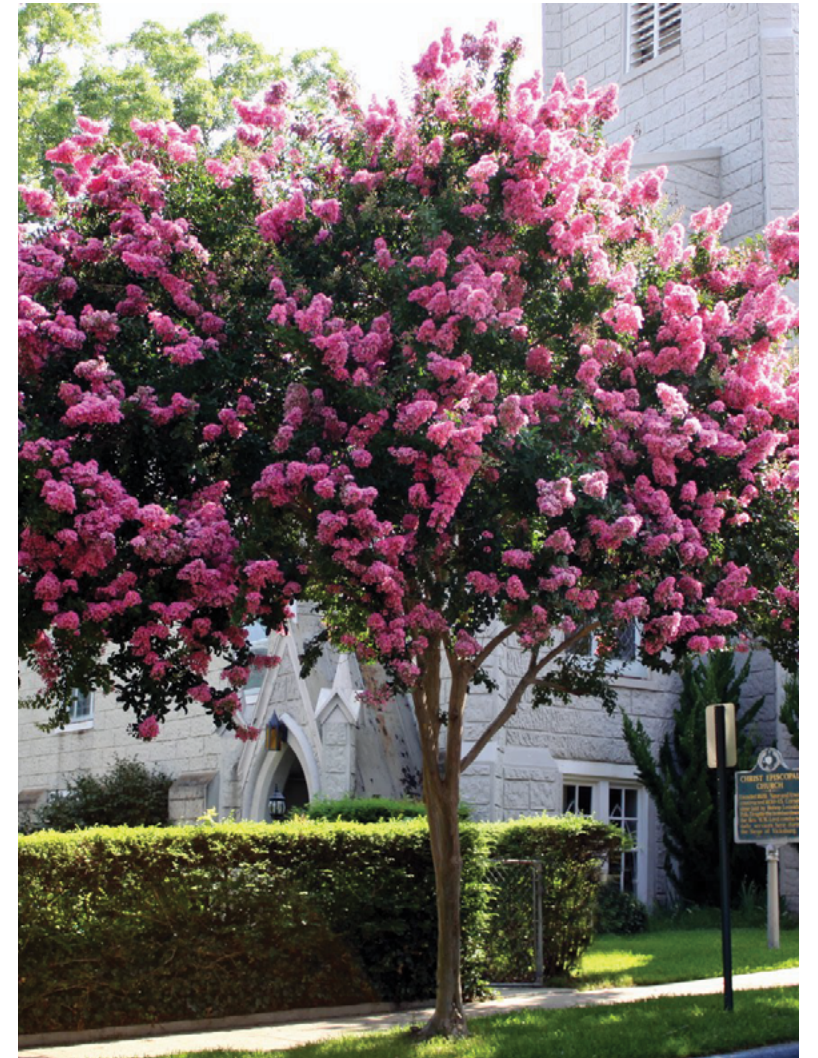
- | | |
|----------------------|--|
| 1. Palmetto | 5. Crape Myrtle |
| 2. Saw Palmetto | 6. Azalea |
| 3. Sweetbay Magnolia | 7. Virginia Creeper (on building face) |
| 4. Noisette Rose | |



Graphite and Ink on Paper: Garden Plan



Photos of Typical Charleston Foliage: Palmetto (Left), Saw Palmetto (Right)



Photos of Typical Charleston Foliage: Sweetbay Magnolia (Left), Noisette Rose (Middle), Crape Myrtle (Right)



Photos of Typical Charleston Foliage: Azalea (Left), Virginia Creeper (Right)

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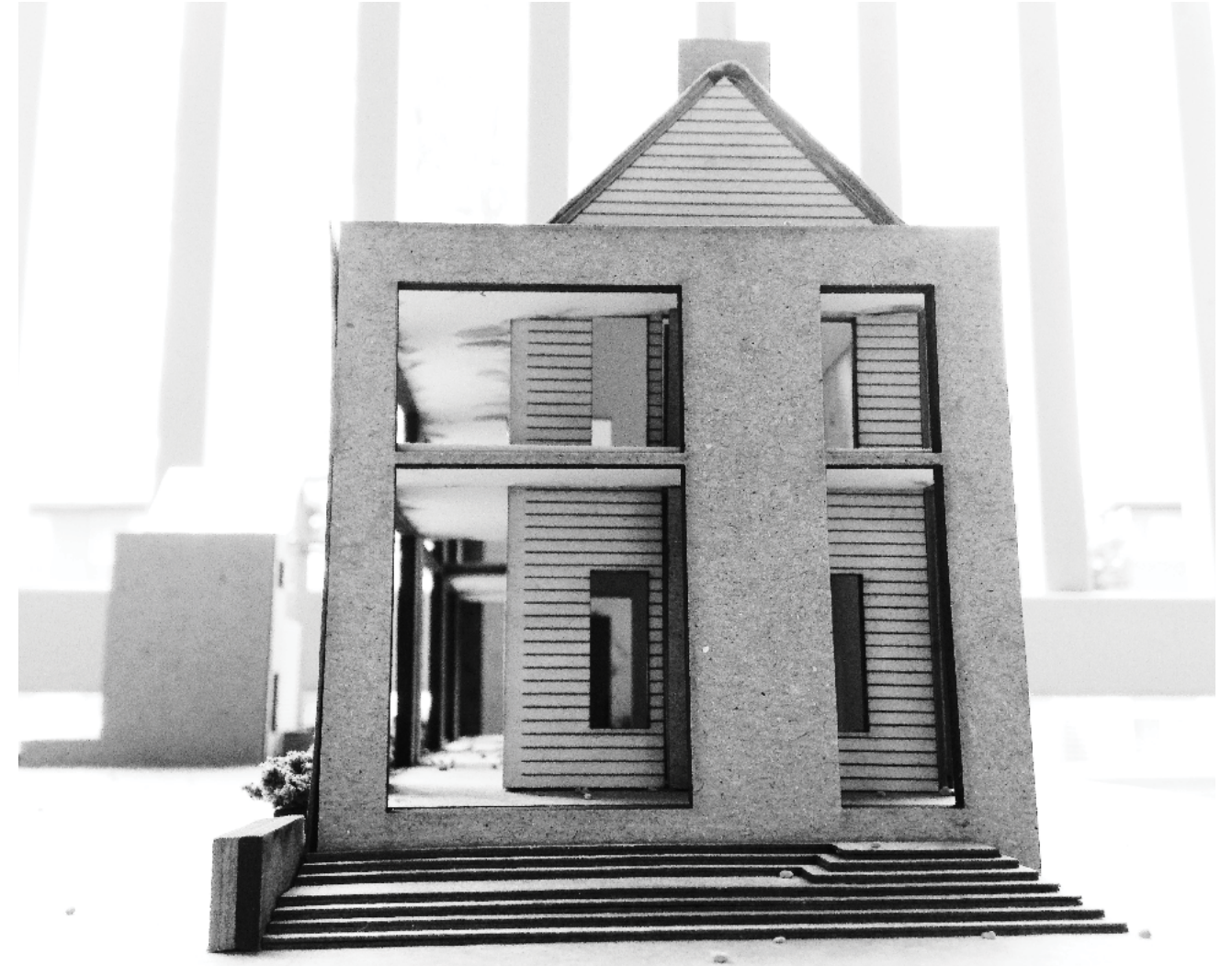
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APPENDICES

APPENDIX A: MODEL PHOTOS



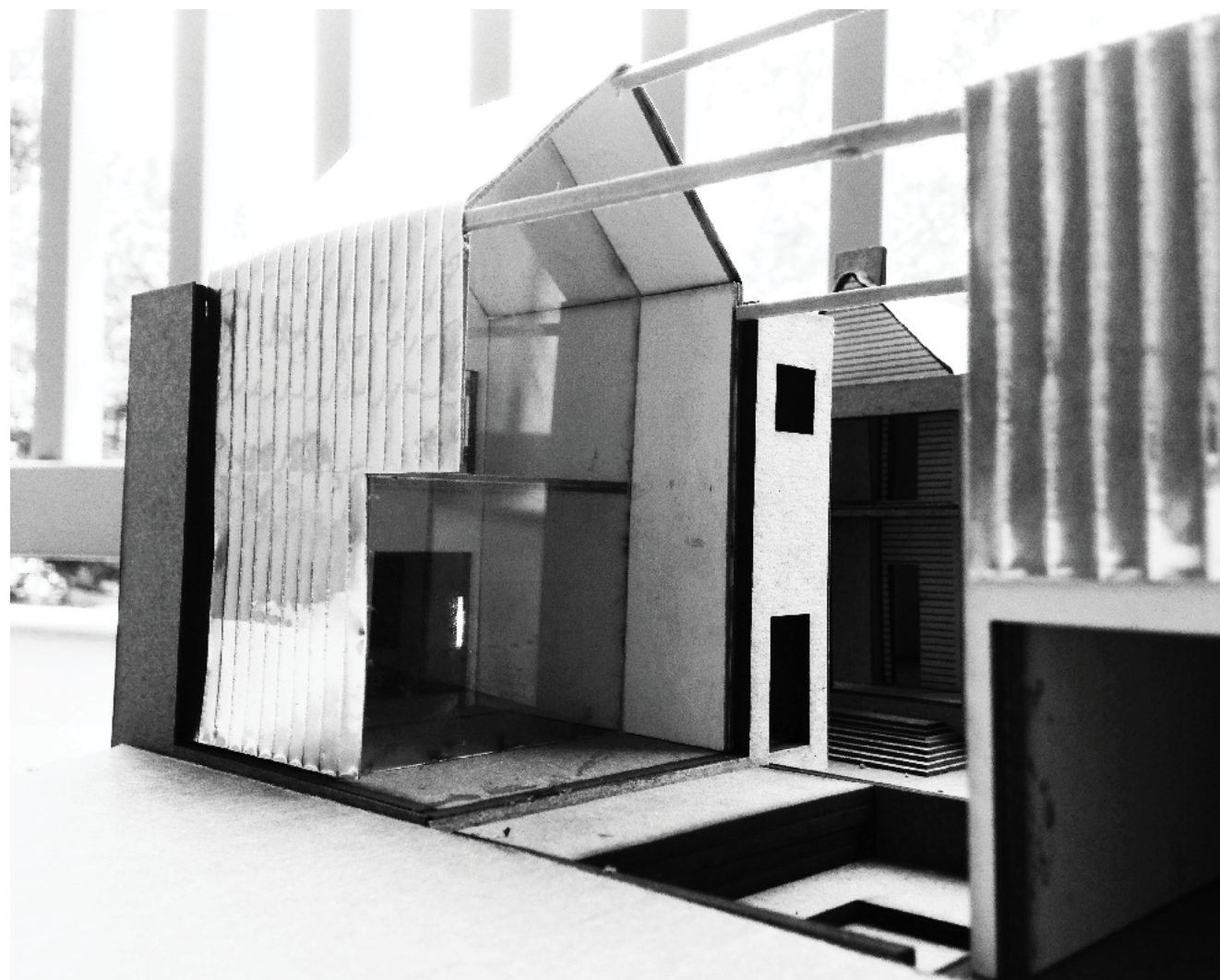
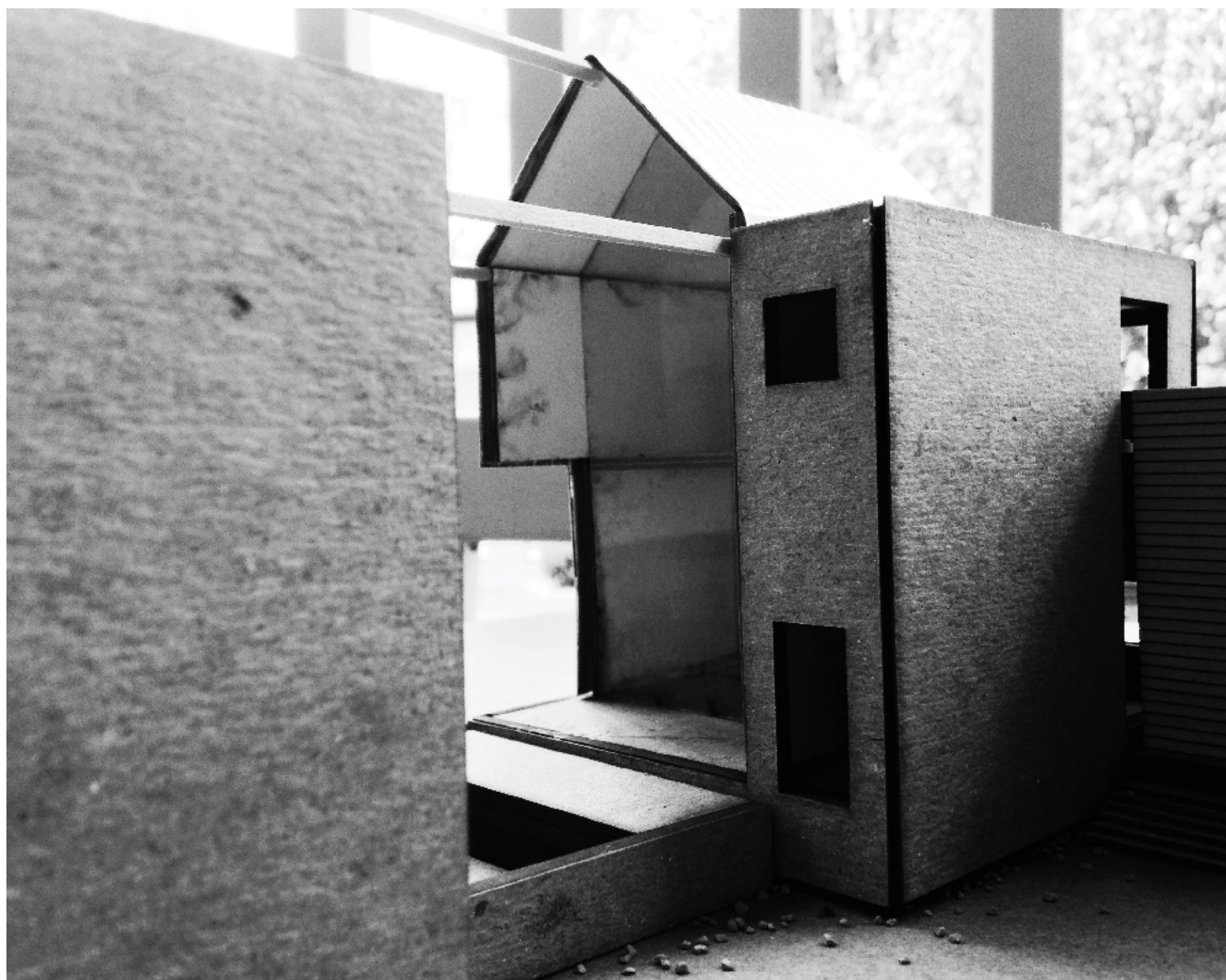
Model Photos: Piazza (Left), Street Elevation (Right)



Model Photos: Garden Passage (Left), Neighboring House (Right)



Model Photos: Dining Room Courtyard (Left), Parlor Chimney & Piazza (Right)



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¹Sanborn Fire Insurance Maps: Charleston, 1884 May. South Caroliniana Library, Digital Collections. <http://digital.tcl.sc.edu/cdm/compoundobject/collection/SFMAPS/id/672/rec/1> (Accessed 2 January 2014) Public Domain determination below*

²Gibbs, James. *A Book of Architecture*. Dover Publications, London. 2008. Public Domain determination below**

*Originally published by Sanborn Maps in 1885

**Images reproduced were originally published in a portfolio under the same name in 1728

APPENDIX C: DIGITAL MEDIA

All images and photographs were produced or reproduced by the author with the media noted, unless otherwise stated.

Images were digitally edited using Adobe Photoshop CS6

Digital images were created using Adobe Illustrator CS6

The manuscript layout was created using Adobe InDesign CS6