

*An Exploration of Movement
and
The Human Form*

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Abstract

The human form can be translated and diagrammed in multiple components, such as movement, structure, emotion, and tendency. As the art of dance redefines the limits of the body, these characteristics can be directly applied to the development of and progression through an architectural space. By abstracting movement of the human body, an architectural form can be derived.

Observing movement of the human body through an architectural space provides potential design insight and direction. Taking the existing components of the skin and bone in the human body, a structural form and potentially limitless skin for a building can be obtained.

How does movement occur within a space and how can an architectural space be designed to 'move'?

Dedicated
to all who assisted and supported me
throughout this process
including
the committee,
the faculty and my fellow students of both the
Washington Alexandria Architectural Center
& the Catholic University of America,
as well as my friends and family.

Thank you for all of your support,
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six years of my
undergraduate and graduate
studies.

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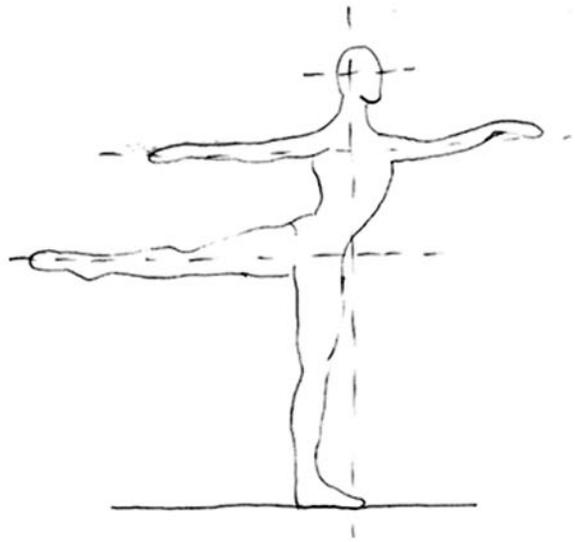
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Preliminary Design

Preliminary design work included an analysis of the human form. Movement of the body was observed. This included not only the art of dance and classical ballet, but also movements performed in every day life, such as walking.

The contrast of the curved and straight lines was also studied at this stage of design. Studied in both drawing and models, the analysis became early part of the finished thesis.





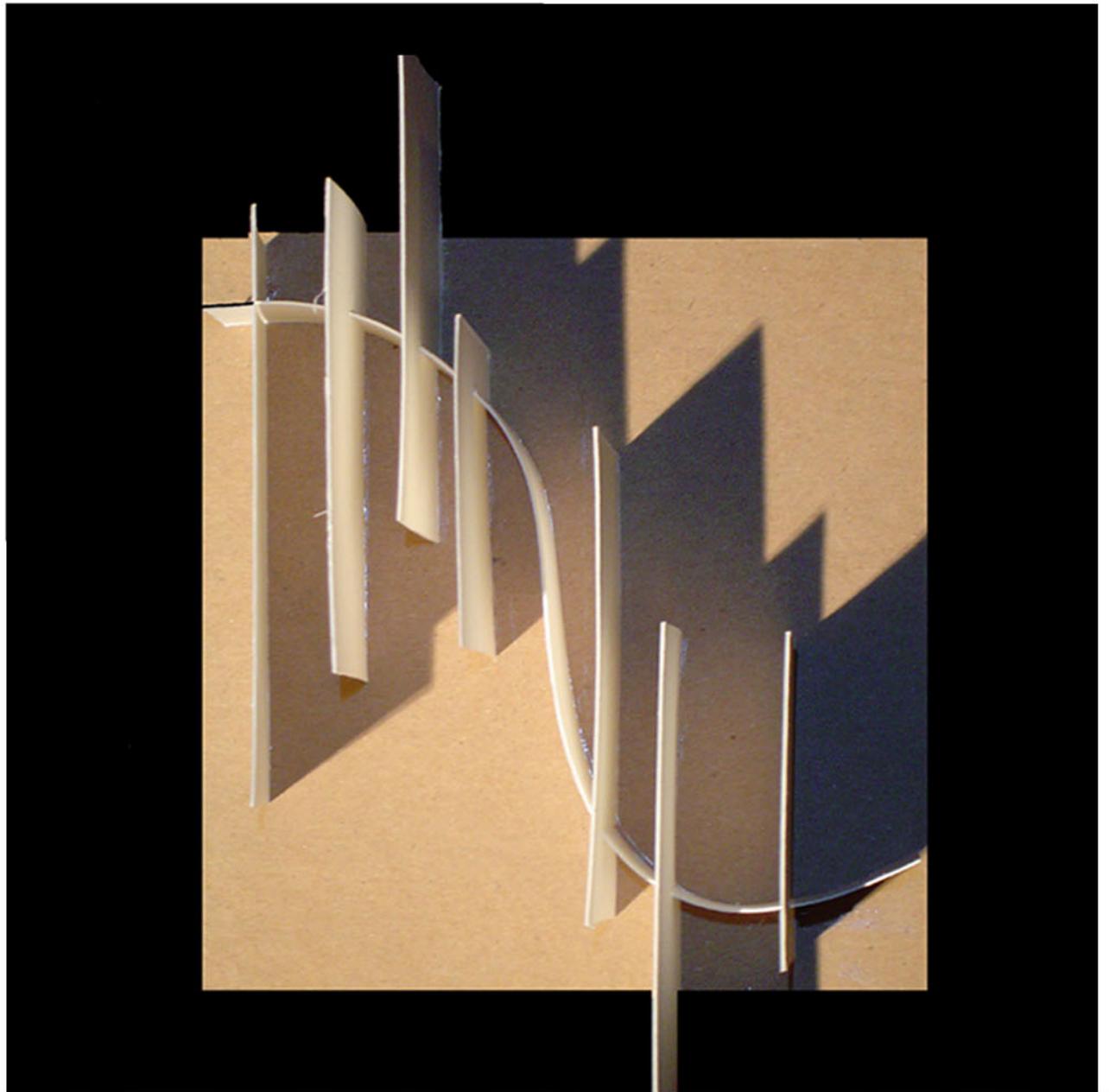
The initial investigation of body movement began with an exploration of the human form. A better understanding of the human body was attained through this analysis.

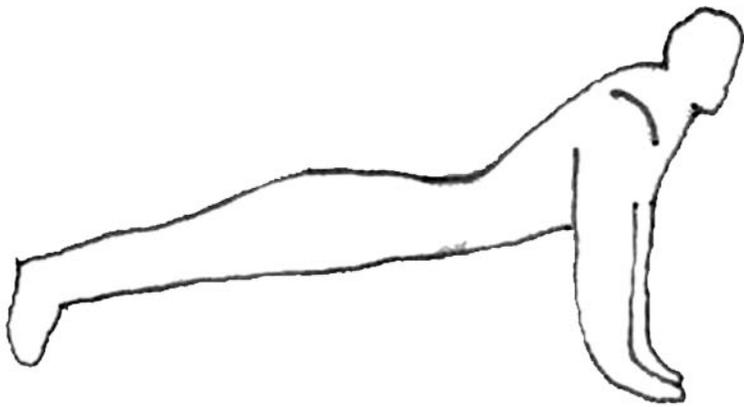
How can the body be manipulated into certain forms? How can dance be compared to every day actions such as walking, sitting, etc.? Are bodies taught to move in certain ways or does it occur naturally?

Several works of art were examined in order to view how movement can be captured two dimensionally. How can the body itself be viewed and often times represented as a building?

Classical ballet is an art form based entirely on redefining the limits of the human body. When viewing dance, the relationship between movements can no longer be casual. It must be defined and choreographed.

The sketches shown were inspired by Muriel Stuart's "The Classical Ballet."¹ Dashed lines represent potential movement throughout the body while achieving these positions.

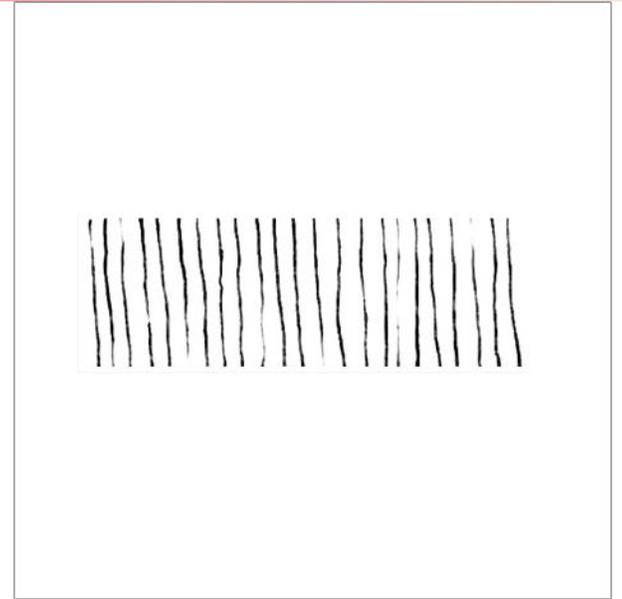




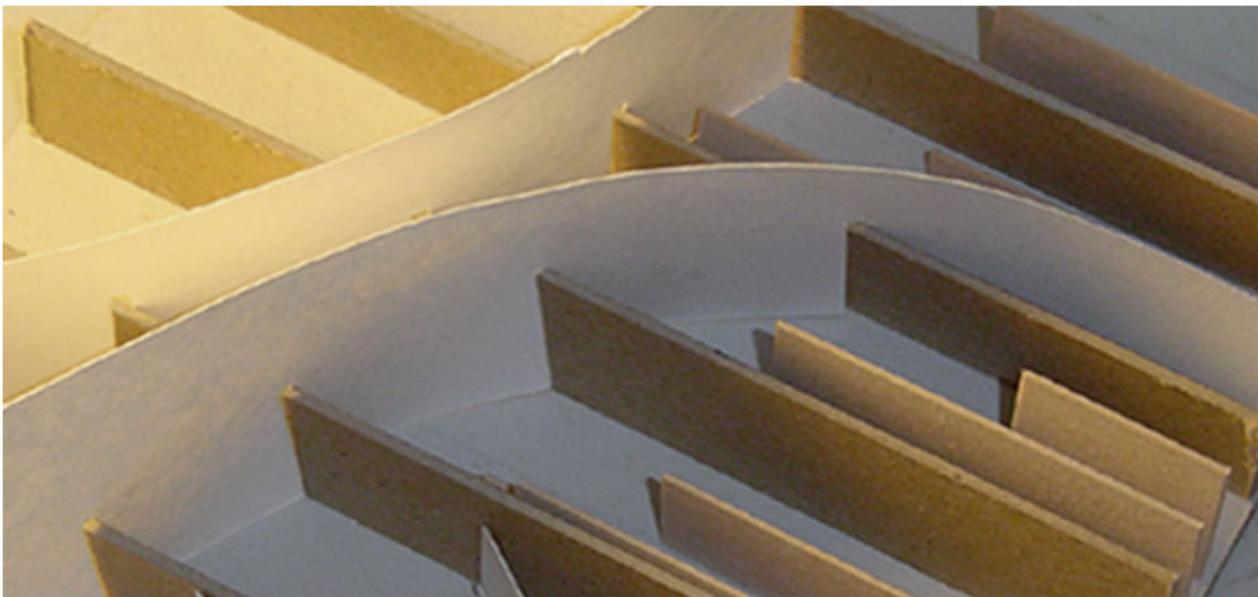
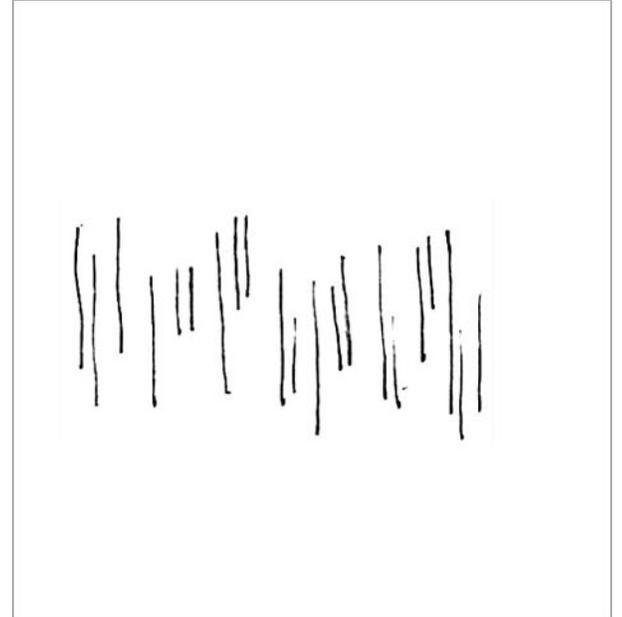
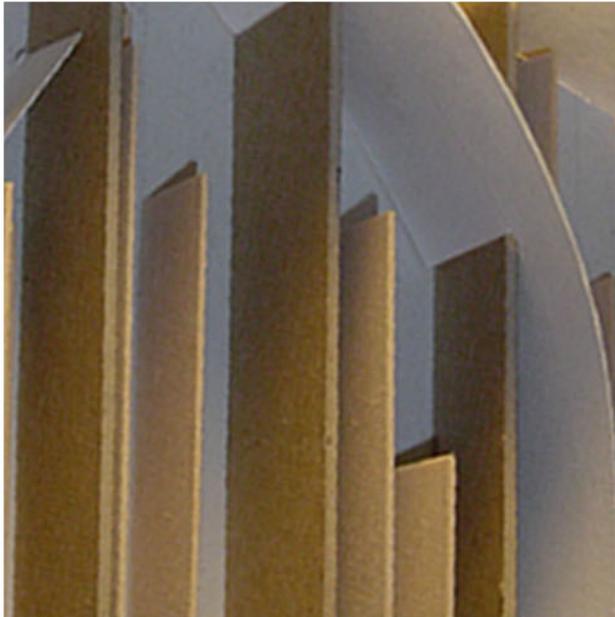
In continuing the investigation of the human body, Bauhaus inspired images were constructed. Although these forms vary drastically from the forms and positions of classical ballet, they still provided provided similar questions concerning movement.

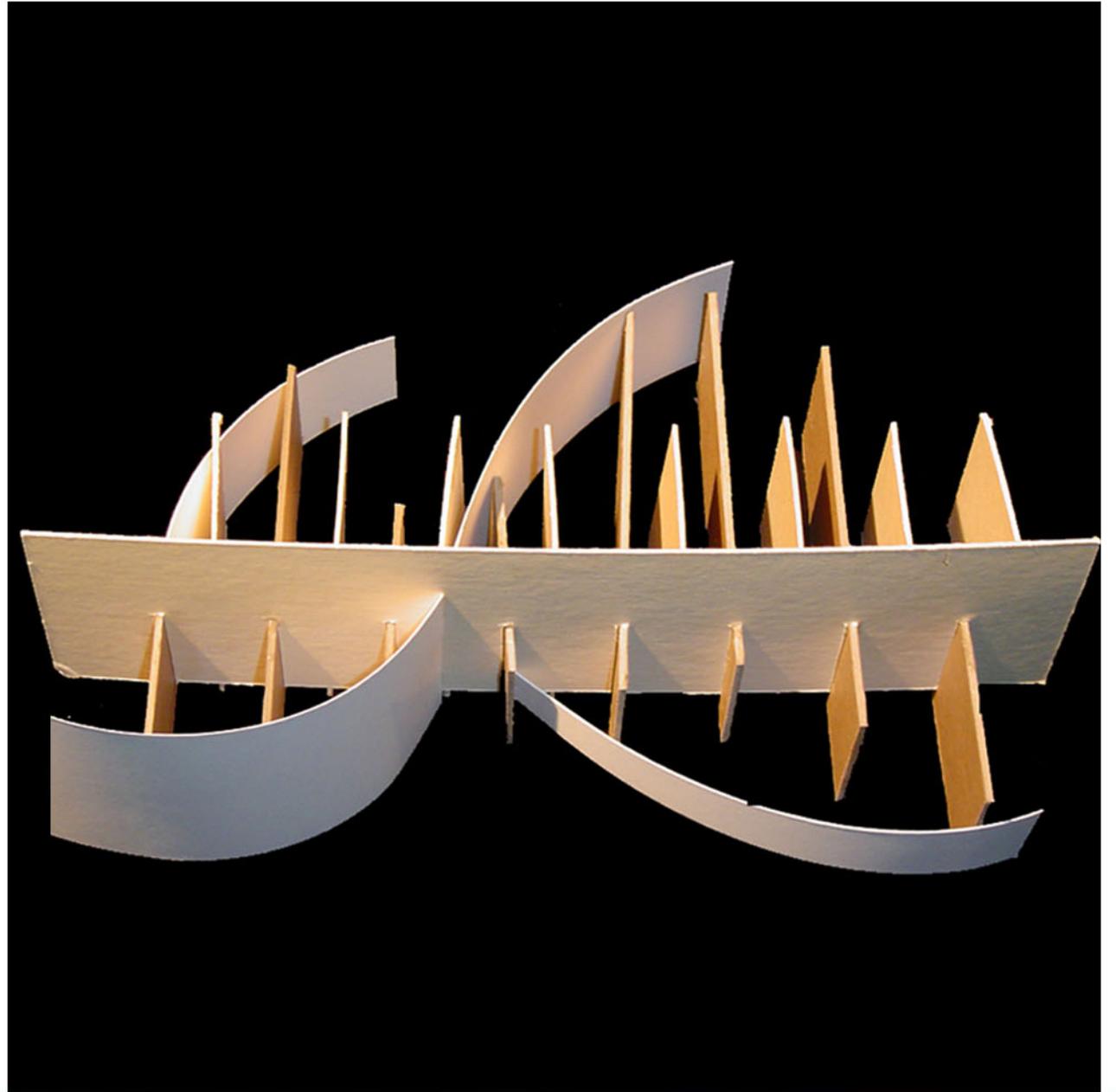
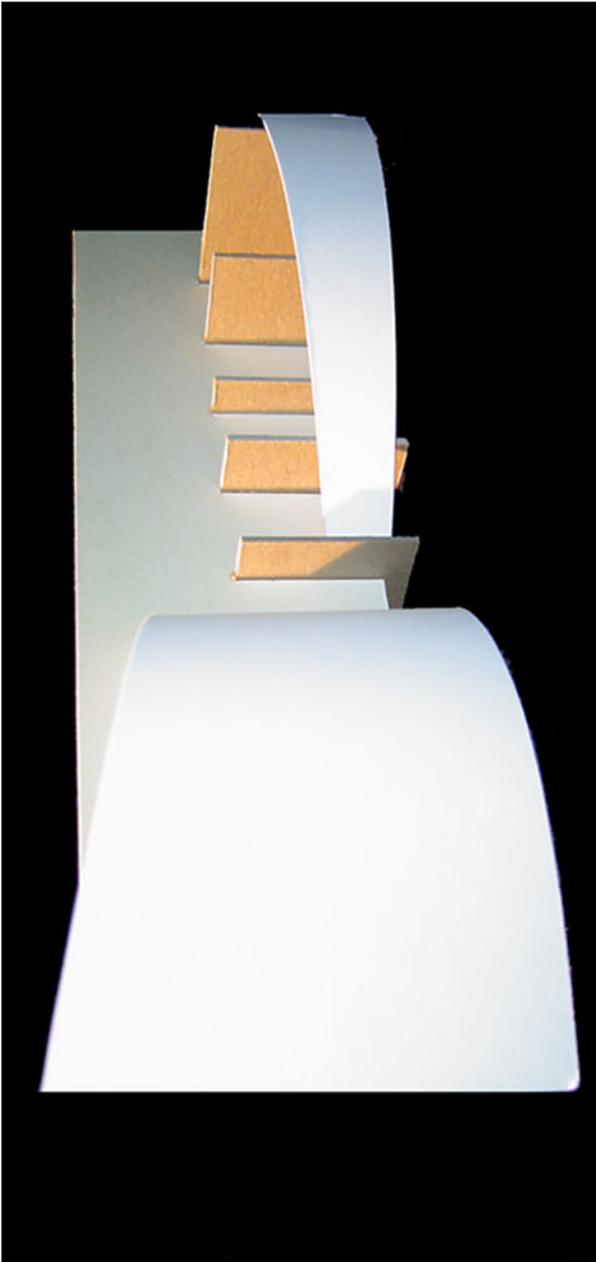
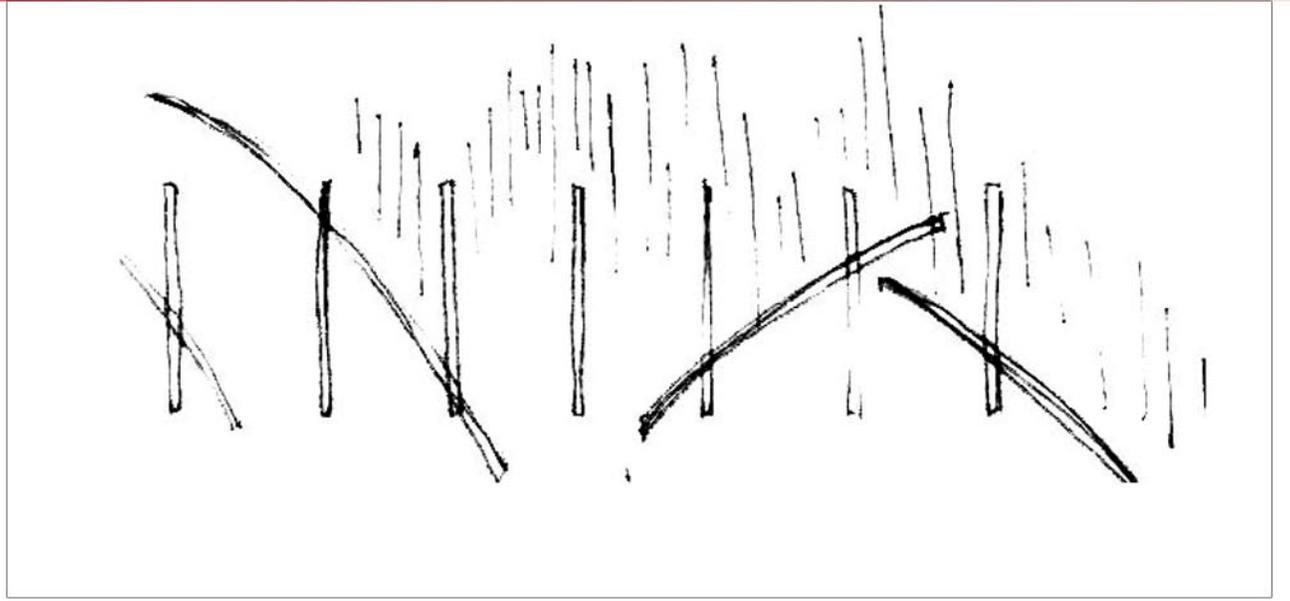
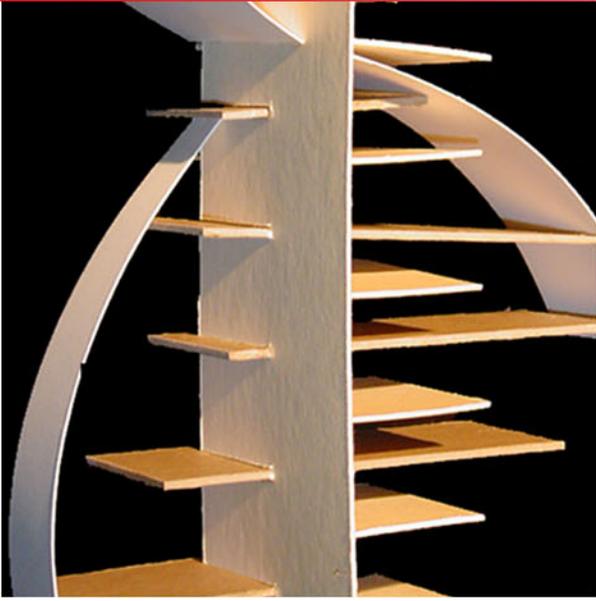
These images, although handsketched, were based on photographs and performances portrayed in Walter Gropius' "Theater of the Bauhaus."²

In pursuing further examination of dance, models and sketches were created diagramming the relationship between time, music, and movement. A regular element (time) was represented most times by a series of lines.



Similarly, the rhythm of music was also characterized by a group of lines with varied regularity. Woven within these two elements are curving lines, both in model and drawing, to represent the motion both performed and defined by either a single body of a group of bodies. Since these studies were done rather abstractly, they can be viewed in both plan and section.





Site Selection & Design





View looking South



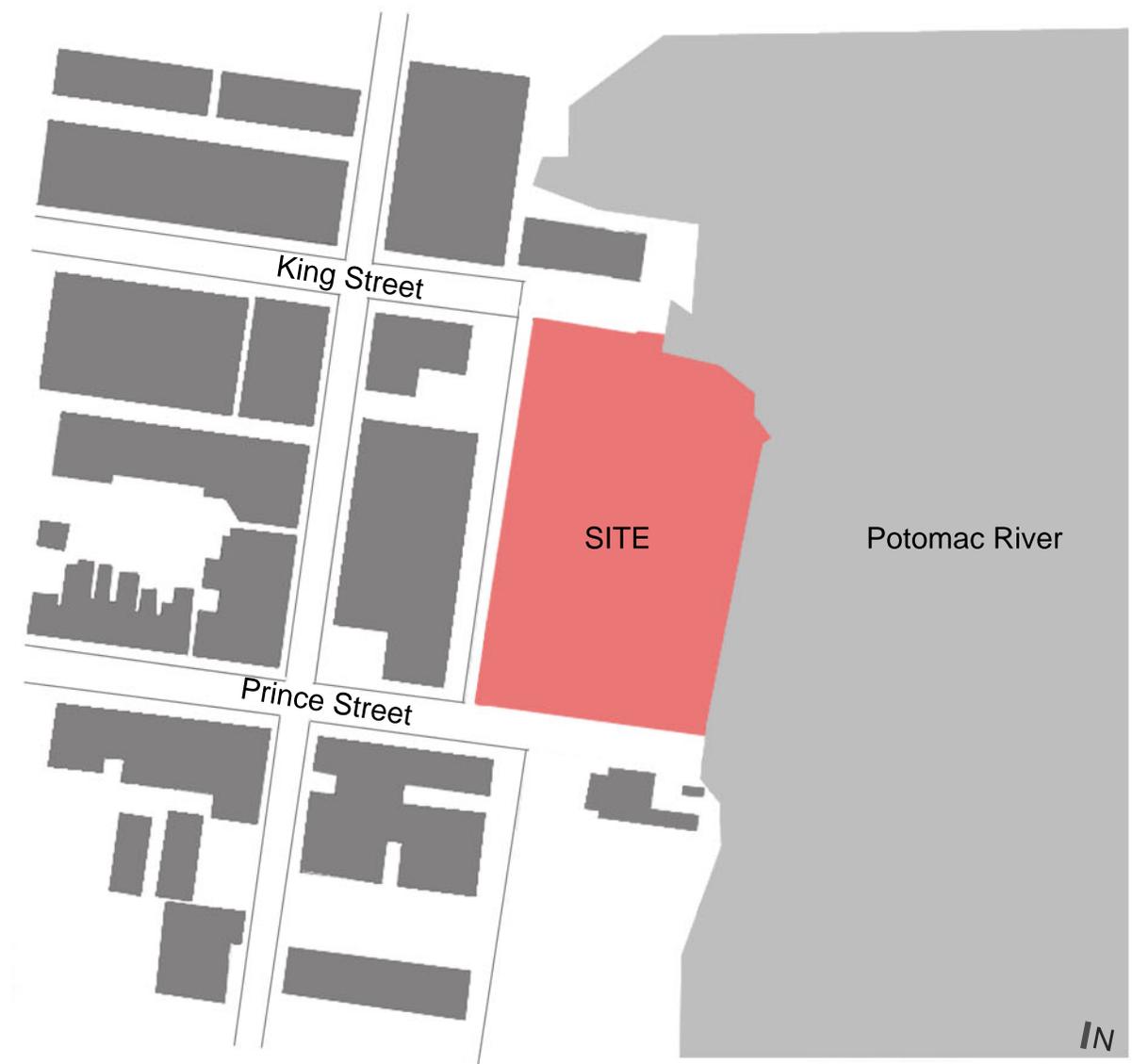
View looking North



View looking East

The site for this thesis project is located in Alexandria, Virginia. Presently an open park, the space provides an interesting contrast against the urban fabric of Old Town Alexandria. The site provides numerous opportunities for outdoor and indoor gathering spaces. Located at the end of King Street, the site serves as a terminus to the axis of Old Town.

Upon deciding to design a school and performance space for classical ballet, the site seemed appropriate due to the proximity of the water and the location within the urban environment. The designed building takes advantage of the view provided and integrates the water into both the plan and section of the building.





View looking West



View looking West



View looking North



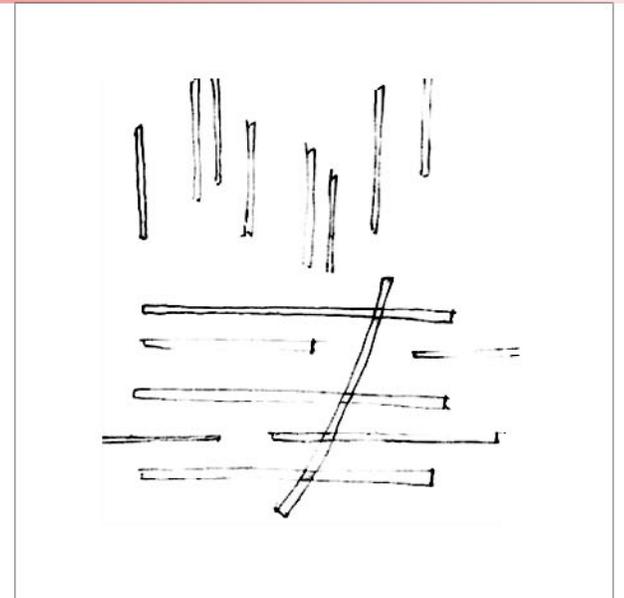
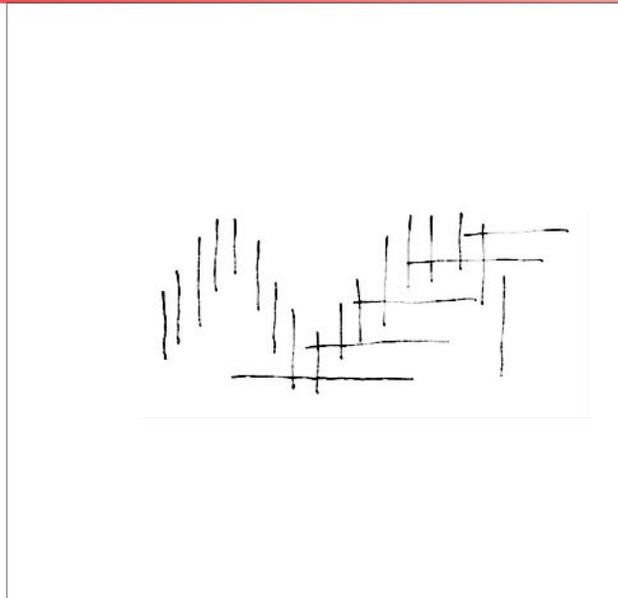
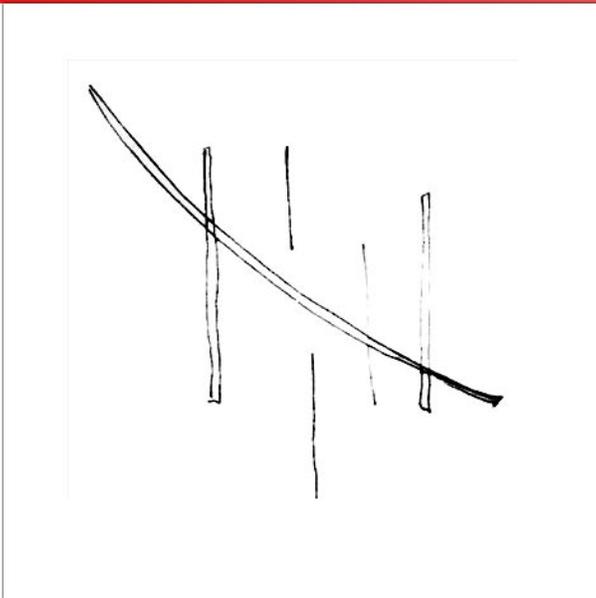
View looking West



View looking East



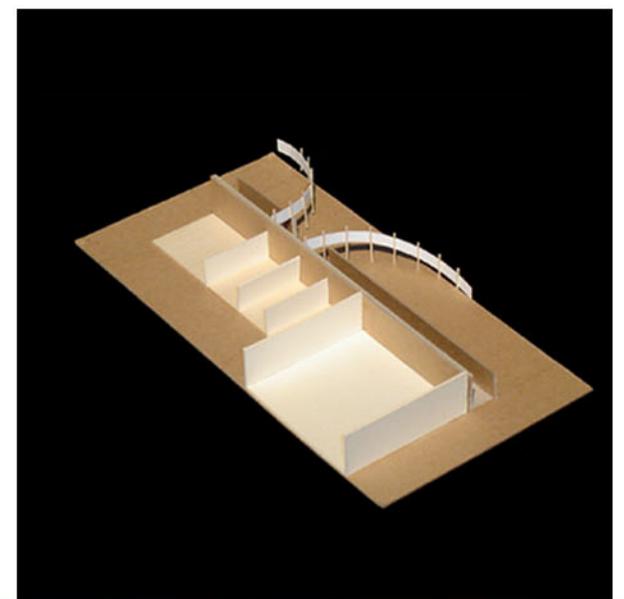
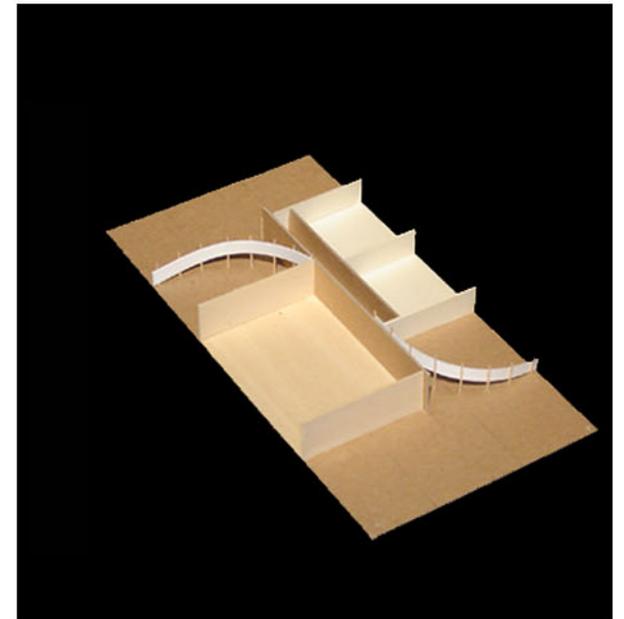
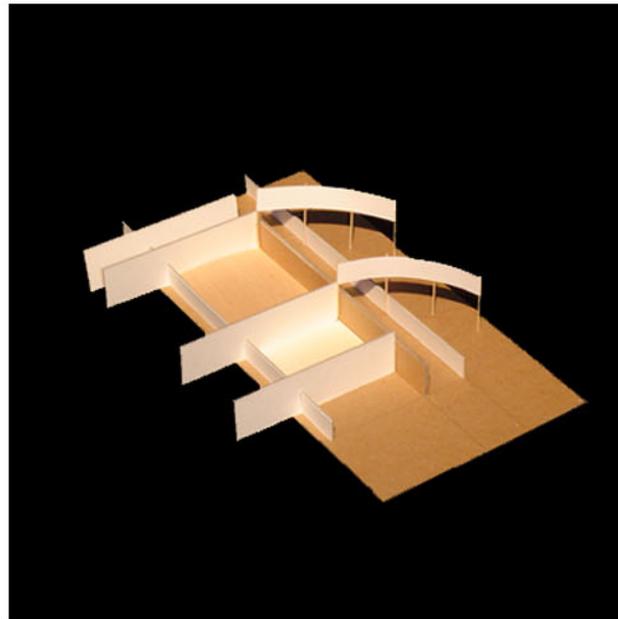
View looking South

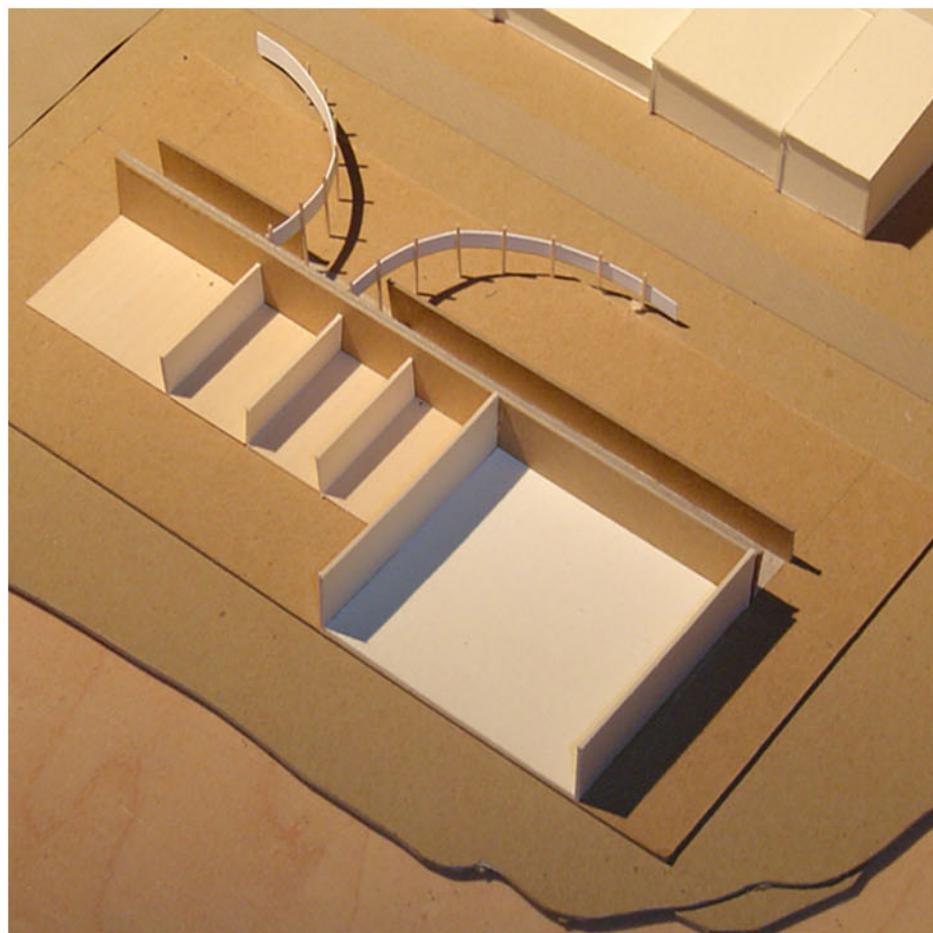
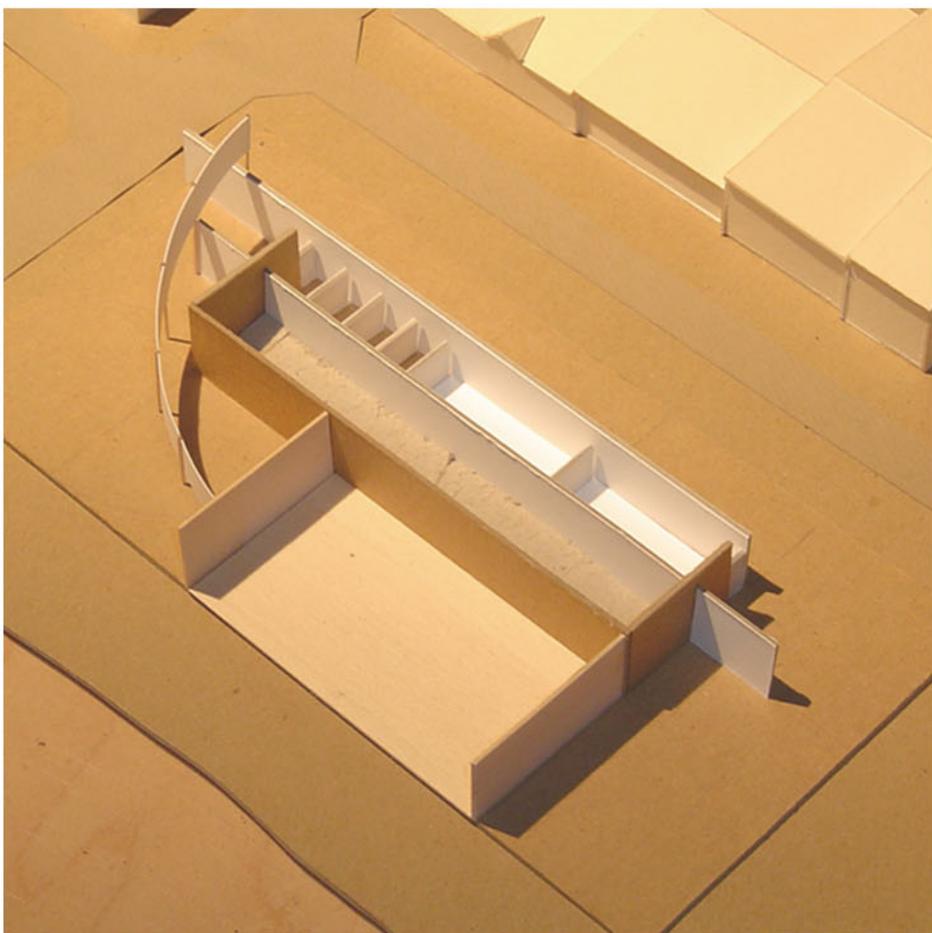
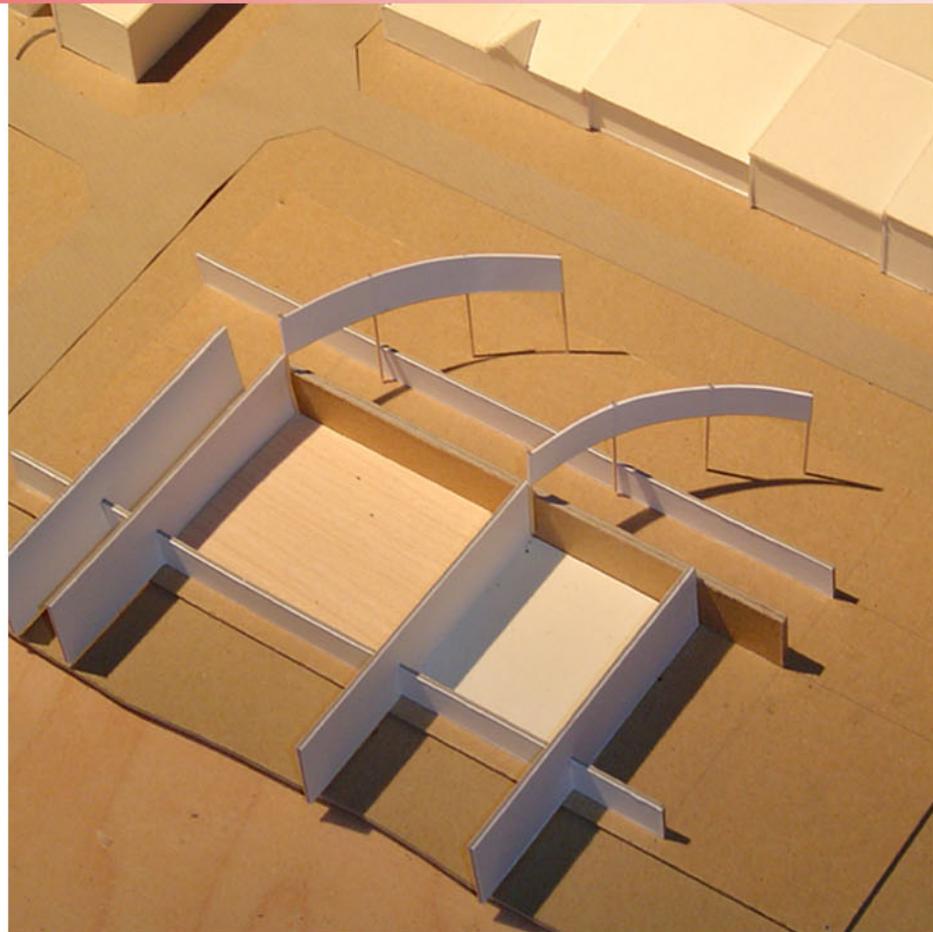
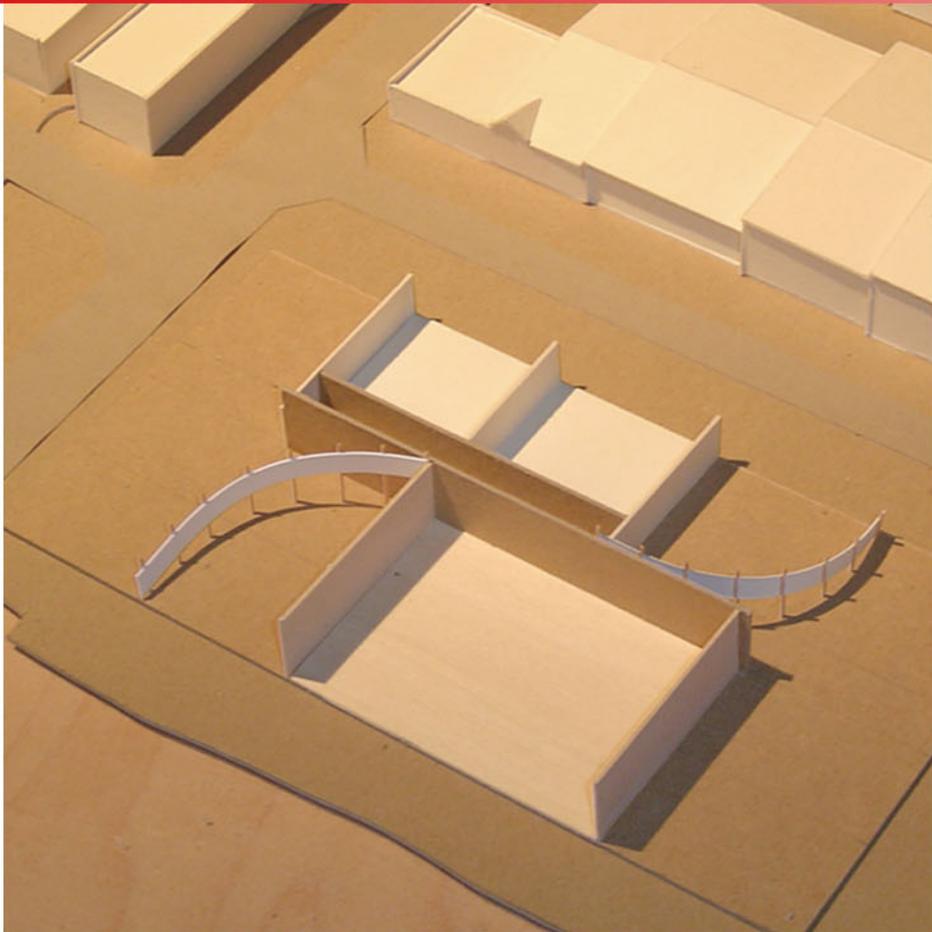


In pursuing further analysis of the relationship between the curved and straight line, the idea of movement was then applied to the site. Movement was diagrammed based on the activity throughout the site as well as the motion of the water.

Four models were constructed as to show possible solutions to the merging of the curved and straight lines. Each of the schemes shows a diagrammatic approach to the relationship between the educational and performance aspects of the program.

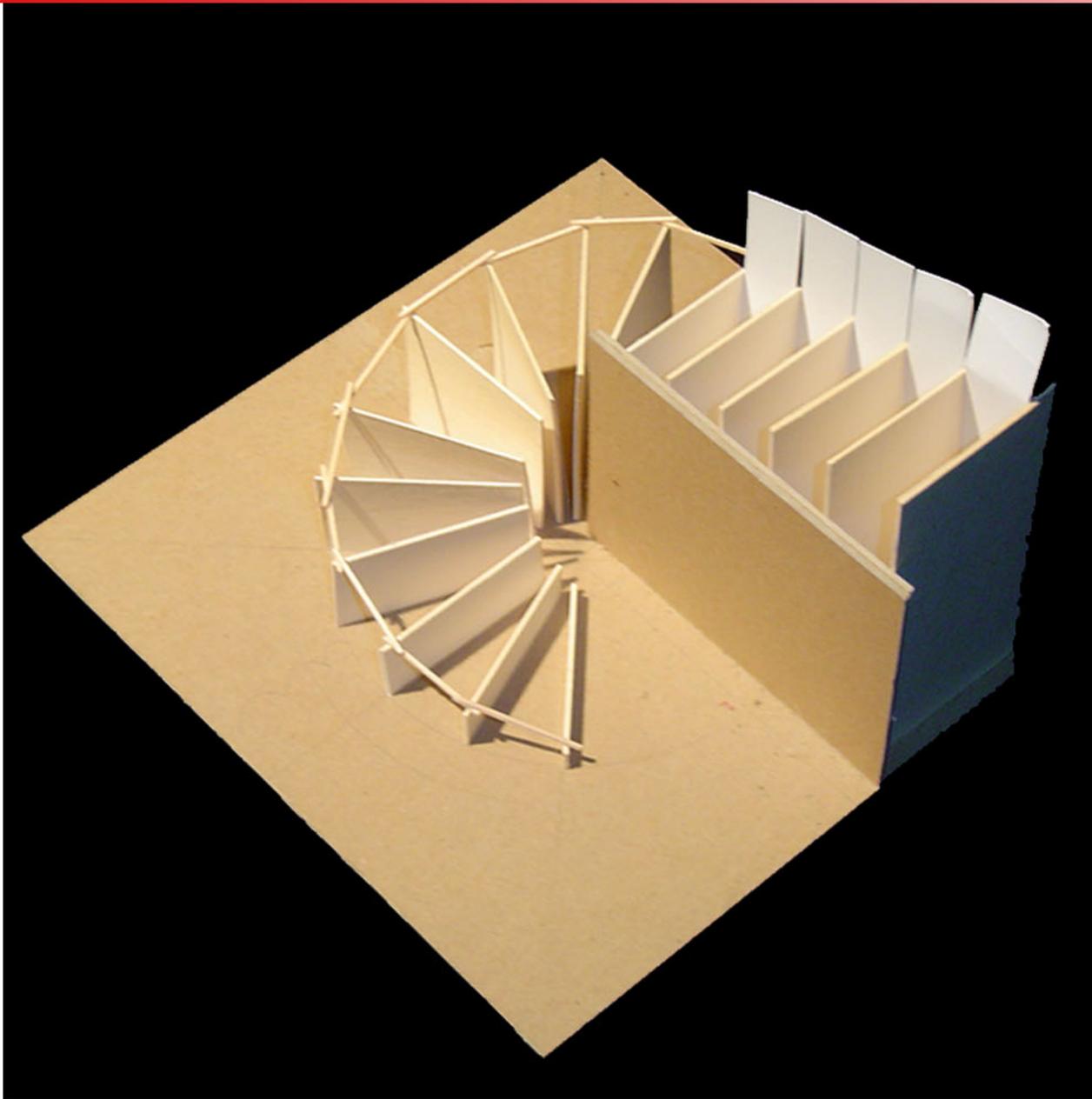
Using the idea of a spine to regulate and join these two functions, these models show simplistic approaches to the relationship of movement to the built form. Shown on the following pages, these models were placed on the site as to find a possible parti for the plan of the building.



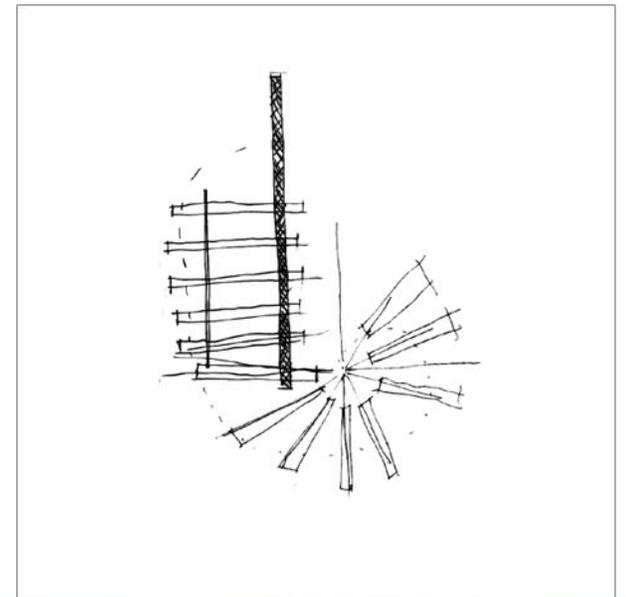
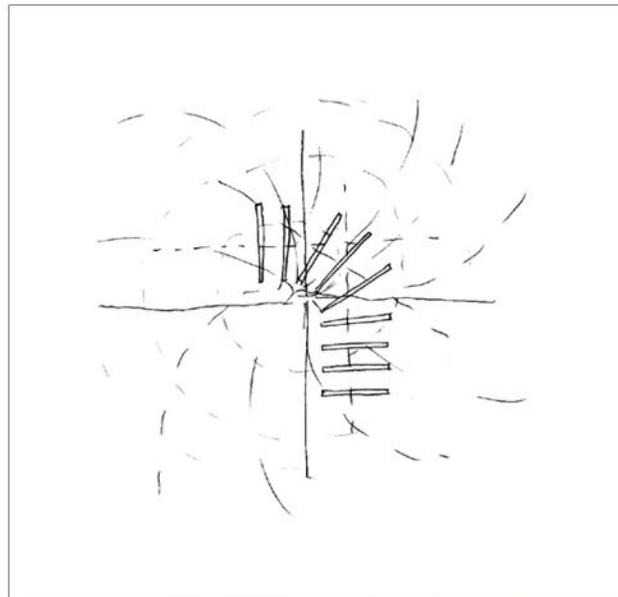
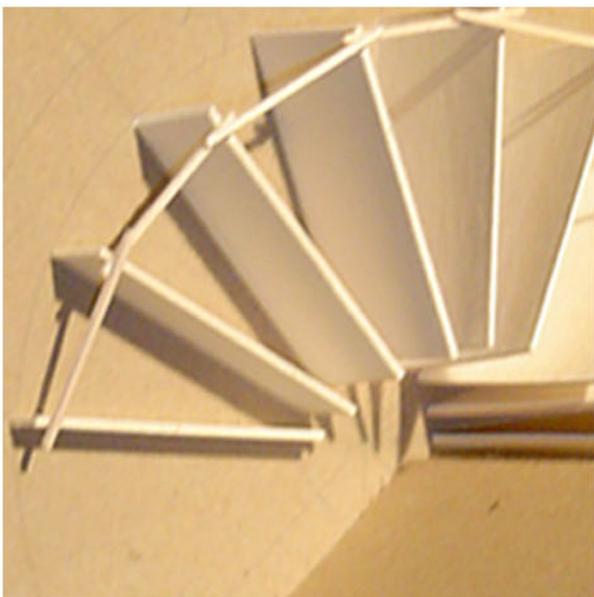
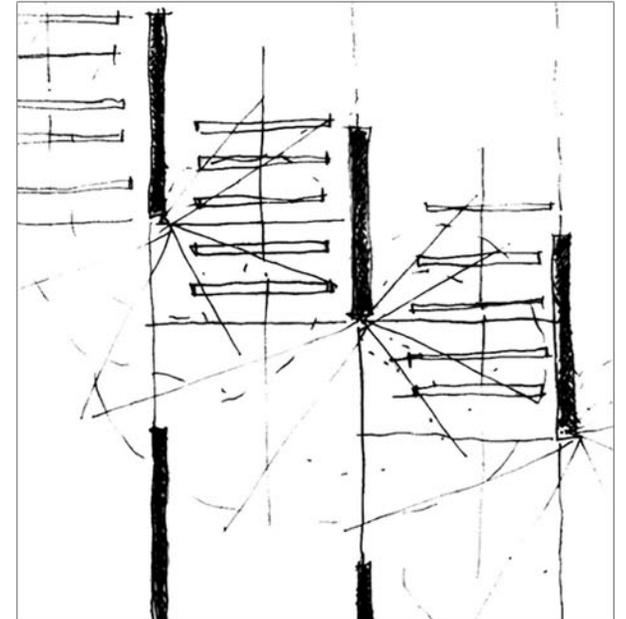


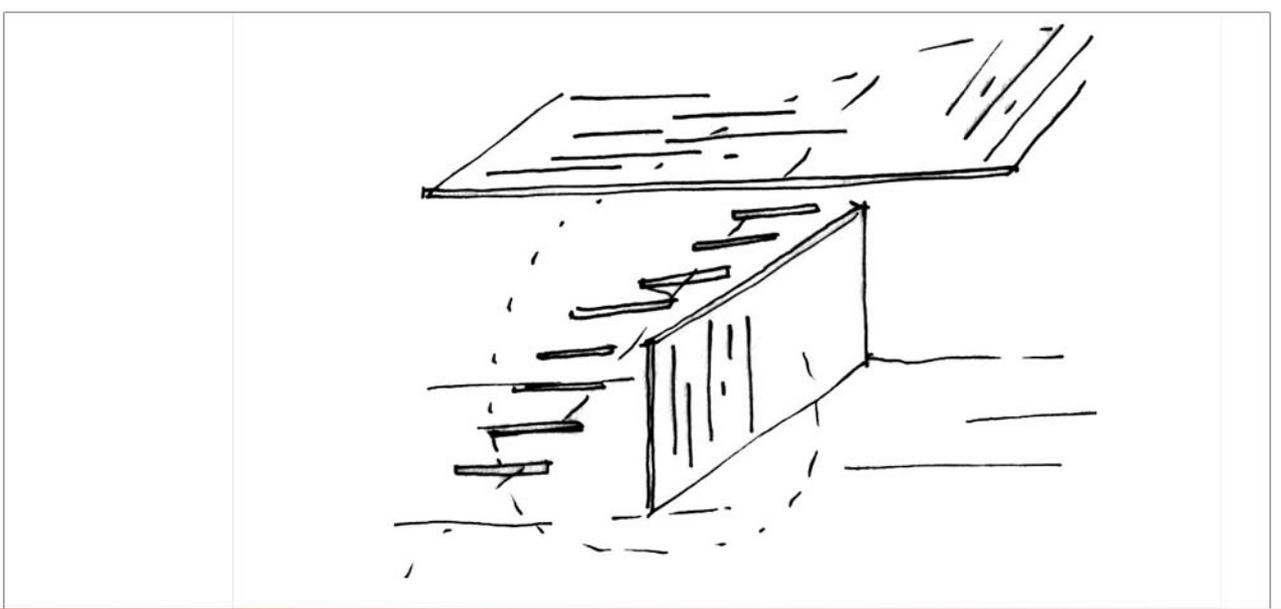
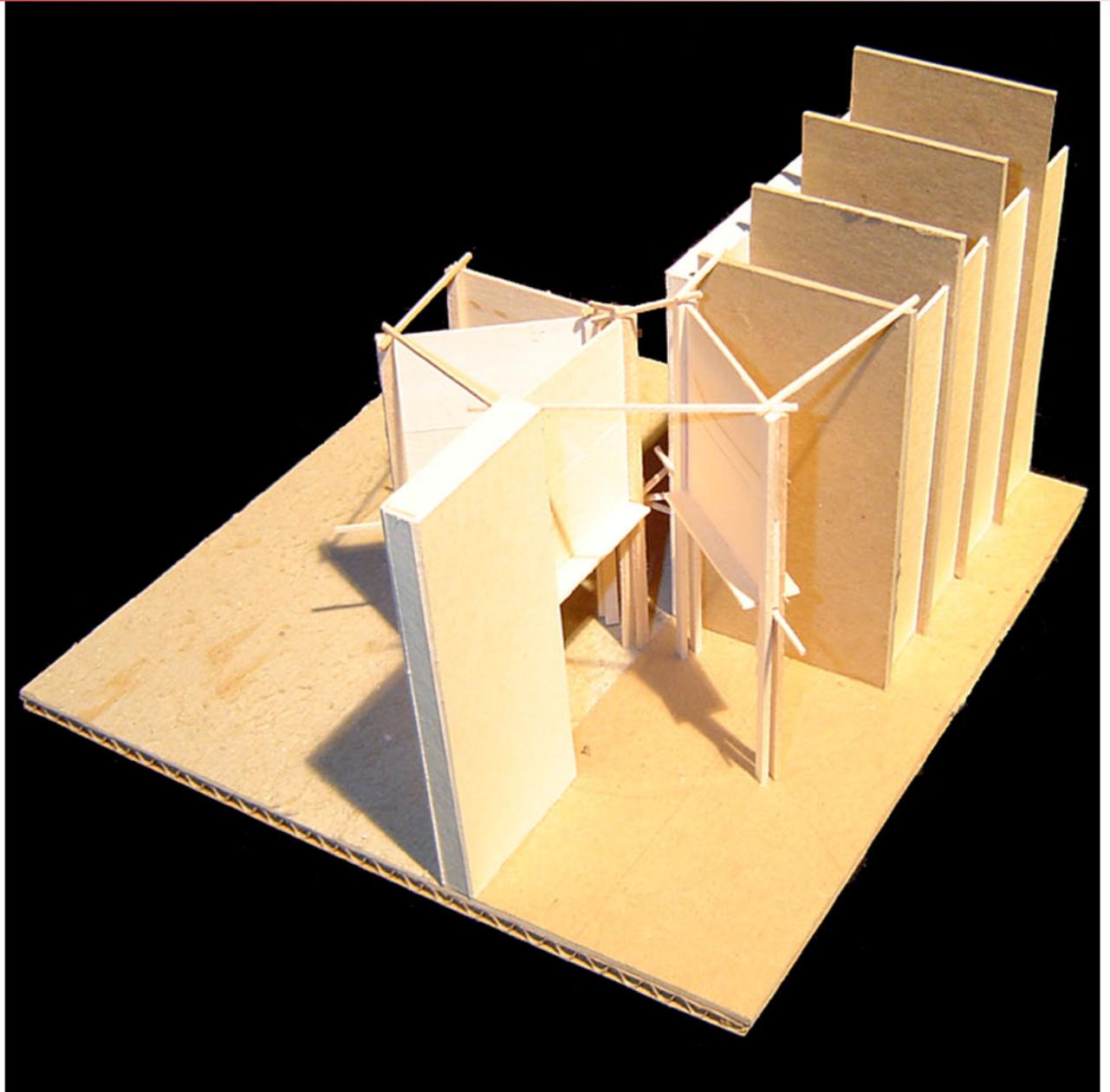
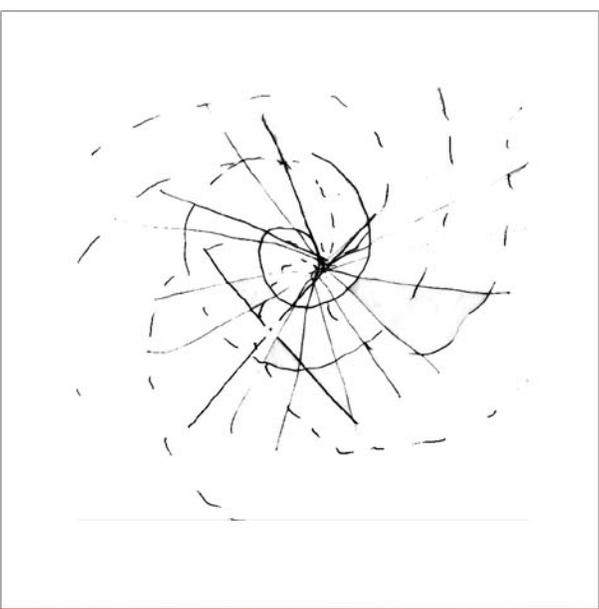
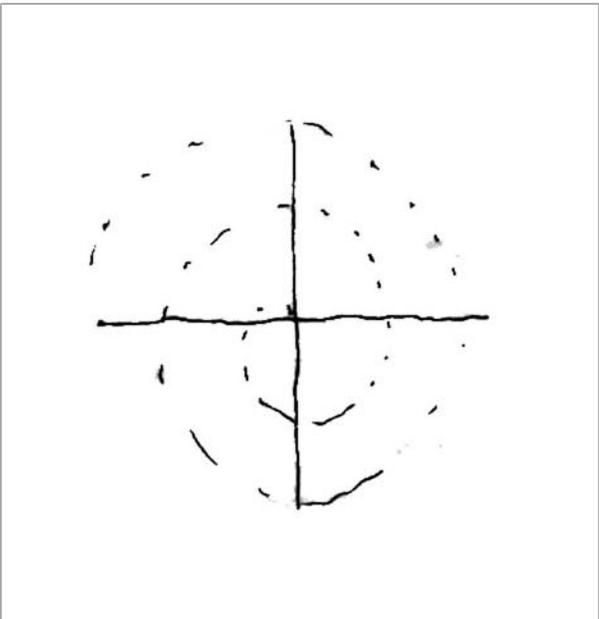
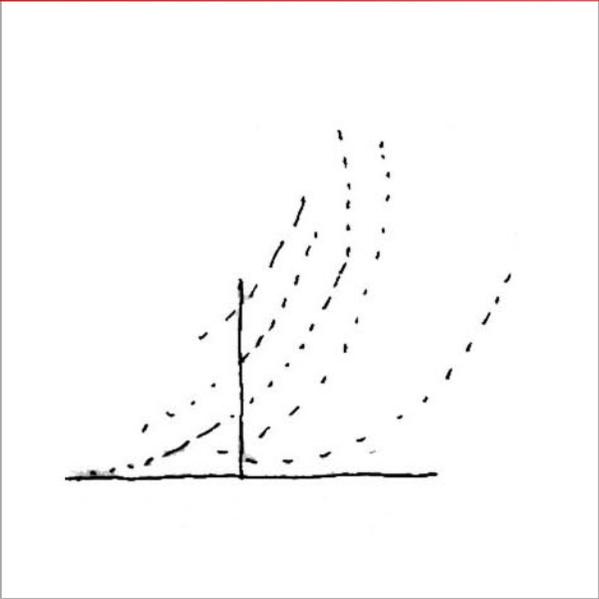
*Building Design
and
Development*



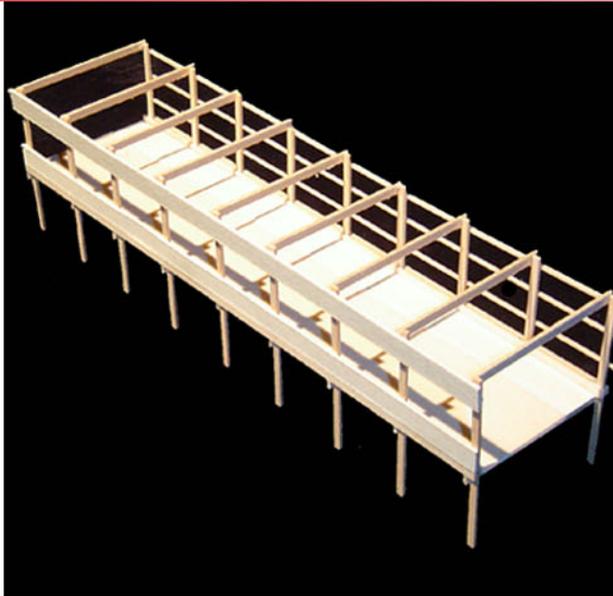


Similar to the models and sketches initially constructed, these images show the exploration of a threshold, specifically a stair. Each of the two models was inspired by sketches diagramming spiraling forms. Both models explore relationships between opposites, such as skin vs. bone, enclosure vs. openness, light vs. dark, and lightness vs. heaviness. The second model (shown on the following page) begins to further investigate the relationship between skin and bone by using different types of construction. The heaviness of the straight line contrasts sharply with the lightness of the curving line.





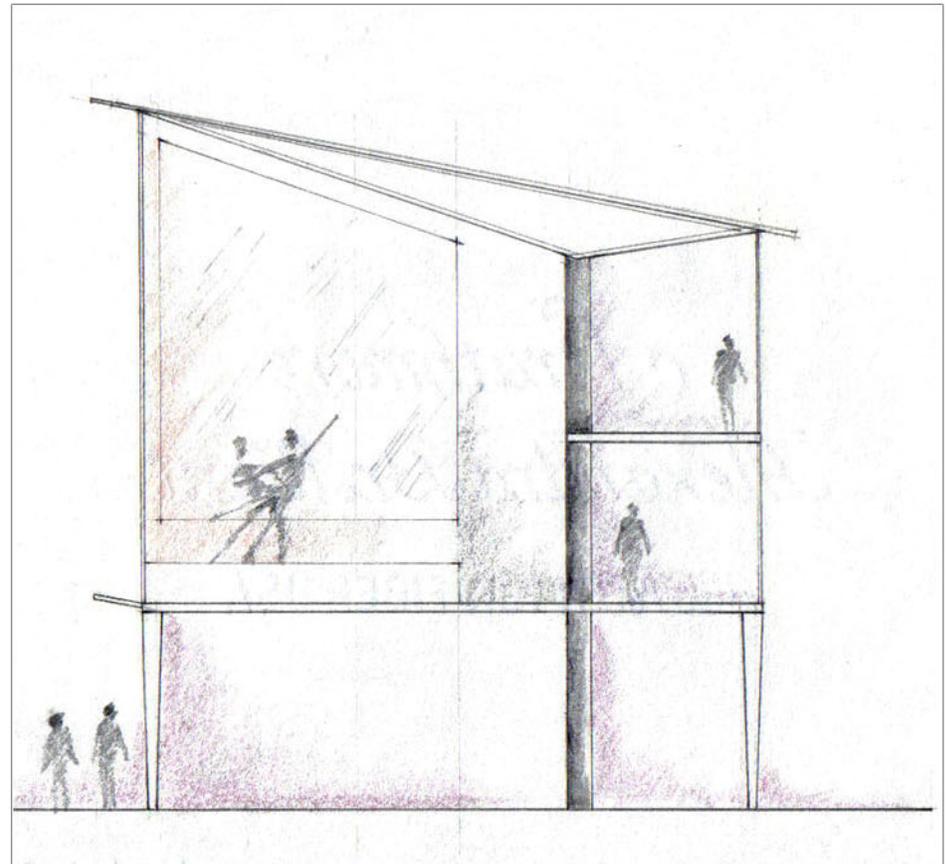
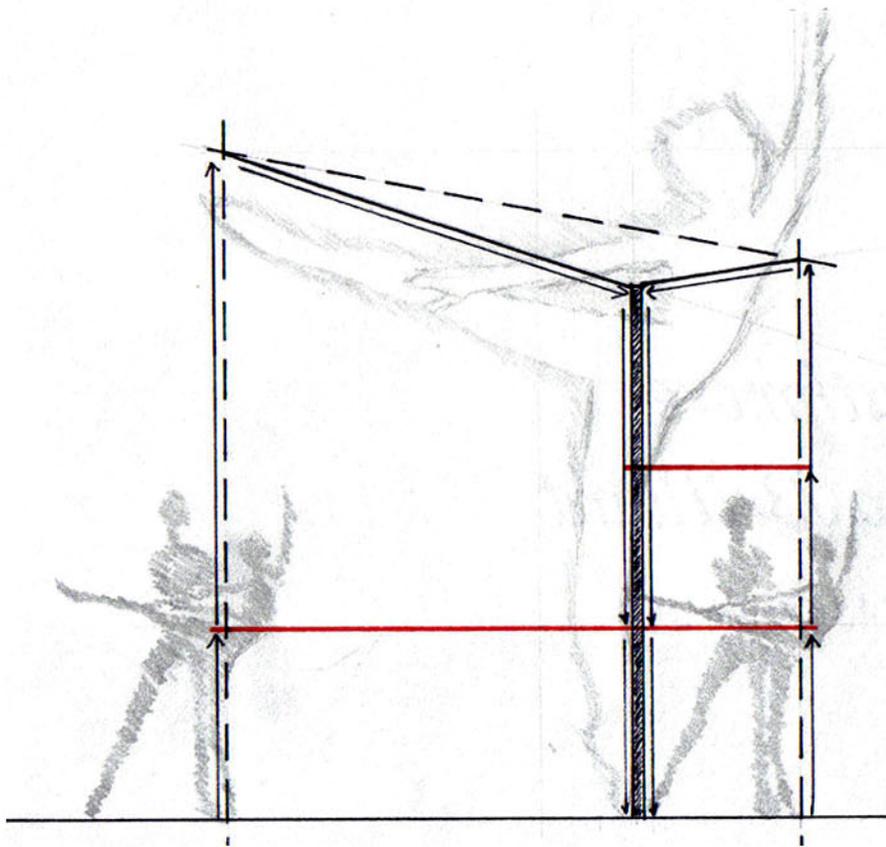
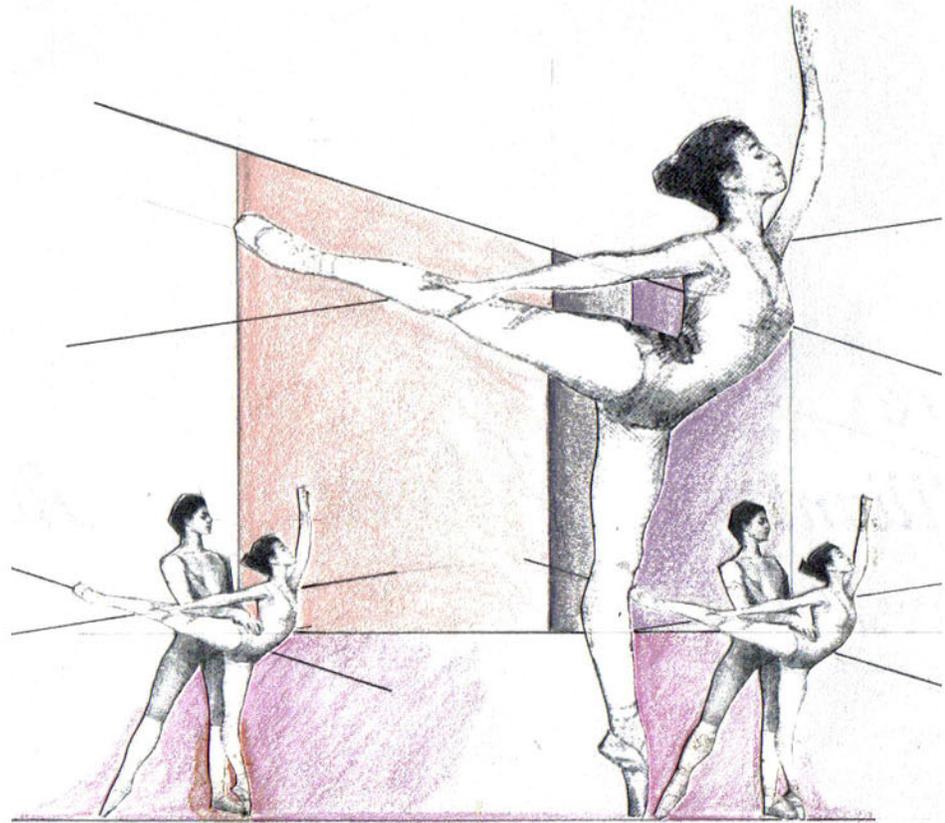
As the design process continued, models were constructed examining the different pieces of the program. The two sectional models depicted on this page examine different approaches to the studio/ educational portion of the building. Each of the models studied the relationship of skin and bone by both revealing and concealing structural components of the building. Similarly, the concept of skin and bone was also applied to the partition. A structural frame was first constructed and then different materials were applied, using the idea of opacity and transparency to reveal elements within the building.

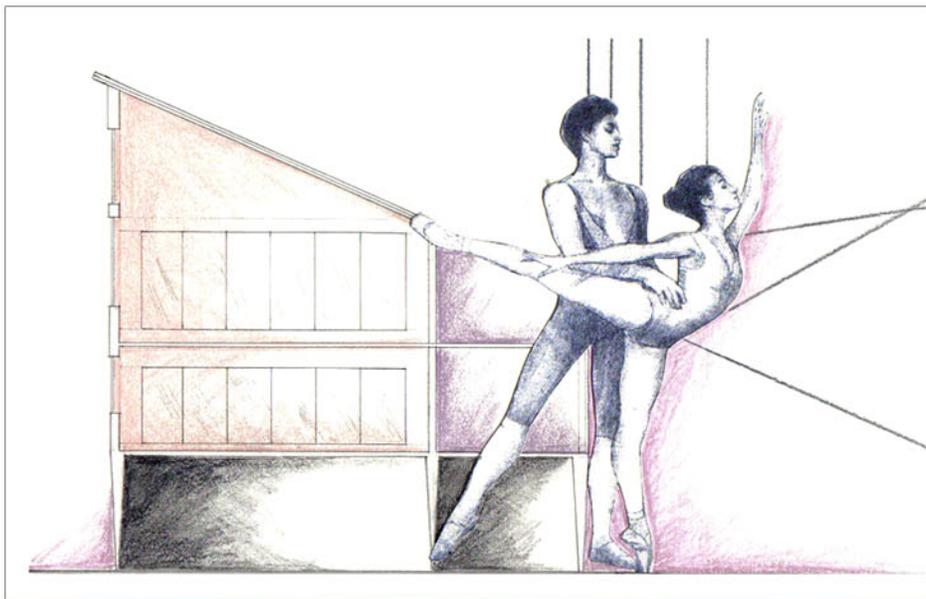
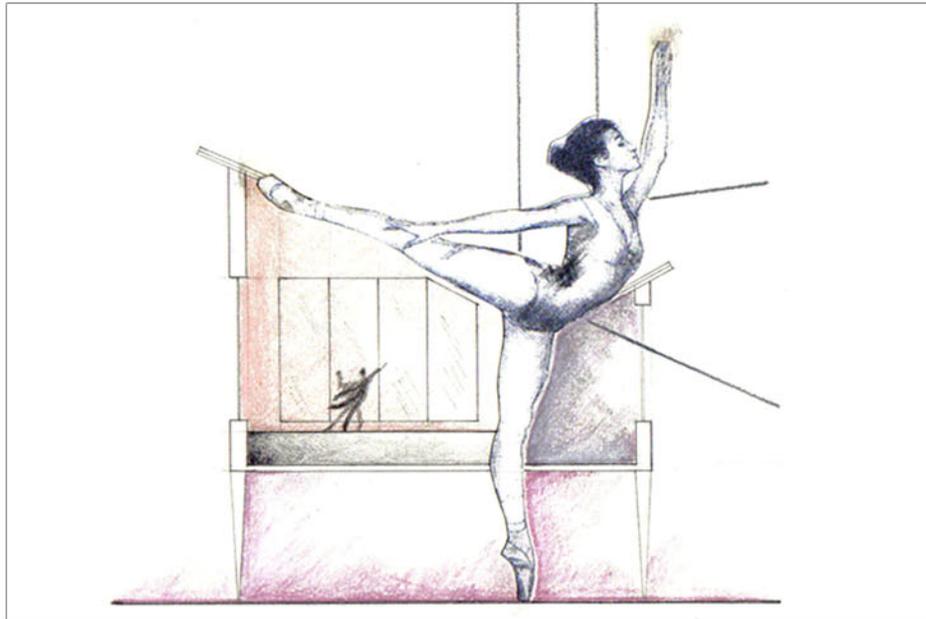
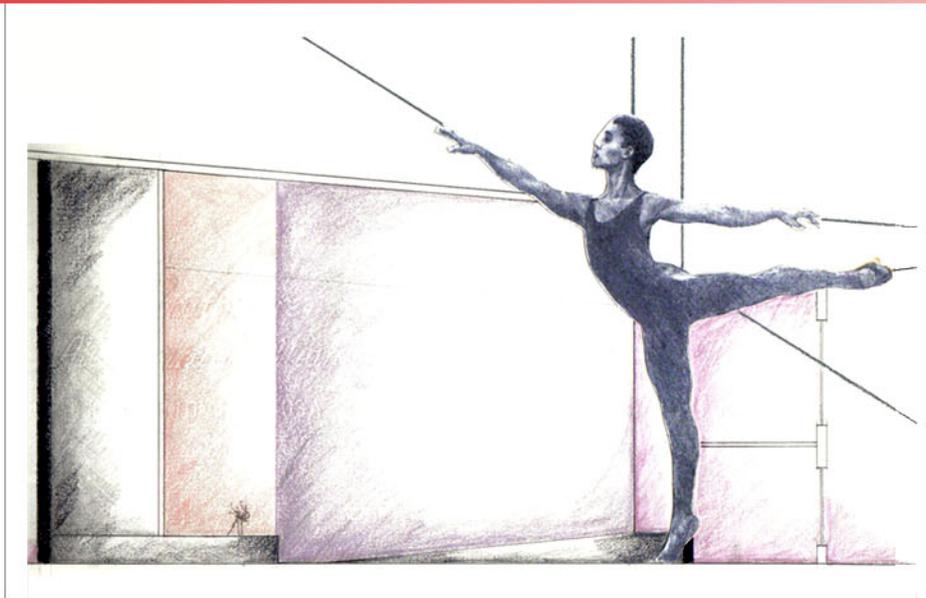


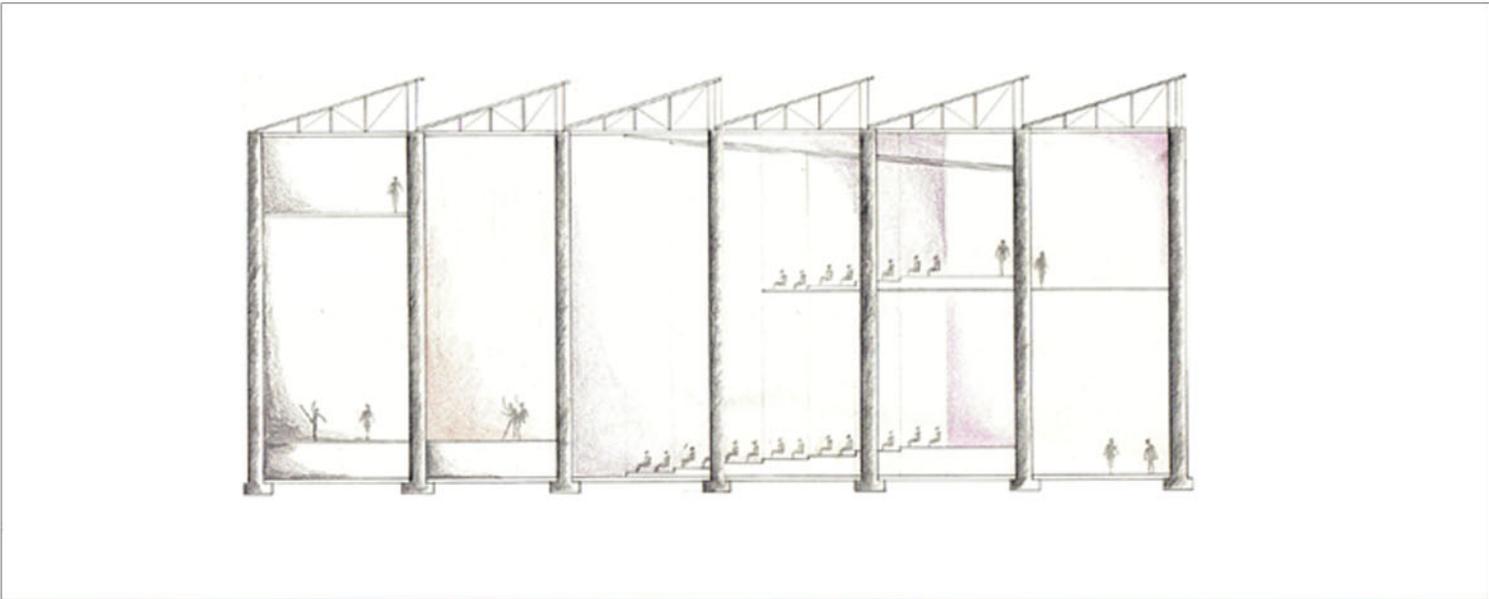
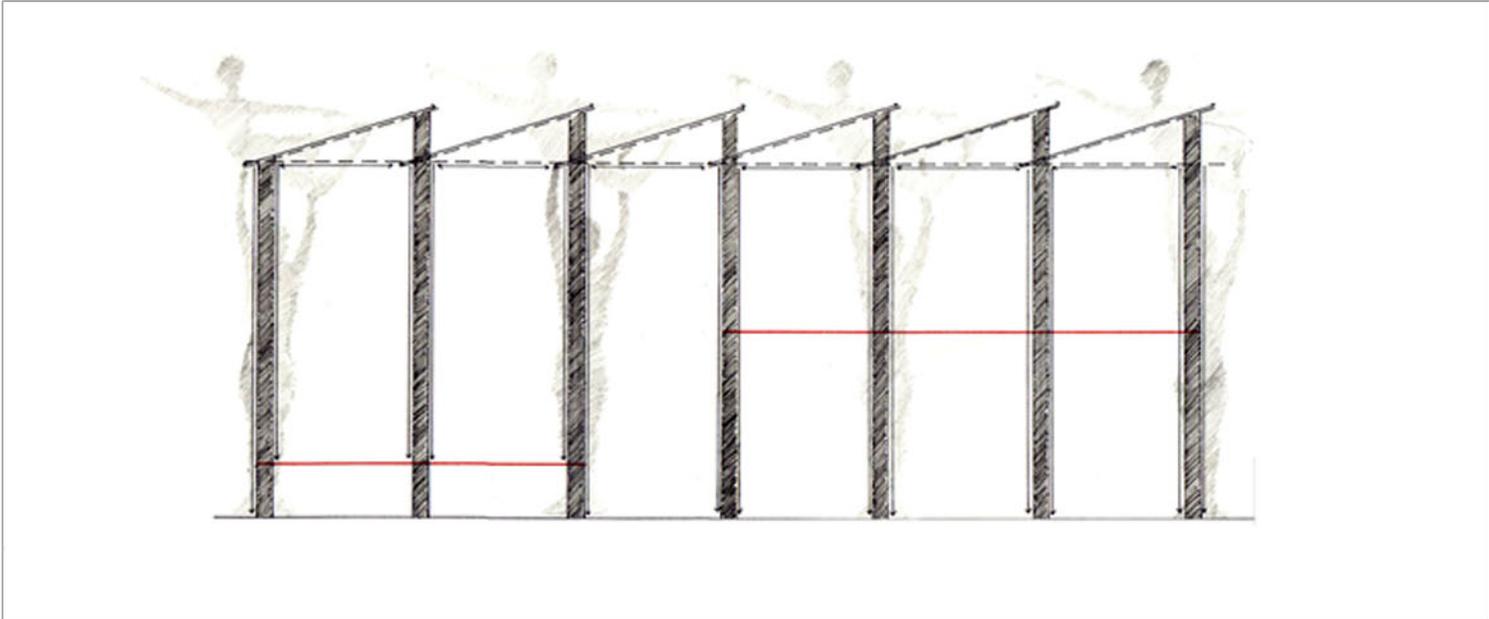
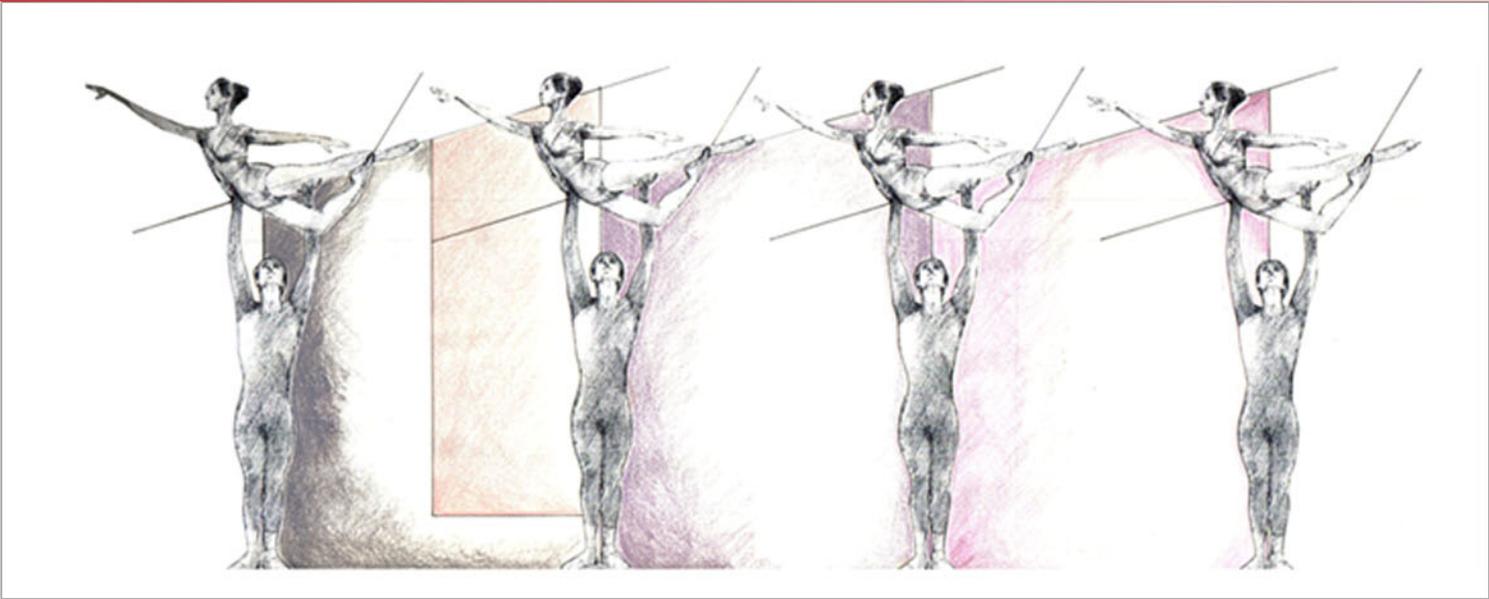
Moving away from the previous approaches of models and sketches, the human form was incorporated into the drawings. Taking images of dancers in various positions, the form of the building was created based on the classical ballet position. These collages depict the arabesque.

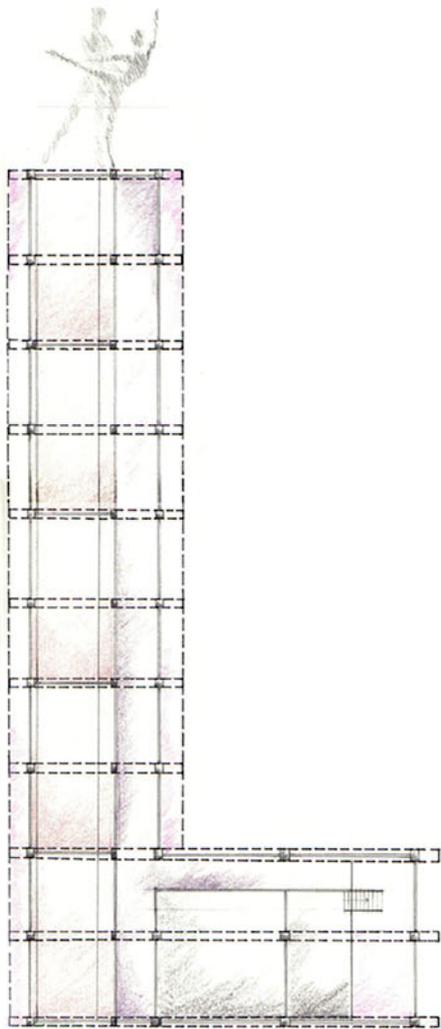
This series of drawings/ collages focused on the incorporation of images of dancers, blocks of color, and the use of line to guide and define the section of the building. The dancer's body shapes structural components of the building.

Collages on pages 15-17 were created with images from Anthony Dufort's "Ballet Steps."³

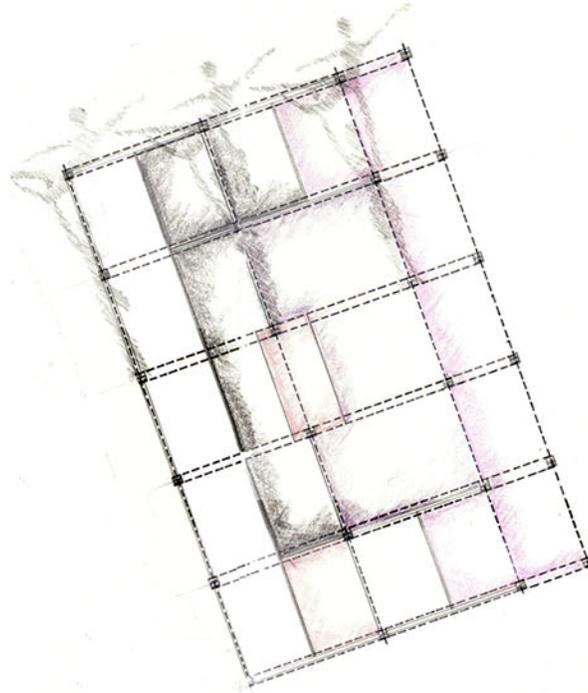






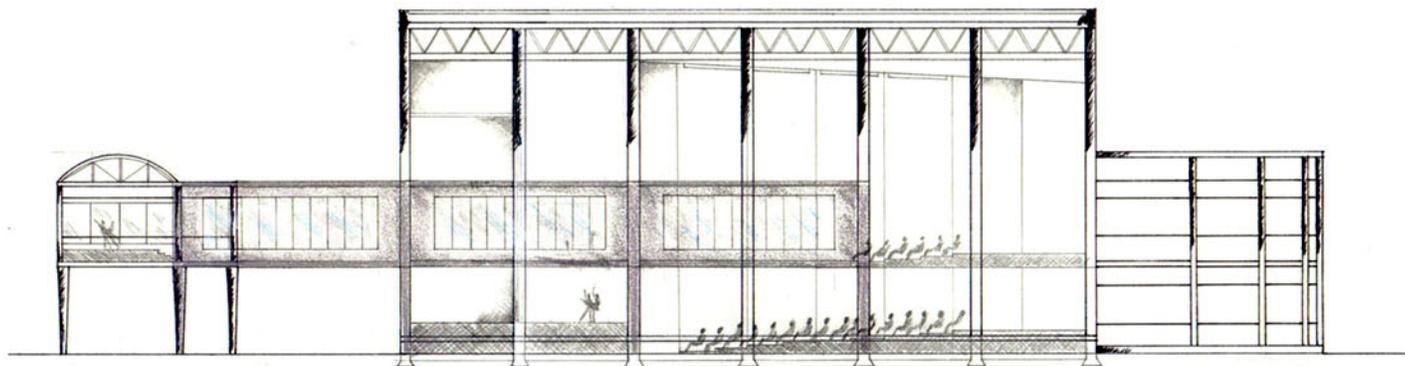


PLAN



The two components were then examined in plan, creating two separate masses. The educational portion was initially defined in an 'L' shape, potentially wrapping around the theater- a rectangular form.

These drawings explore the concept of layering. Different mediums were used to portray the separate layers of plan. Colored pencil, ink, and graphite each represent significant elements within the plan.



EAST- WEST BUILDING SECTION