

A MACHINE FOR THE ARTS
a public art atelier in washington, dc



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a public art atelier in washington, dc

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MASTER OF ARCHITECTURE

approved by:

PROFESSOR HANS ROTT, CHAIR

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8 May 2007

D ISTRICT OF

C OLUMBIA

W ATERFRONT

A TELIER



A. Salk Institute (Louis I. Kahn)

For architecture, emptiness implies that a building should not be slave to its program, twisting and turning to accommodate our every movement and wish-- squirming to please, as it were-- but rather be formed according to innate principles of order, structure, shelter, the evolution of architecture itself--and accident. It should be *found* useful and beautiful, like a tree.... Architecture with emptiness is...always unfinished: if not literally, then by the space it makes and the potential it shows. We become engaged with the intervals and open ends.

MICHAEL BENEDIKT. *For An Architecture of Reality*

Abstract	5
Introduction	6
Precedents	7
DCWA	
Site	8
Plans	12
Oblique Projection	19
Elevations	20
Sections	26
Interiors	31
On Art & Architecture	36
Acknowledgments	37
References	38
Images	38
Vita	39

In an attempt to address the accessibility of the arts in Washington, D.C. and also to engage the underutilized waterfront, this thesis proposes a cultural center for the arts that at once links the building with the water, but which also becomes a source of excitement for the city. The arts center will act as an atelier that mixes education, production and exhibition of fine arts, theater, dance and music, with the goal being to achieve a space alive with activity and shared energy.

Typically, buildings for art education have followed a model that emphasizes interaction by forcing artists of different media to share the same space in a classroom environment. Those same rooms may appear no different than, say, a room intended for an English class or science lab. The District of Columbia Waterfront Atelier (DCWA) aims to offer spaces that are designed for the specific medium and nothing else, thus, elevating the importance of the craft. By separating the arts into singular units, one may wonder if interaction between artists is lost. Interaction, however, may be achieved through different methods rather than, simply, by programmatic ones and the DCWA has become an exploration to discover alternatives to maintain and heighten the universal goal of an art atelier: to become engulfed and energized by the arts in an interactive setting.

For centuries, buildings have been designed to house and accommodate art and artists. Interior museum design, although it has evolved over the years, typically follows a standard format: large, blank rectangular rooms with plastered, white walls. The notion is that the art will complete the space and the architecture will not interfere. However, do spaces where artists actually produce and learn about art need to follow this same format?

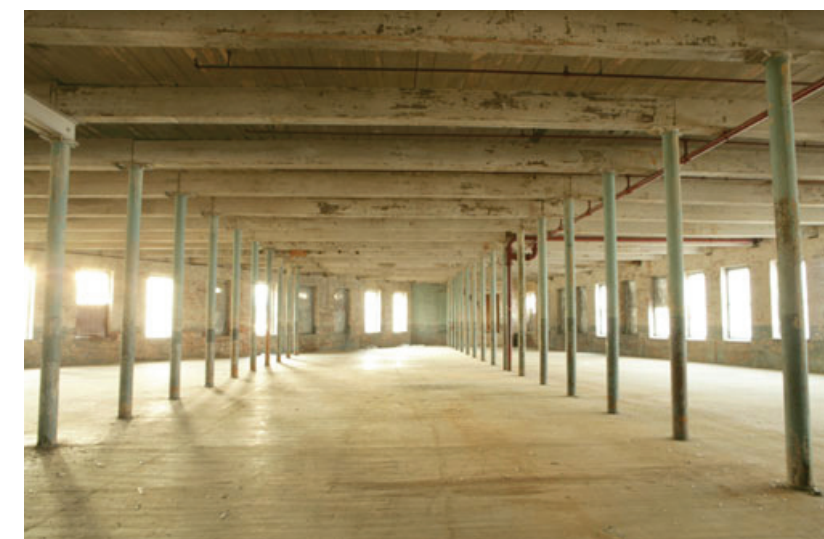
During the 1970s, in New York's SoHo neighborhood artists like Donald Judd raised "aged, leftover nineteenth- and twentieth-century industrial and utilitarian structures to the status of ideal, permanent museum architecture for his and other contemporary art."¹ He and others railed against the "1980s proliferation of architect-overdesigned new museums--completely inhospitable and insensitive to the art they were intended to exhibit..."² The same argument can be made regarding our art schools and ateliers.

Many art schools and ateliers offer uninspired spaces which are no different than any classroom designated for any subject. We have become numbed to the fact that this is how it has always been and this is what art studios, music studios and dance studios must be. For an artist, an atelier environment can be a wonderful asset for his creativity, energy, and can transform his opinions on art. Simply being around other artists that bring different perspectives, styles, and notions of art to this environment creates an enthusiasm that is hard to achieve when one is alone. So, it is hard to understand why the spaces, so often, do nothing to add to this enthusiasm--and, most likely, detract from it. Cannot architecture inspire an artist? Of course it can and does, but so often the spaces intended for art education and production seem unfit for the activities they are meant to house.

This thesis offers an alternate method of designing an art atelier, but which still focuses on the basic elements of architecture: structure, scale, proportion, material, and light. Whereas proximity of the artists acts as the chief driving force behind many ateliers, the District of Columbia Waterfront Atelier separates the artists and uses construction and material as means to expose each artists' activity and energy to the entire building and public.

Inspired by urban warehouses, Constructivism, the Bauhaus and Futurism, and artists Richard Serra and Dan Flavin, the DCWA displays an architectural language that is inherently familiar. Designed to appear as a factory filled with monolithic volumes and devoid of frivolous detail, the DCWA follows the functional design principles of good factory architecture--durable materials and generous space and light. And like New York's Dia:Beacon, the space in the DCWA, at its core, a raw, utilitarian space, can be subtly modified into collaboration with the artwork and artists. What sets apart the DCWA, however, is that it employs different construction techniques for each space; materials, connections, and details correspond specifically to the art that it houses.

Ultimately, this thesis serves as an investigation of a specific relationship between art and architecture. The goal is to produce a unique model for art schools and ateliers, while maintaining the elemental concepts of their success.



B. Dia:Beacon. New York, NY

¹ Cooke, *Dia:Beacon*. p.27

² *Ibid.*



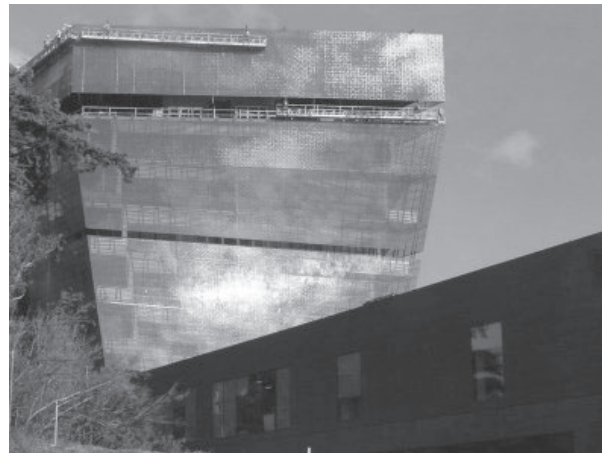
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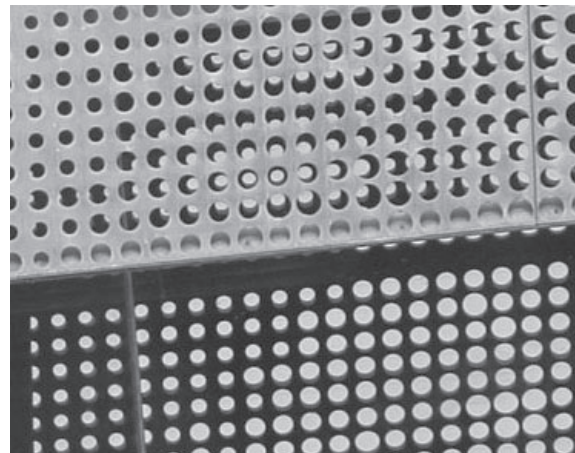
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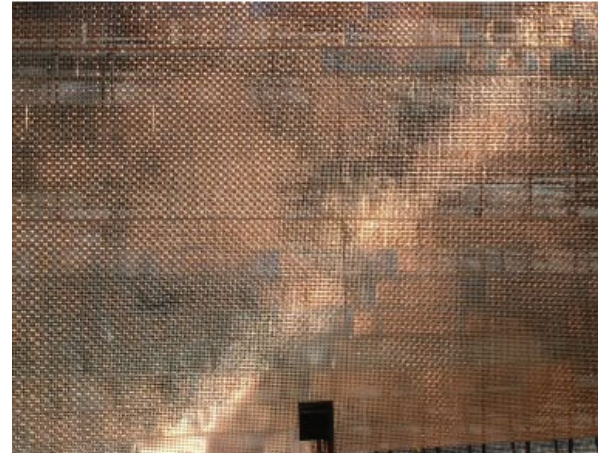
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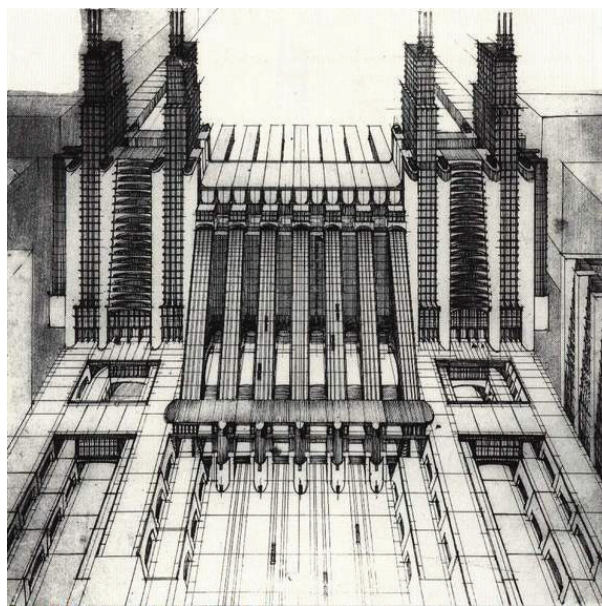
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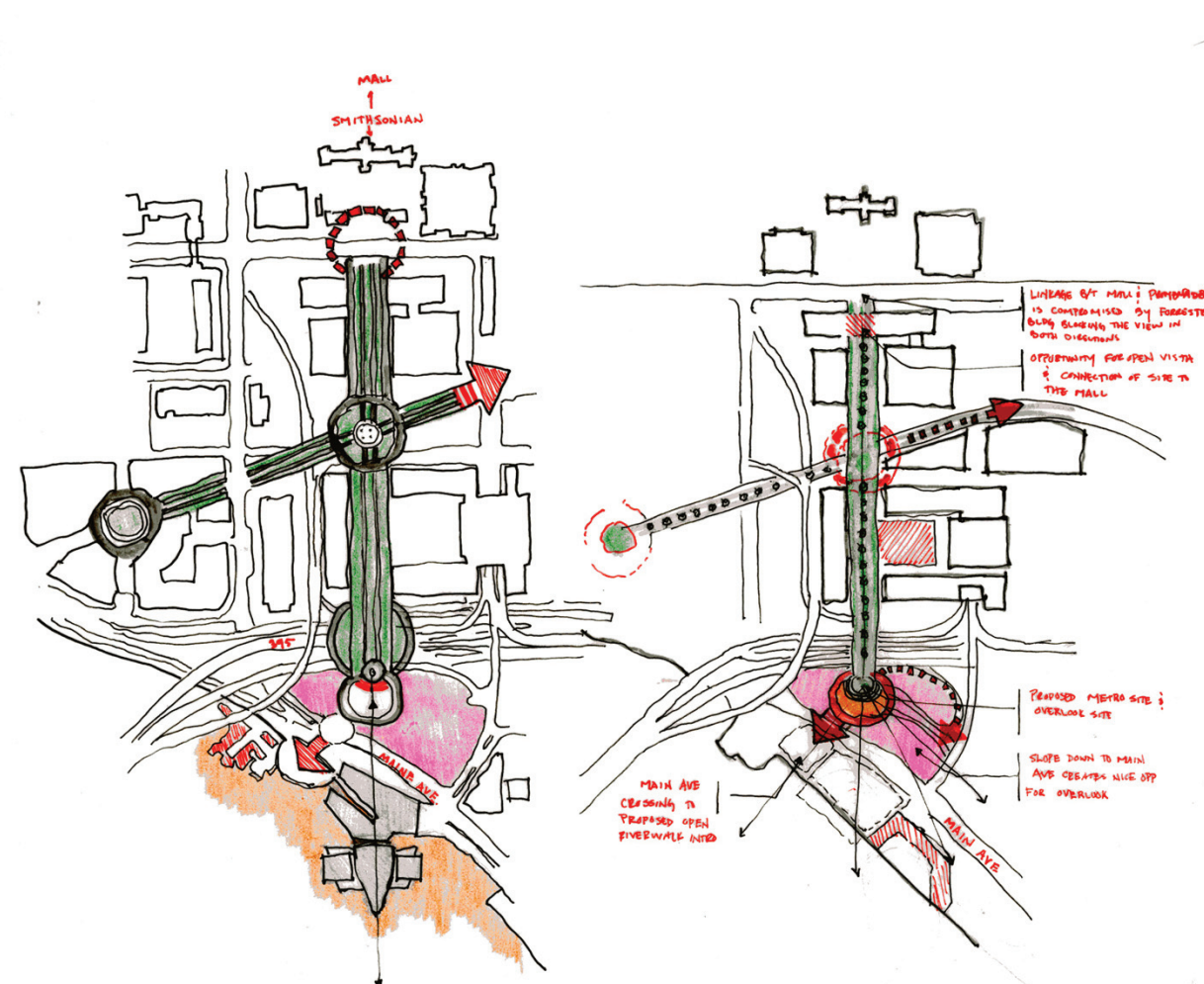
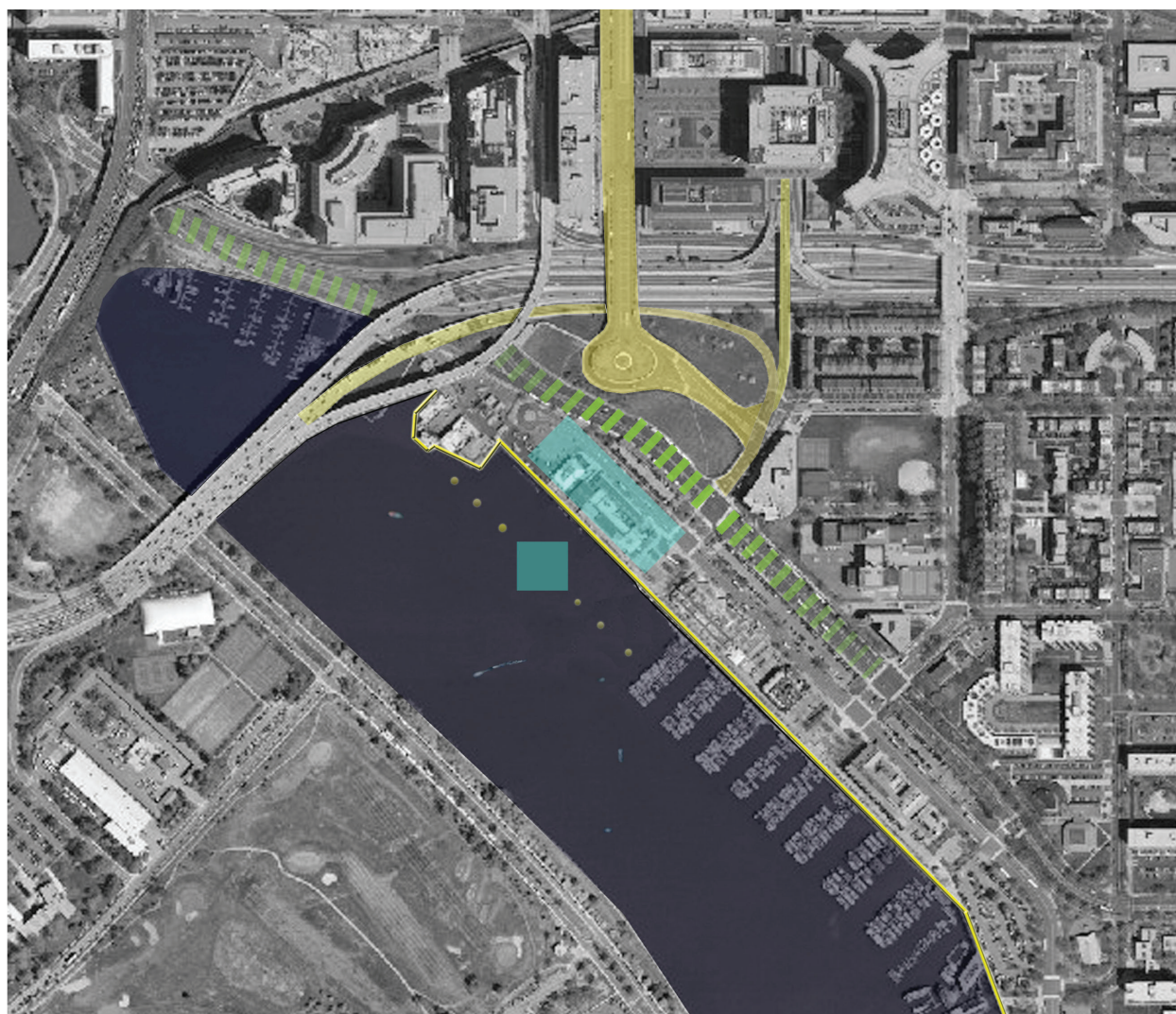
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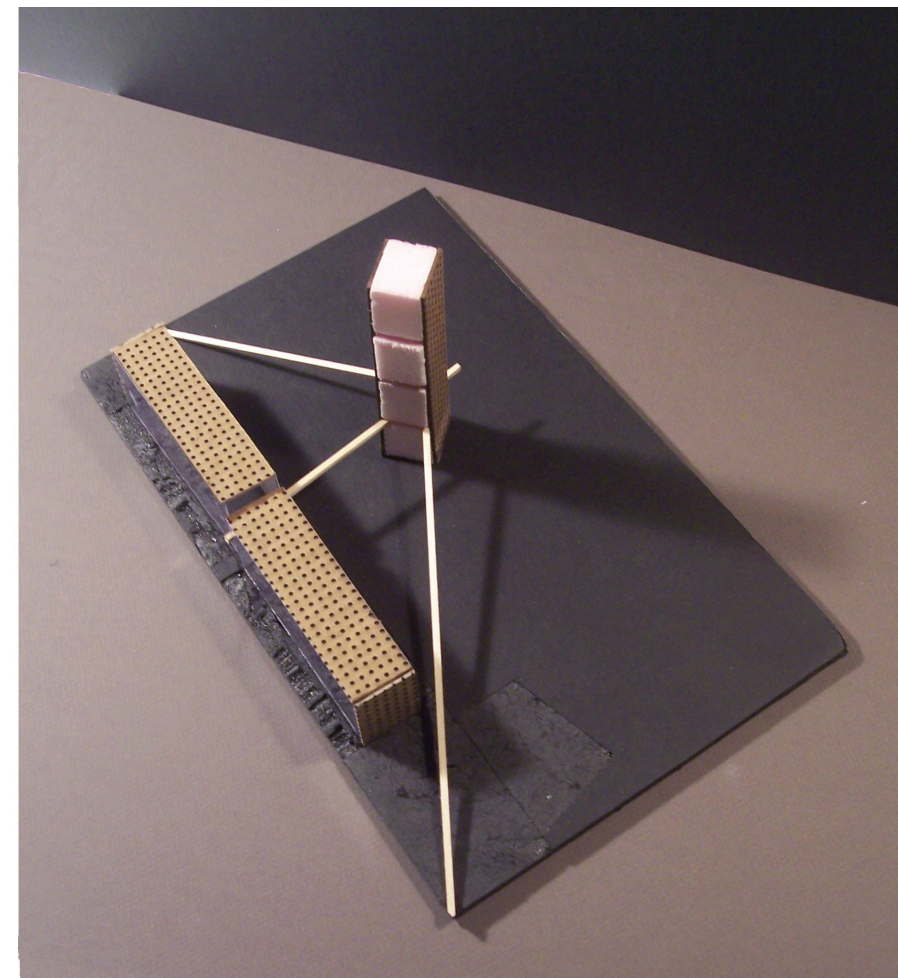
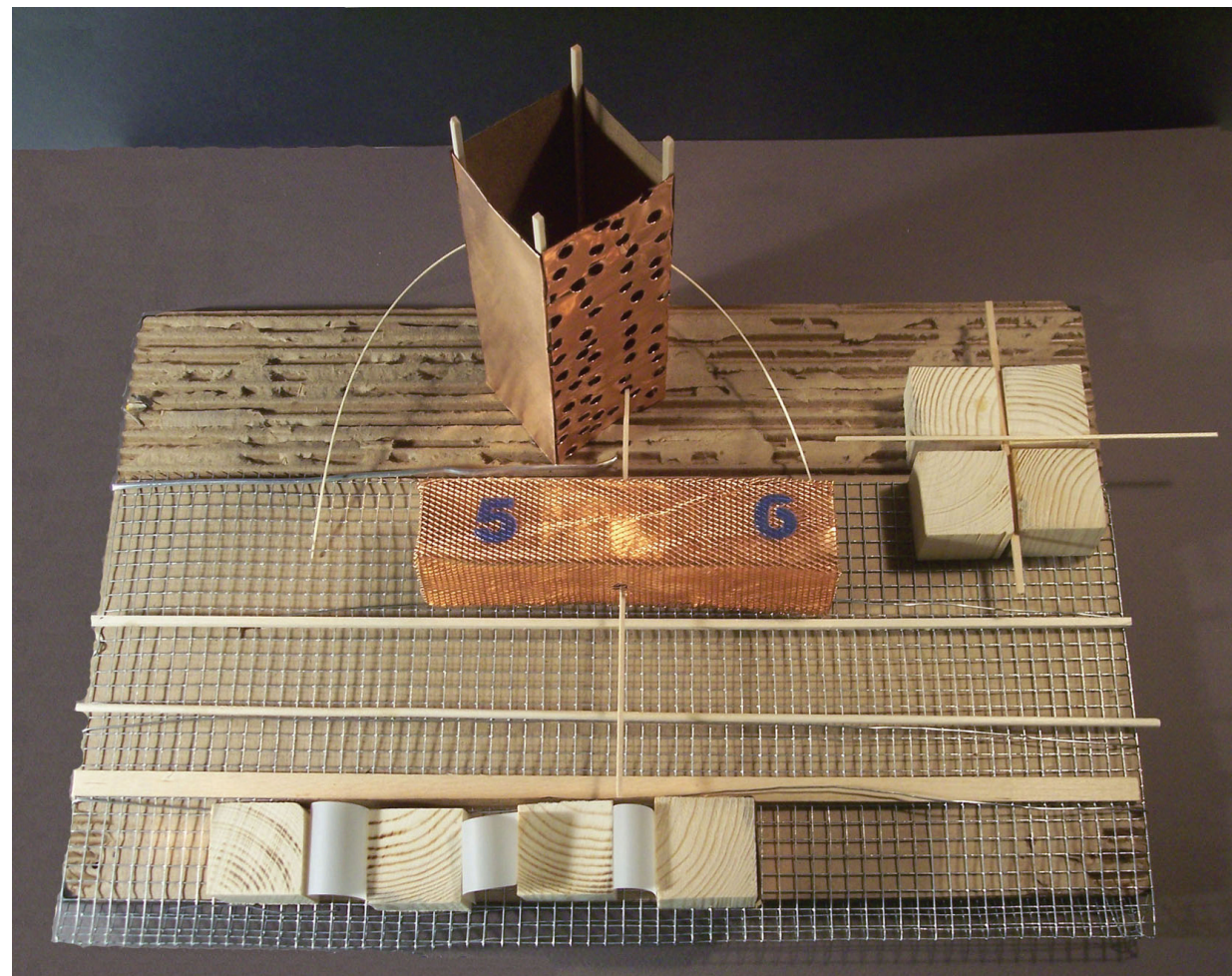
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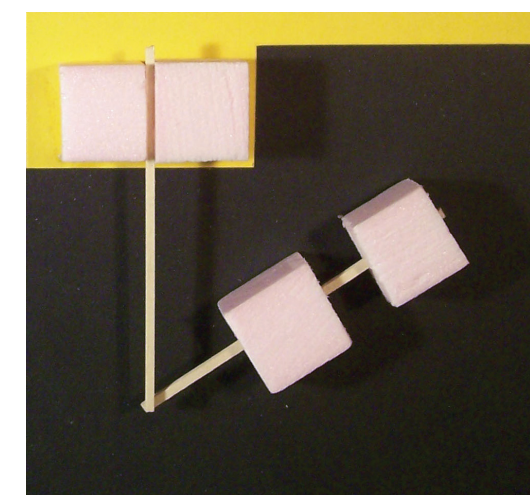
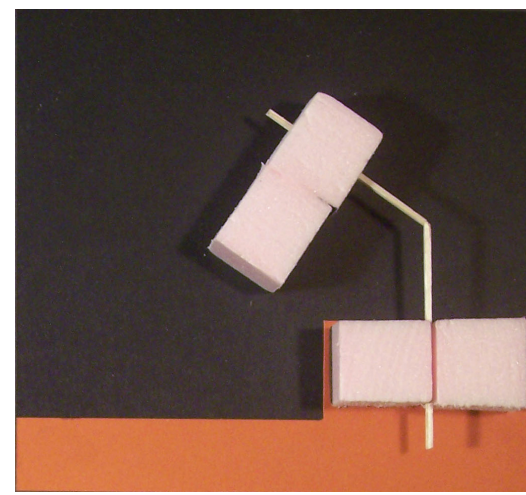
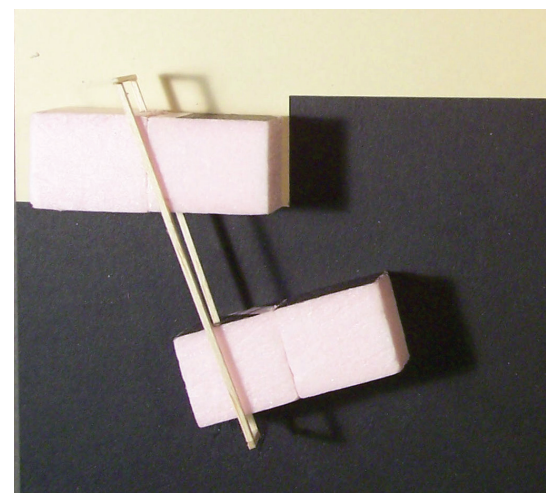
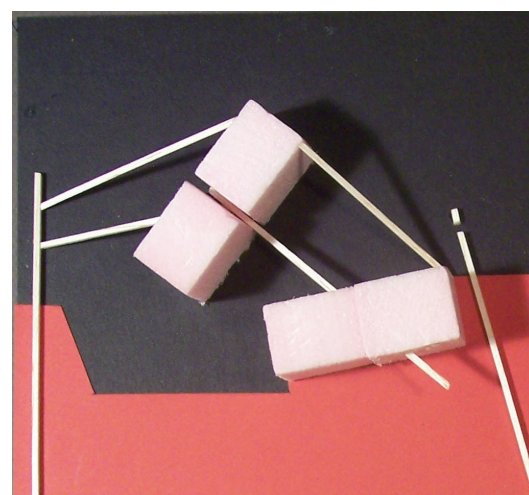
Located on the Southwest Waterfront in Washington, DC, the proposed site lies adjacent to the Maine Avenue Fish Market and between I-395 and the Potomac River. The Southwest Waterfront is a residential neighborhood that is home to the Arena Stage, the Washington Marina, and Hains Point and sits below the L'Enfant Plaza. The site is ideal for numerous reasons: 1) it is easy accessible from many directions as many streets and the I-395 off-ramp feed directly into it; 2) it lies on the DC Channel, making it a destination point for water traffic; 3) due to the popularity of the Fish Market and numerous restaurants, it already draws in many visitors; and 4) the Waterfront is devoid of a significant cultural building. The DCWA aims to revitalize this section of Washington, DC by bringing a new energy and crowd to the Waterfront.

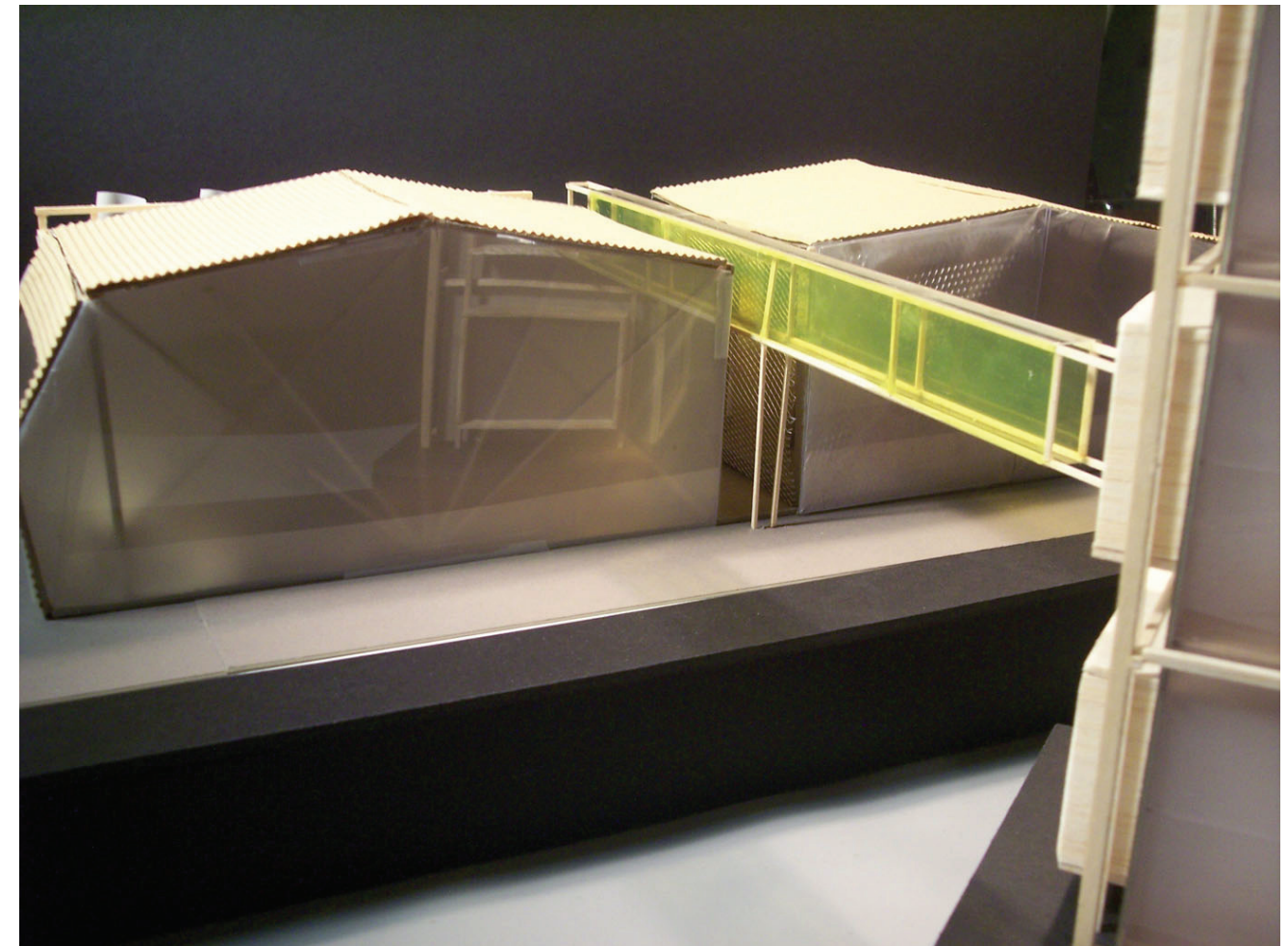


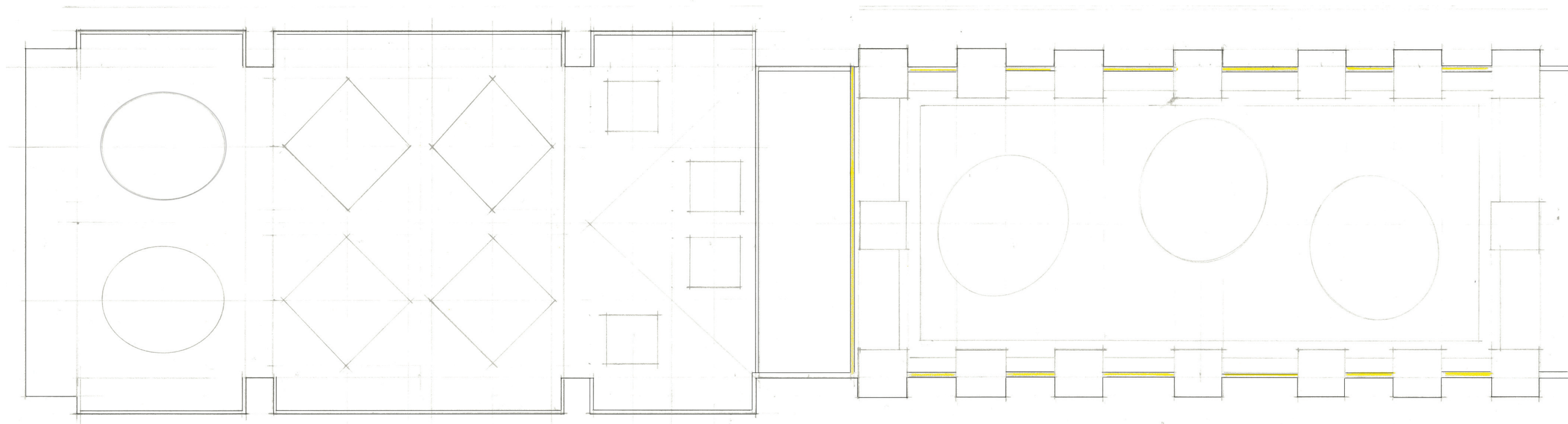
Site



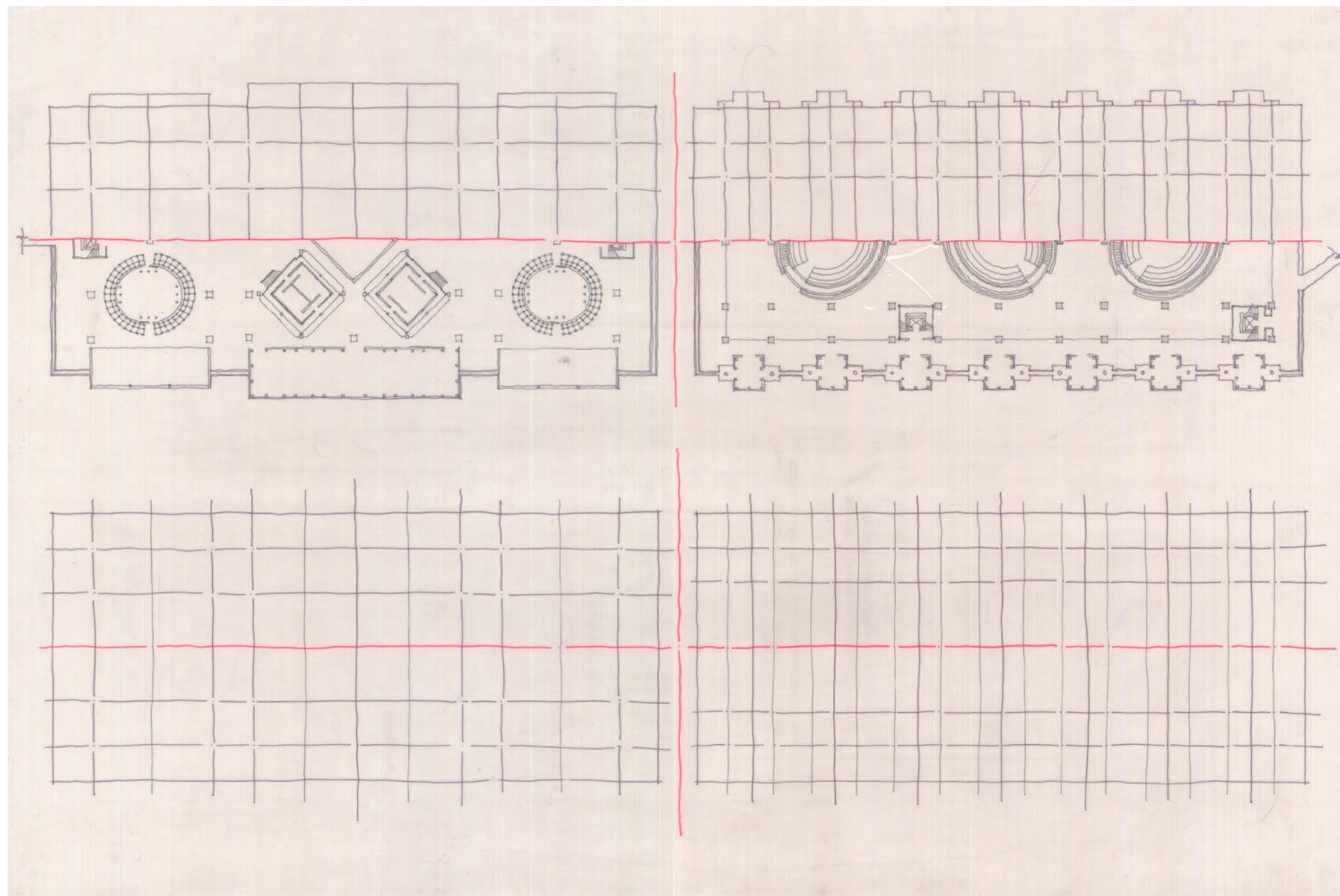
The initial conceptual models illustrate the attempt to link land and water. The design began with a form on the waterfront and a form rising from the DC Channel, allowing for a variety of ways to connect them.



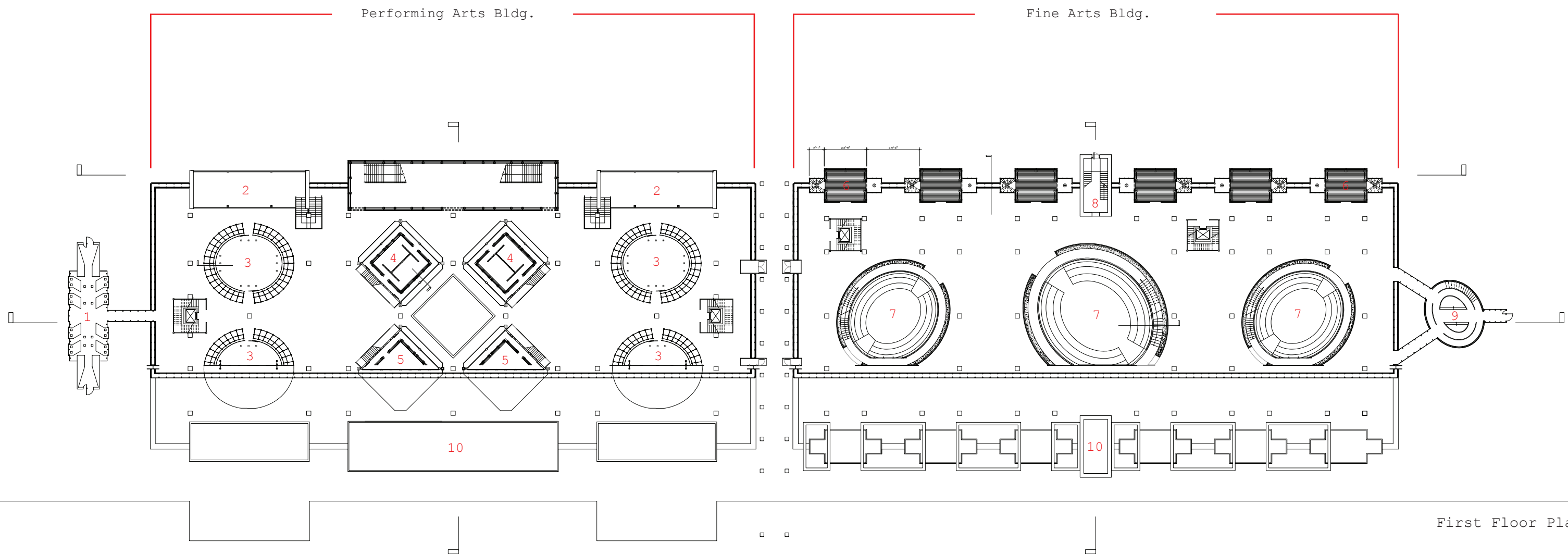




The final design began with a diagram-sketch that aimed to derive form by following rules of symmetry and folding planes. Inspired by warehouse-type buildings, this sketch portrays an outer shell with free-standing forms as well as forms that pierce the shell. The result of these forms gave rise to the notion of ample amount of "in-between" space, allowing for alternate zones of interaction. By not allowing the program to dictate the plan, this sketch afforded the design to become engaged with the idea of emptiness, and as quoted previously by Michael Benedikt, "[w]e become engaged with the intervals and open ends." Furthermore, as the project progressed it became an exercise of focusing on the basic architectural components: structure, scale, proportion, material, and light.



The DCWA is intended to serve all of the arts: fine arts, music, dance, video, and theater. The goal of the complex is to make the arts available to a larger population, while, at the same time, allowing those already immersed in an art to thrive in an energetic and interactive environment. Each art occupies a specific space with the leftover space acting as areas for interaction, performance, and exhibition. Following the traditional atelier model, there are private studios available for artists as well as larger public studios designated for classes.

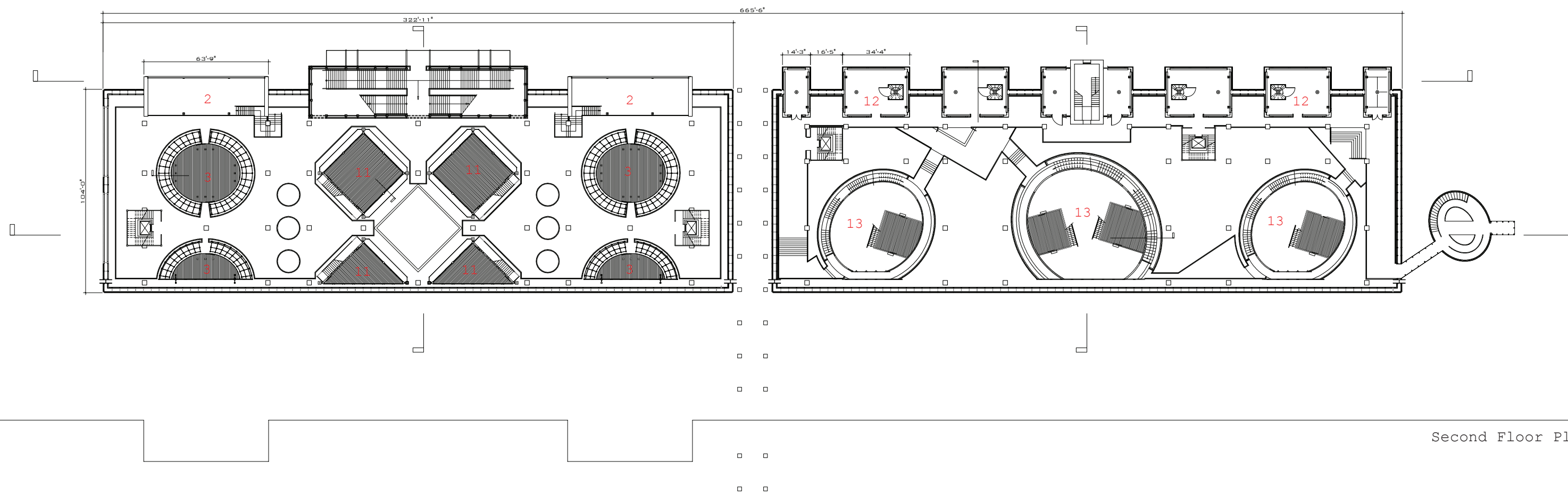


First Floor Plan

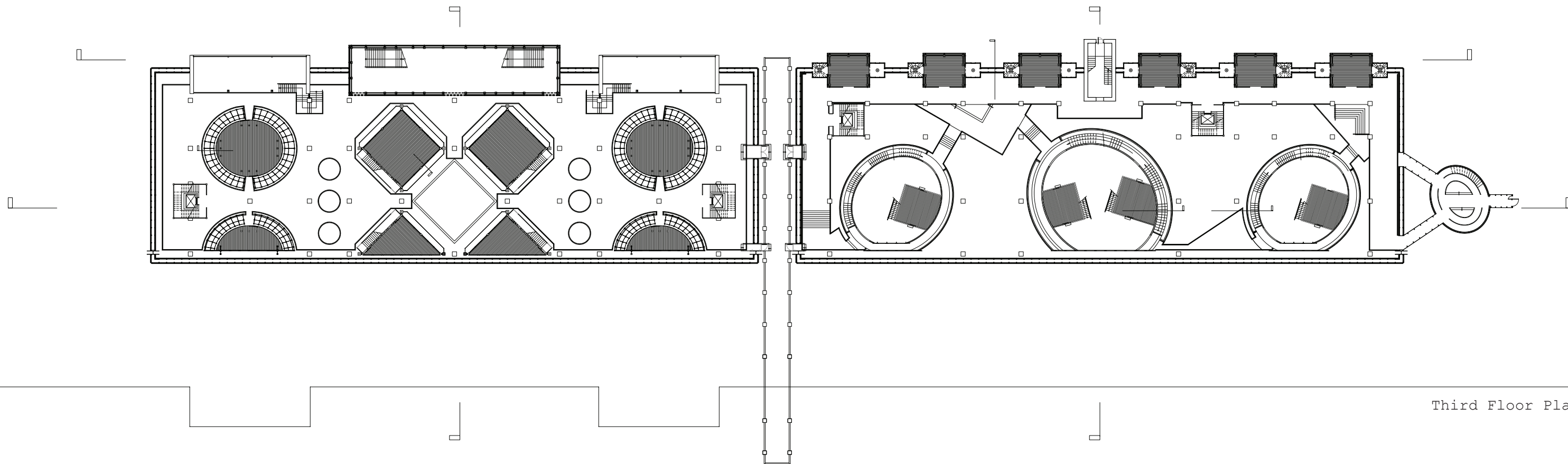
- 1. Performing Arts Entrance
- 2. Performance Stage
- 3. Music Space
- 4. Locker Room/Training
- 5. Warm-Up Space
- 6. Studio/Atelier Space
- 7. Education/Studio

- 8. Entrance/Stair Tower
- 9. Fine Arts Entrance
- 10. Riverwalk/Exterior
Performance Space
- 11. Dance Space
- 12. Gallery
- 13. Education/Studio

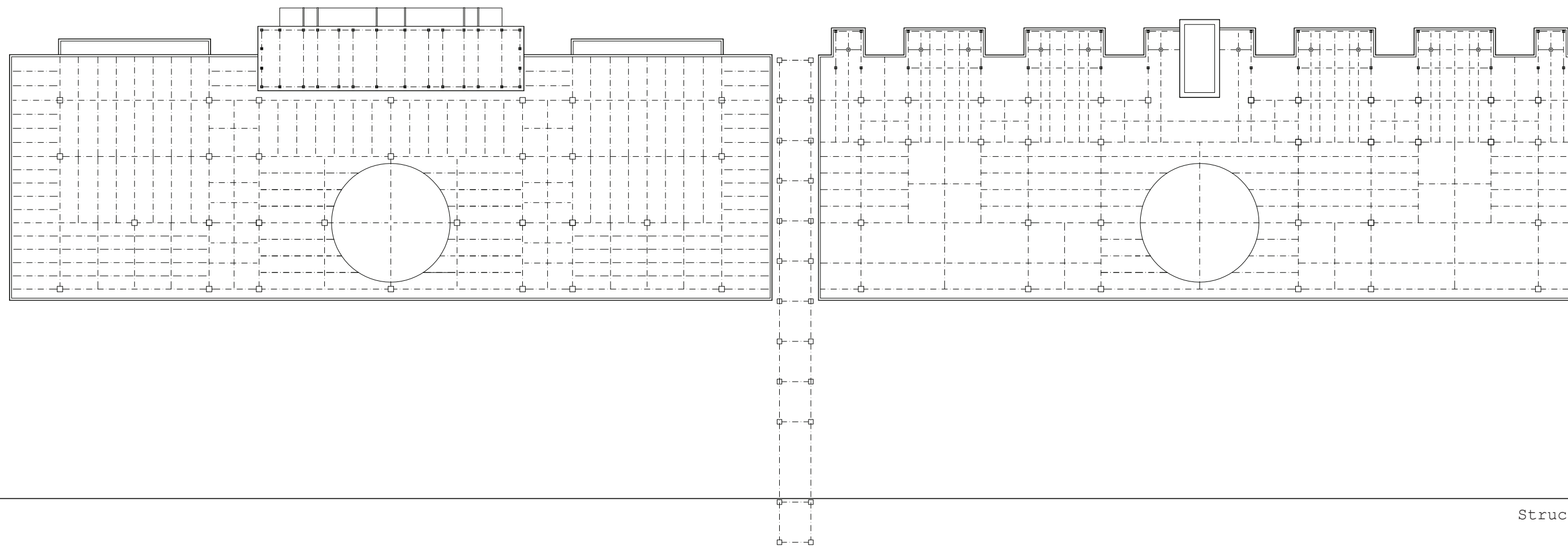
Once the plan was derived, the symmetry of the grid was broken in order to achieve a building that offered two separate facades: one facing the river and one facing the city. By doing this, a wall of glass facing the riverfront allowed passers-by to witness the interior scenes, almost like an x-ray, as well as the artists to have a connection to the water.



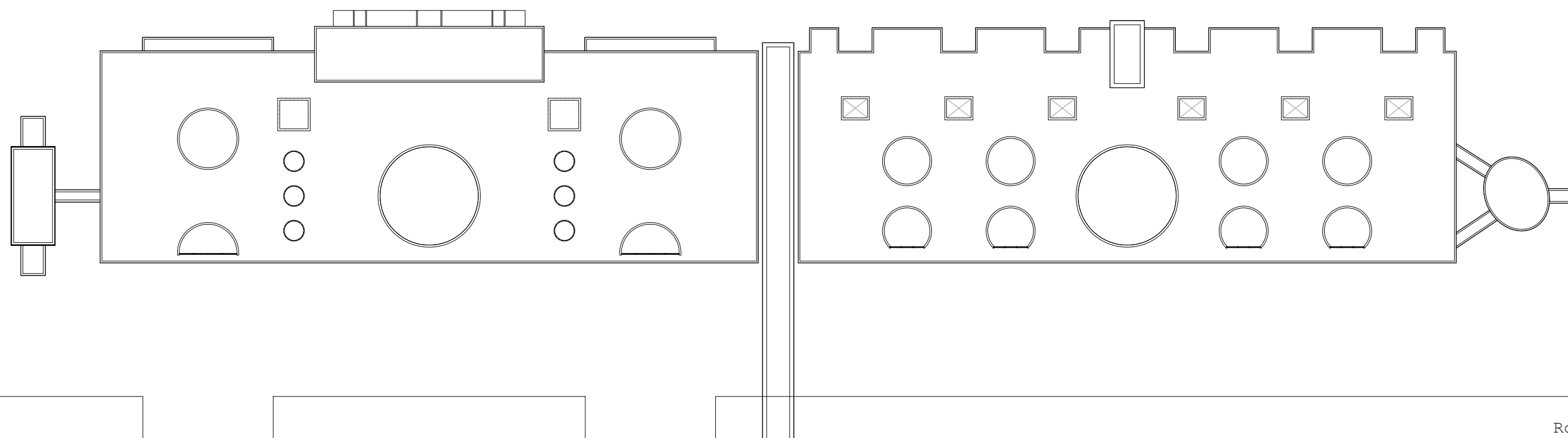
Second Floor Plan



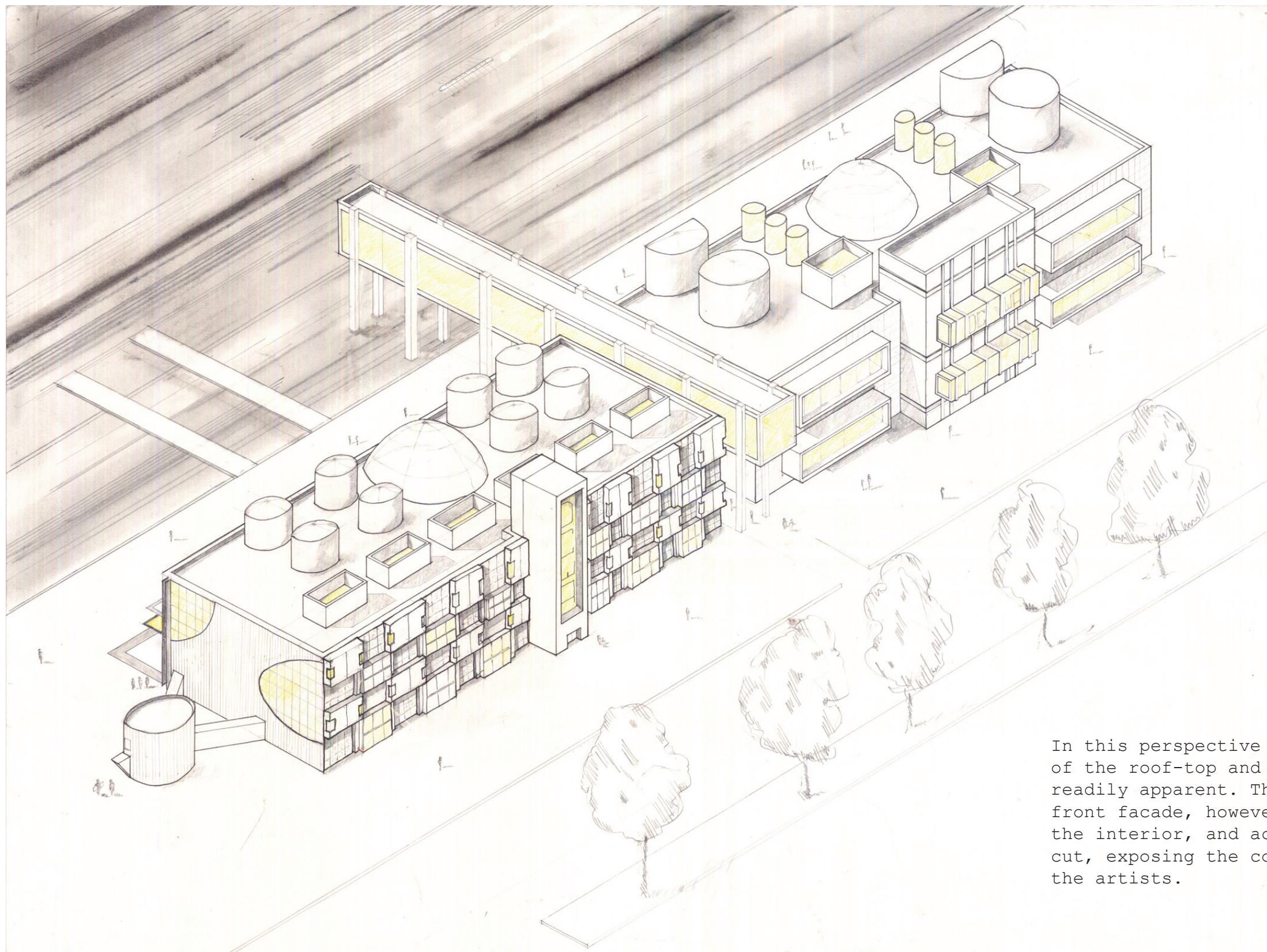
Third Floor Plan



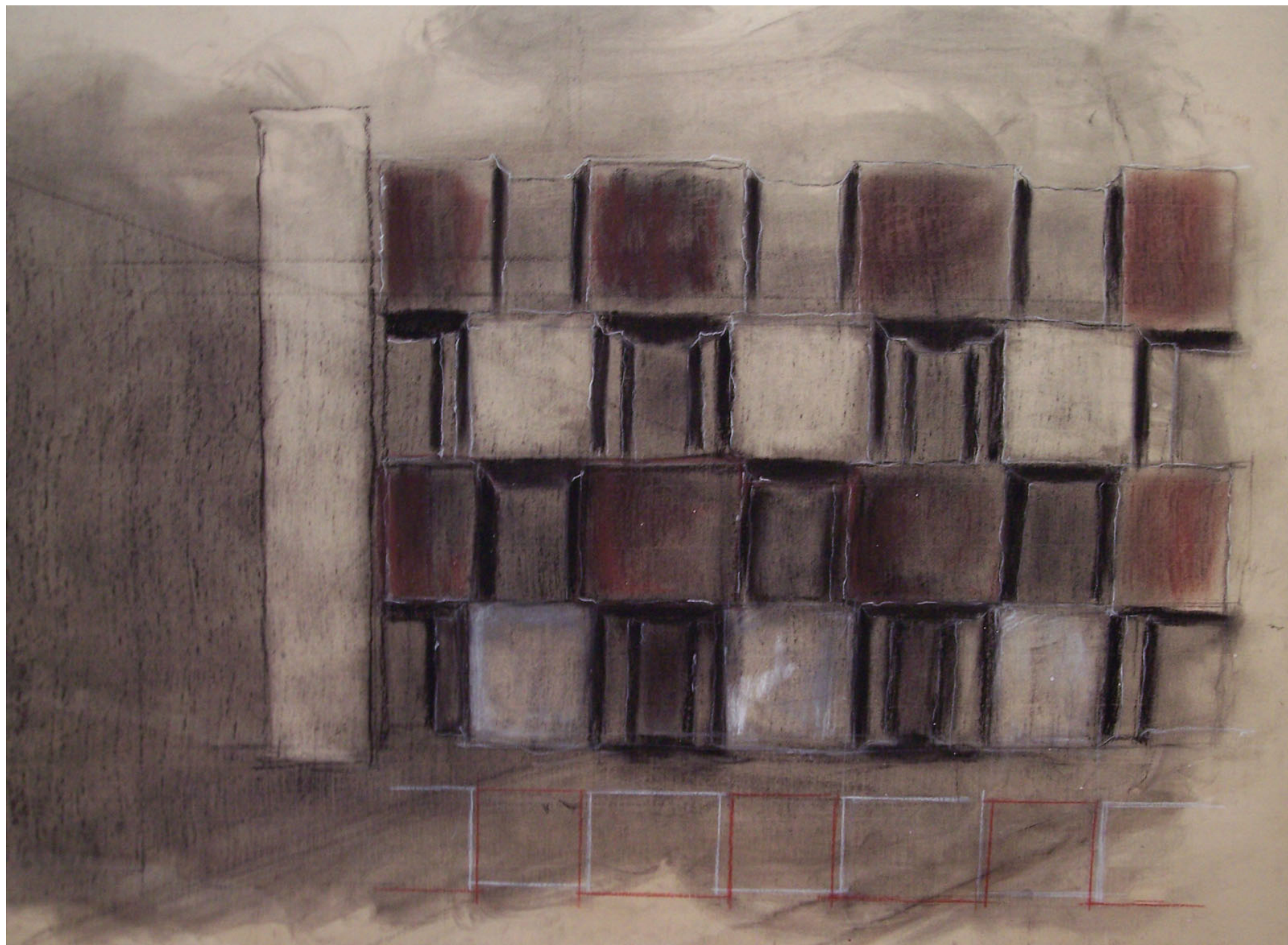
Structural Plan



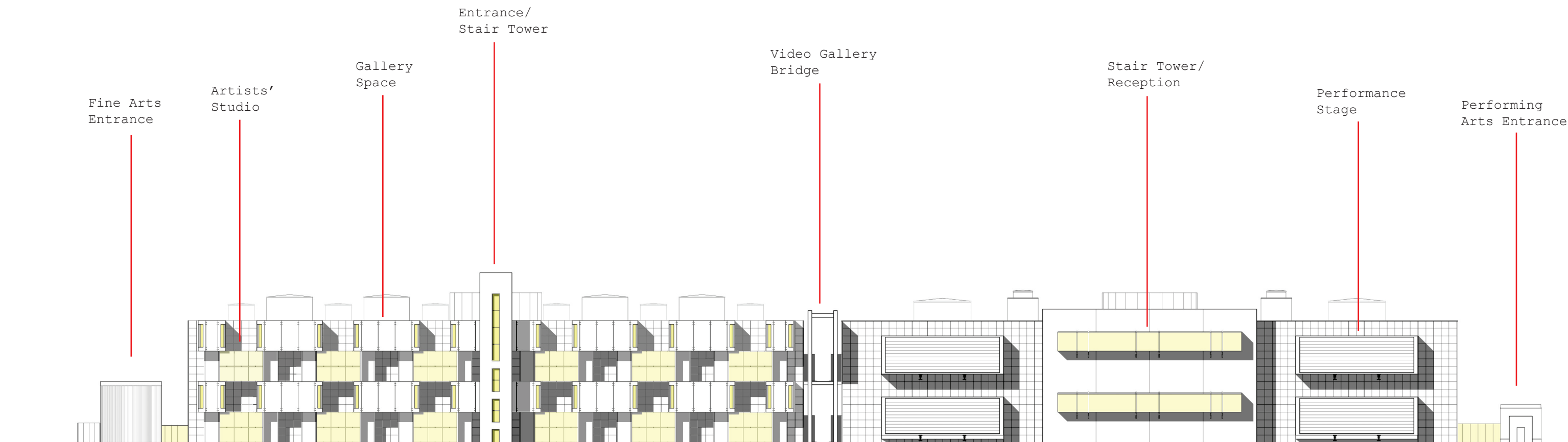
The habitable roof-top plan is an extension of the interior grid. The forms rising from the roof membrane recall water towers common to industrial buildings and urban fabric. For the DCWA, they serve as light-wells, which actually pierce the membrane and are pulled into the interior, resulting in another "elevation." Since they correlate to the interior forms, the light-wells act as spotlights for the activity of the artists.



In this perspective drawing, the prominence of the roof-top and street-facade elements is readily apparent. The glass skin of the waterfront facade, however, offers a full view into the interior, and acts almost like a section cut, exposing the construction and energy of the artists.



The DCWA, by nature of its linearity, addresses the city with one elevation and the river with the other. The intention is to offer two different faces--the city-side facade can be thought of as a mask, while the waterfront elevation allows for a complete view into the building. By shifting and overlapping forms which pierce through the "shell" of the building, the street elevation produces a rhythmic effect, which serves as a response to the nature of Washington, DC's urban (downtown) fabric--one that is built up and overlapping, but which has a definite order and rhythm. On the other side, the mammoth glassed wall, pointing away from the city, responds to the water and permits that can only be experienced on foot or on boat.



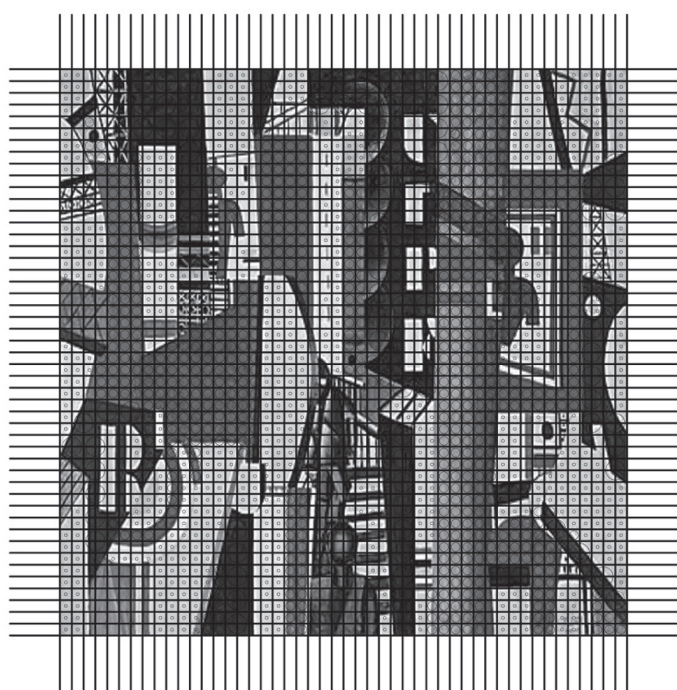
Maine Ave Elevation

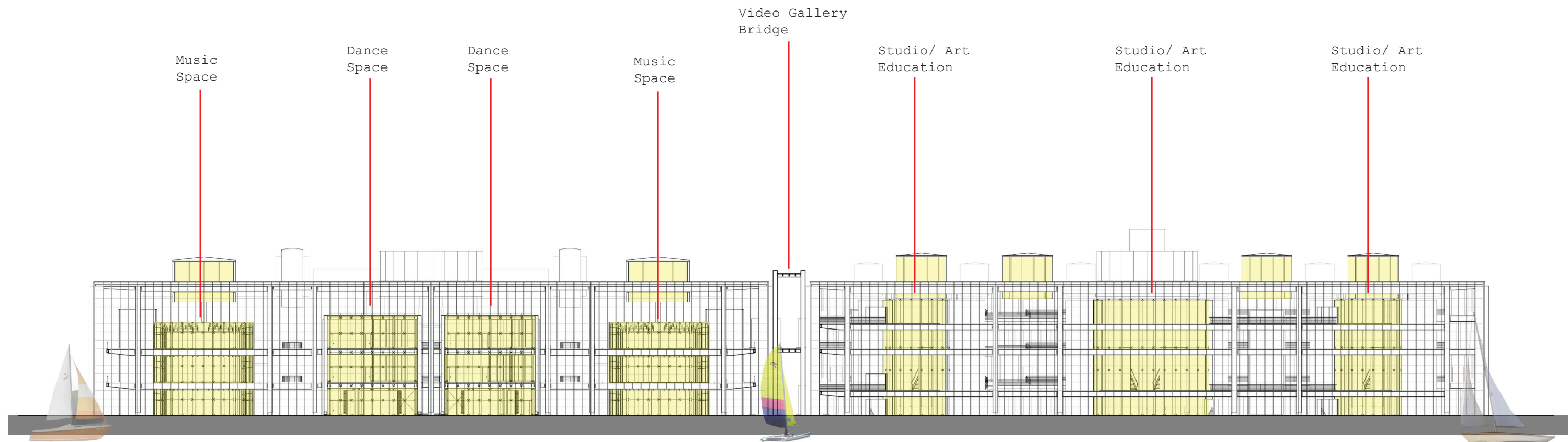


As an attempt to animate the facade, perforated copper panels are designed from the Fernand Leger painting, *The City*, 1919. Upon grayscaling the image, a grid was overlaid and perforation diameters were assigned to the different tones of the painting--using the largest diameter for the darkest tones and smallest diameter for the lightest, and where portions of the painting portray a confusion of positive and negative space, the material remained.

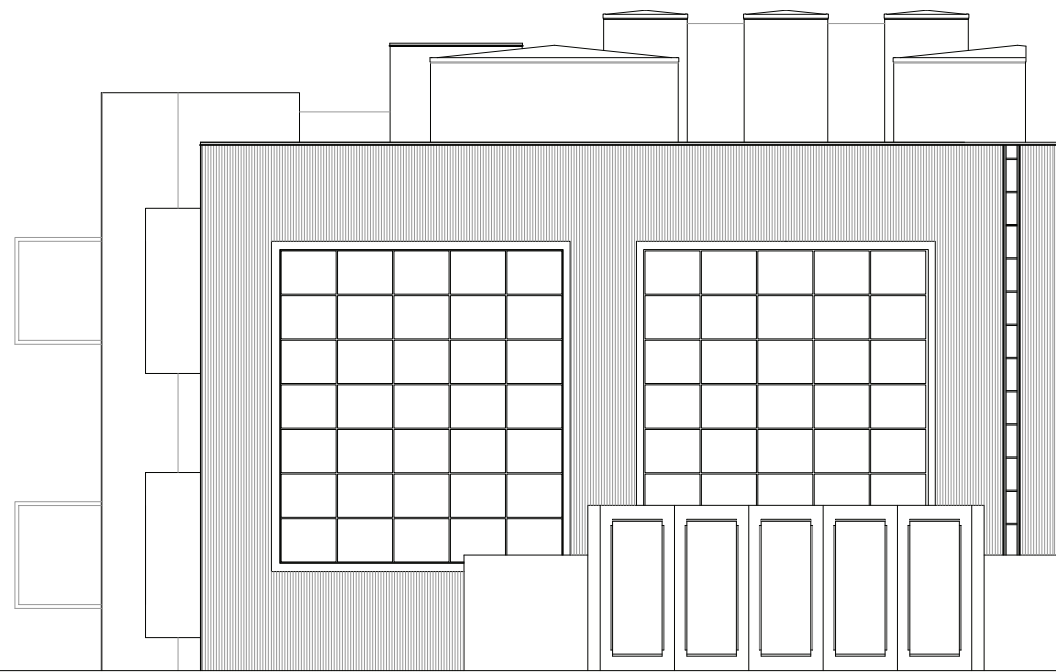
In this work, Leger uses light, color and overlapping planes to represent the new and modern city that was beginning to emerge in the 20th century. He makes the planes appear as if they are coming at you in fragments, much like a city seems to the people in it. There are never clear and defined pictures in the city, rather the people see only fragments of what is passing by or what surrounds them.

The layering effects of the painting mirror the layering effects of the building which results in fragmented views of the interior spaces and urban surroundings.

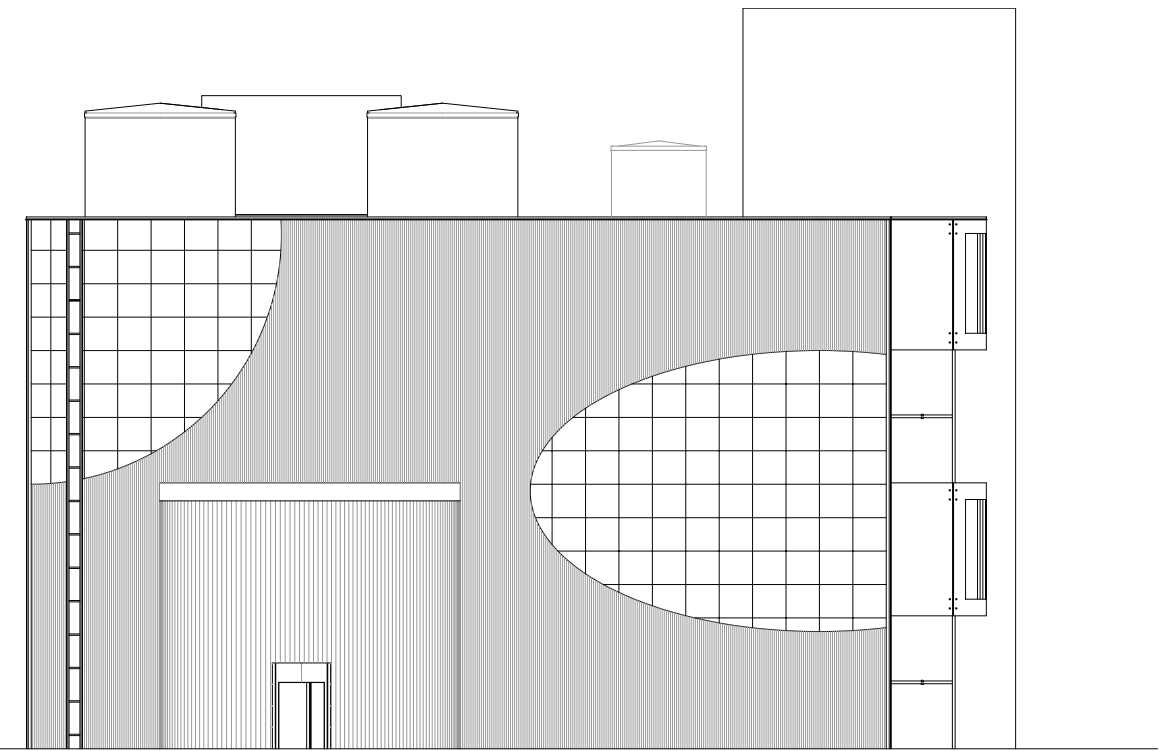




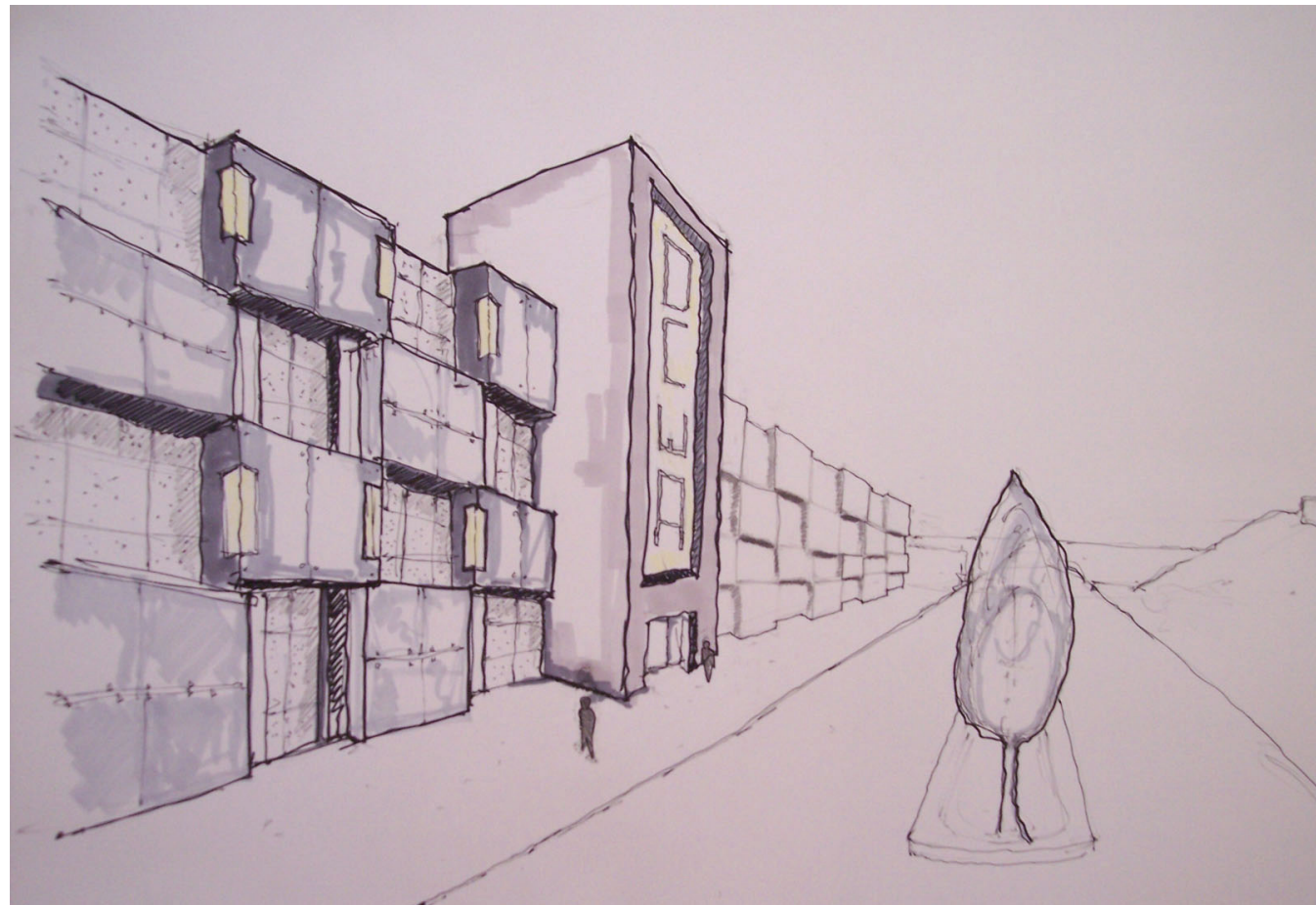
DC Channel Elevation



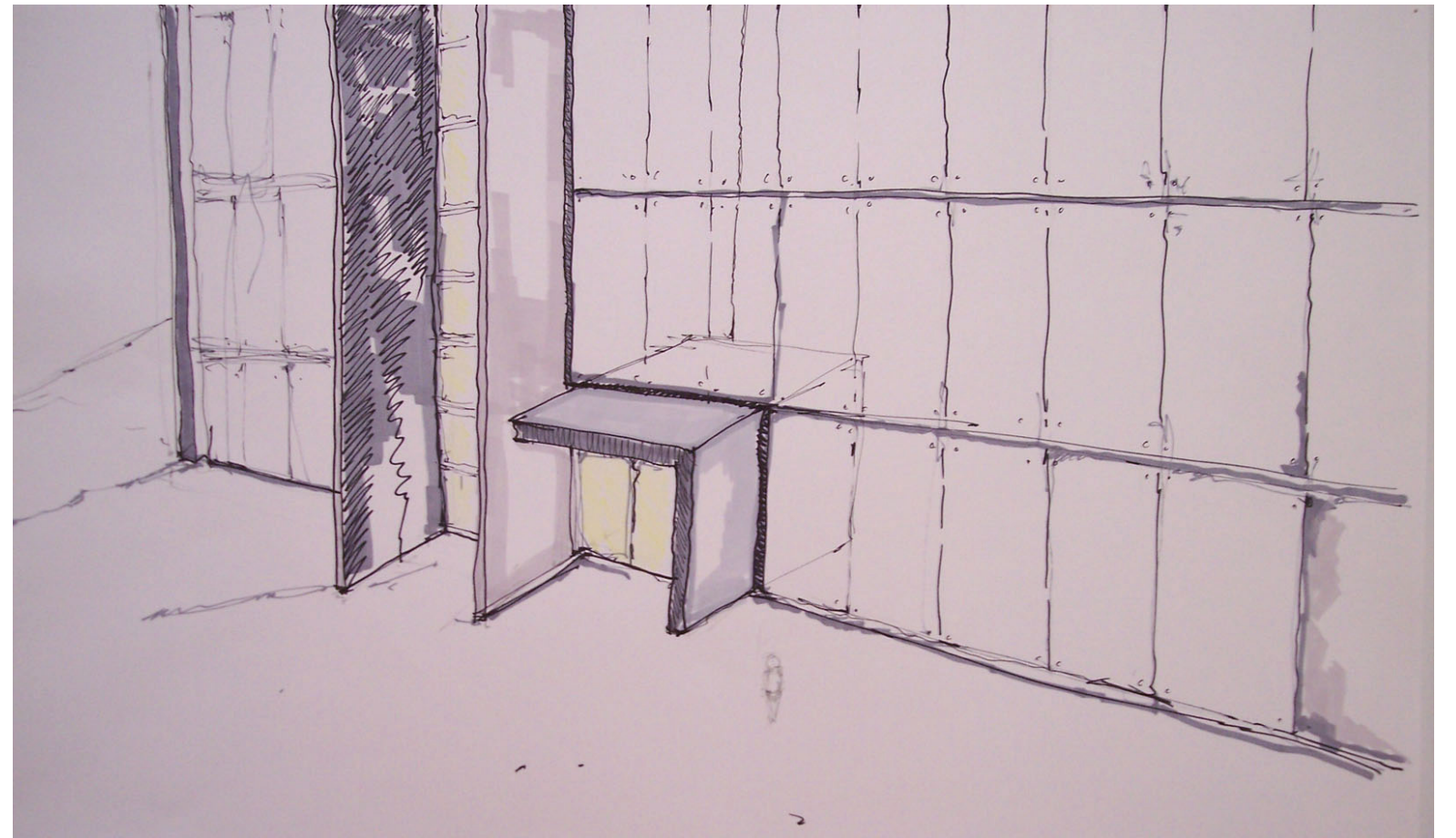
Performing Arts Elevation



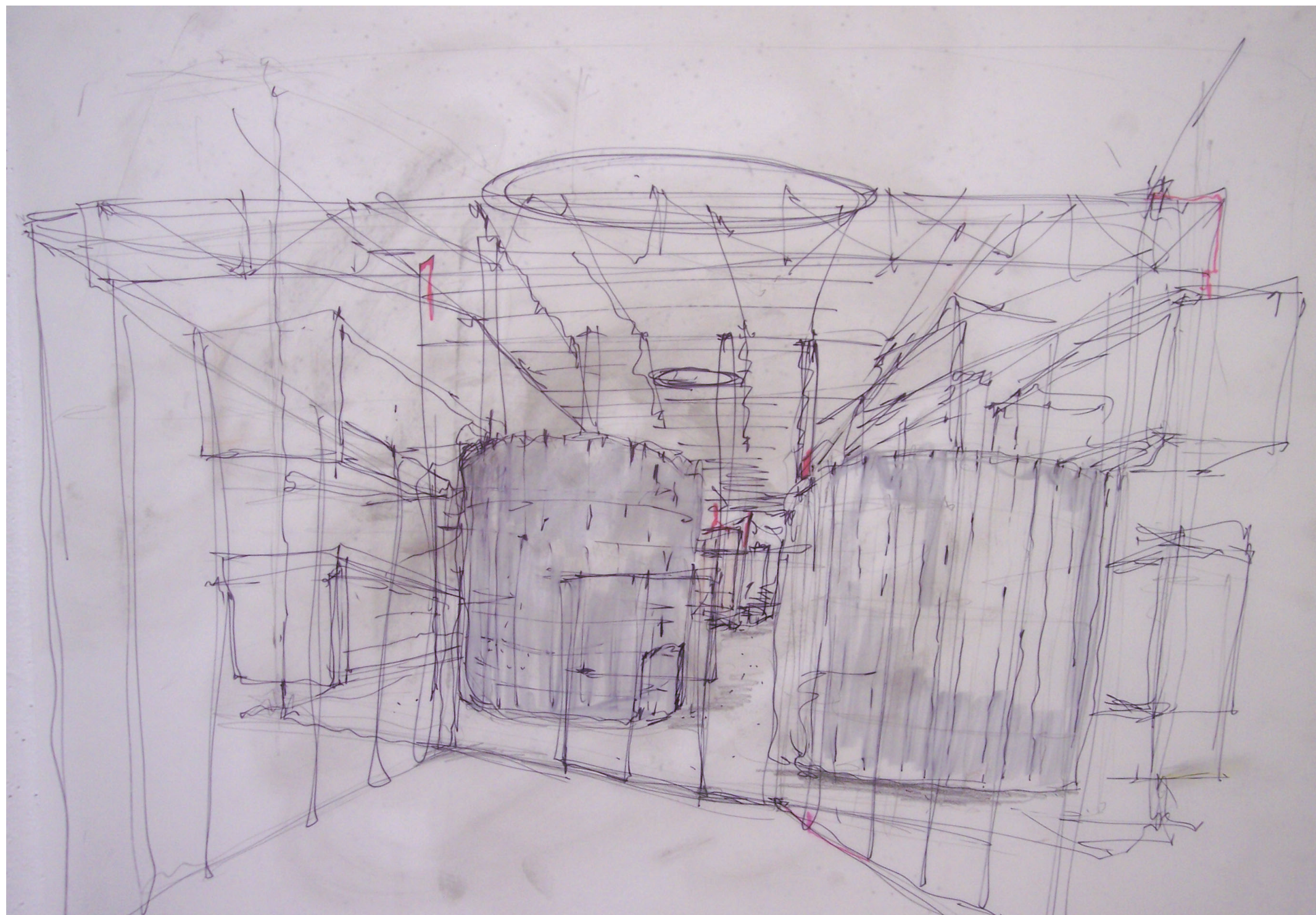
Fine Arts Elevation



Building Perspective



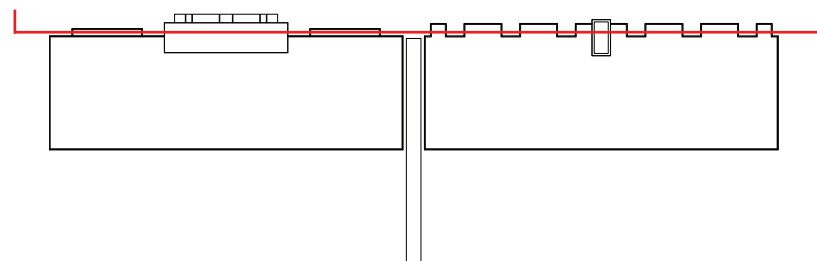
Middle Entrance Sketch

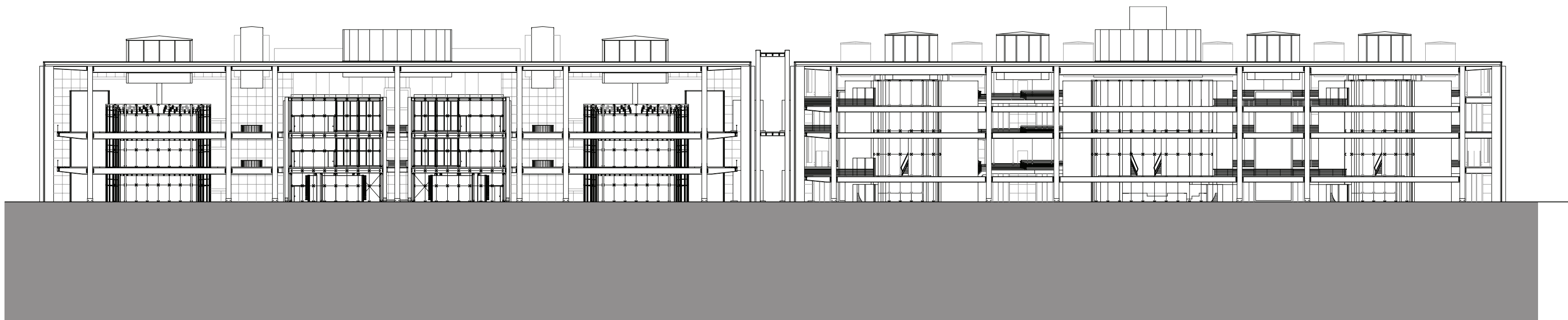


Interior Perspective Sketch

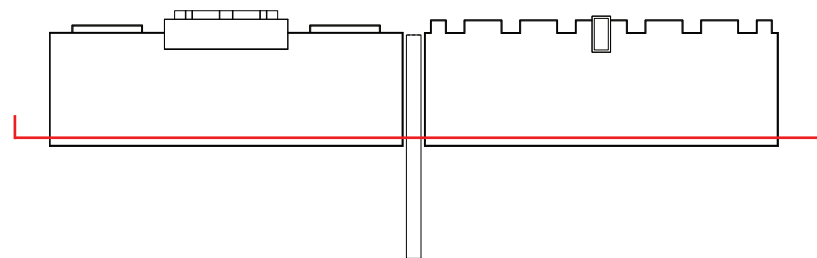


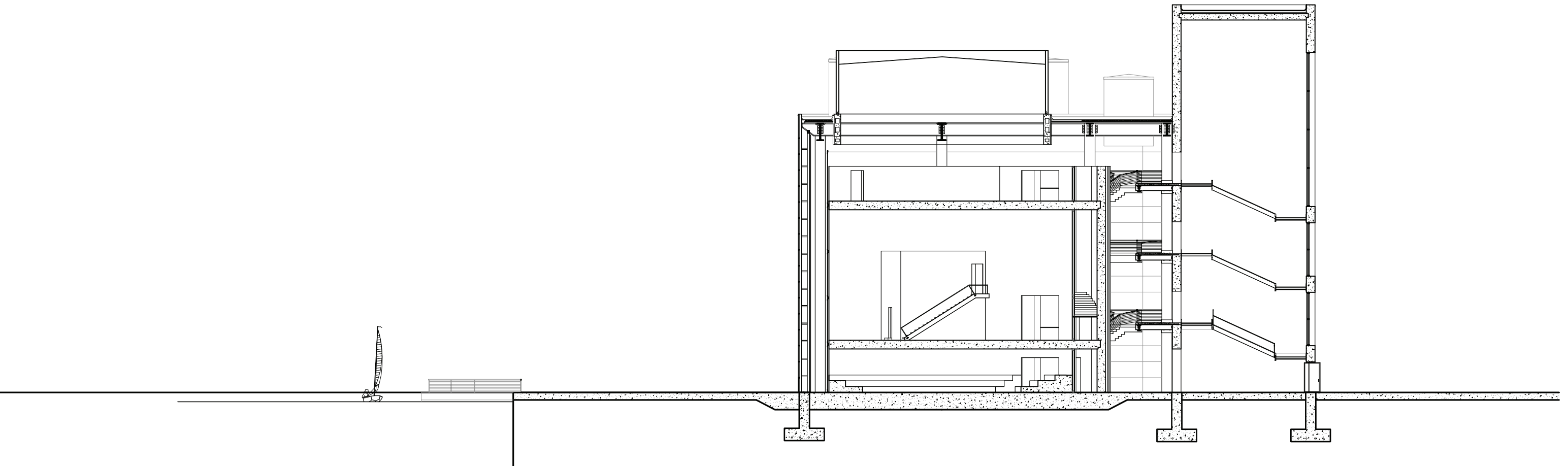
Longitudinal Section



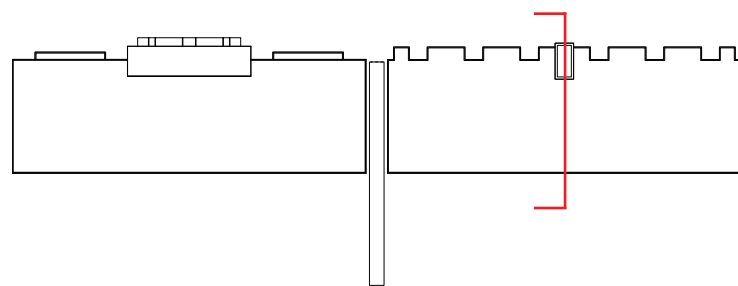


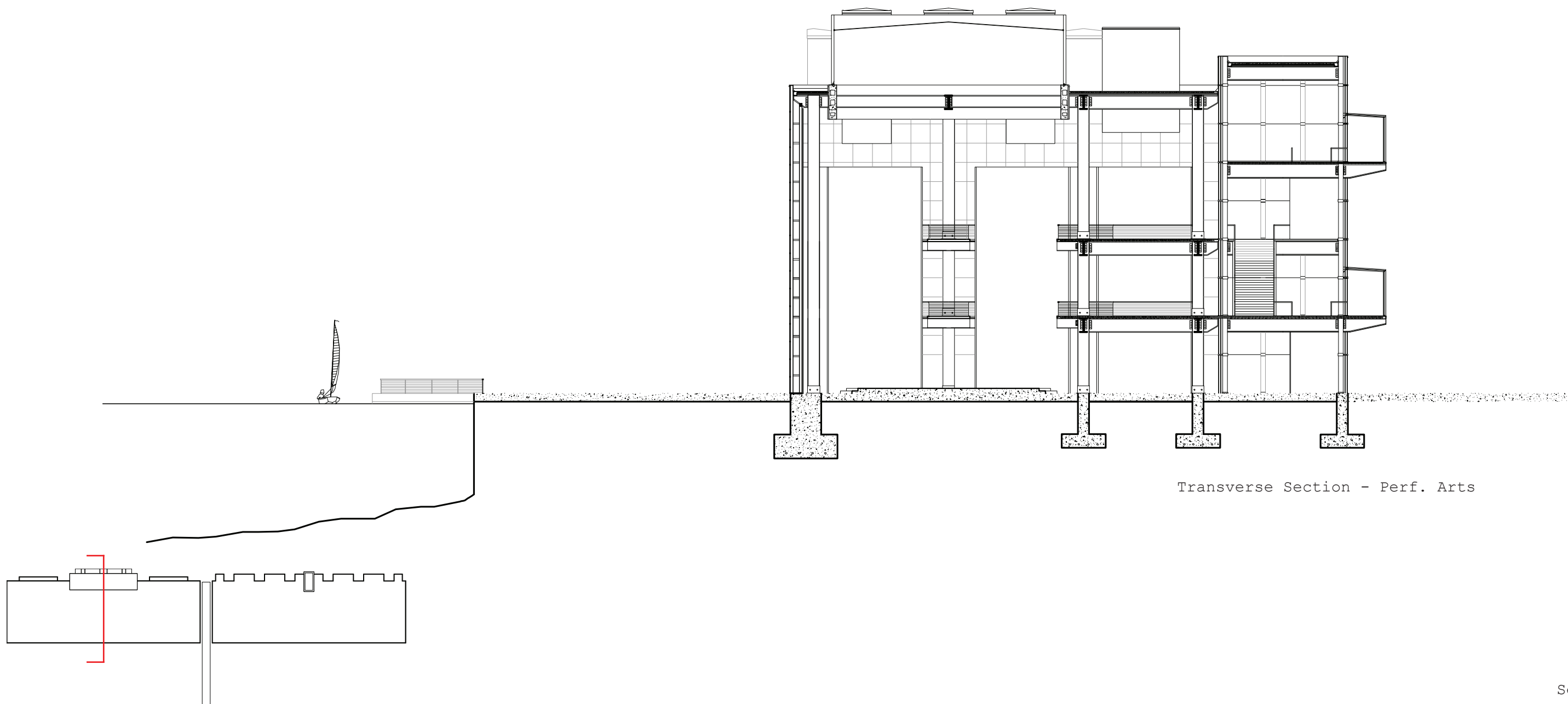
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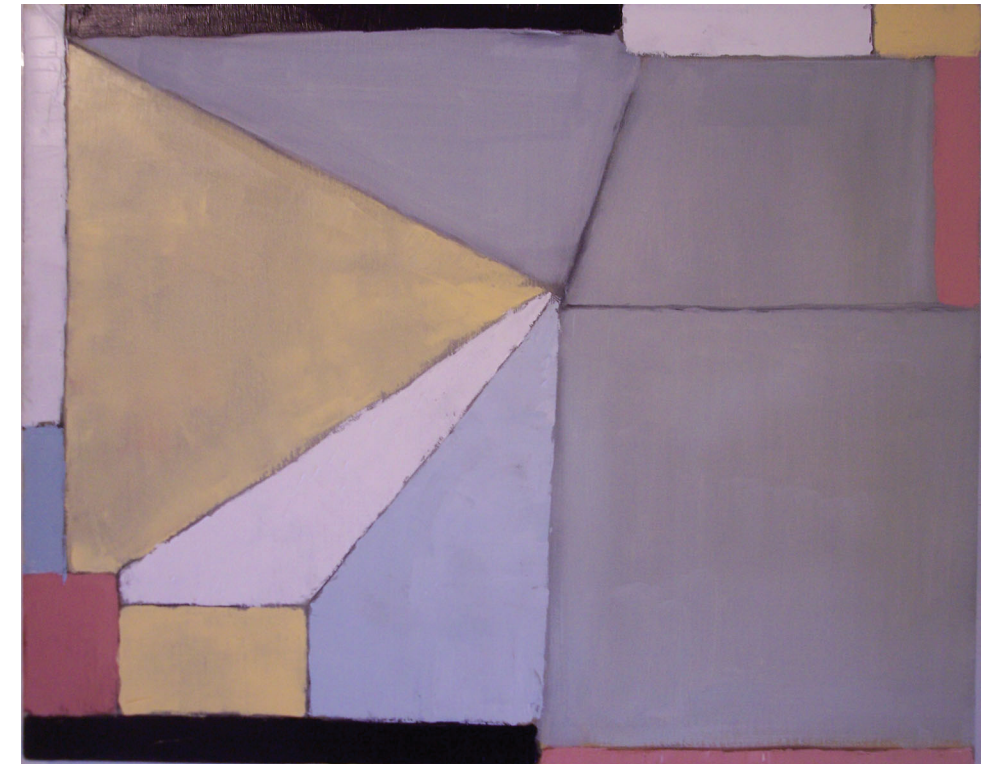
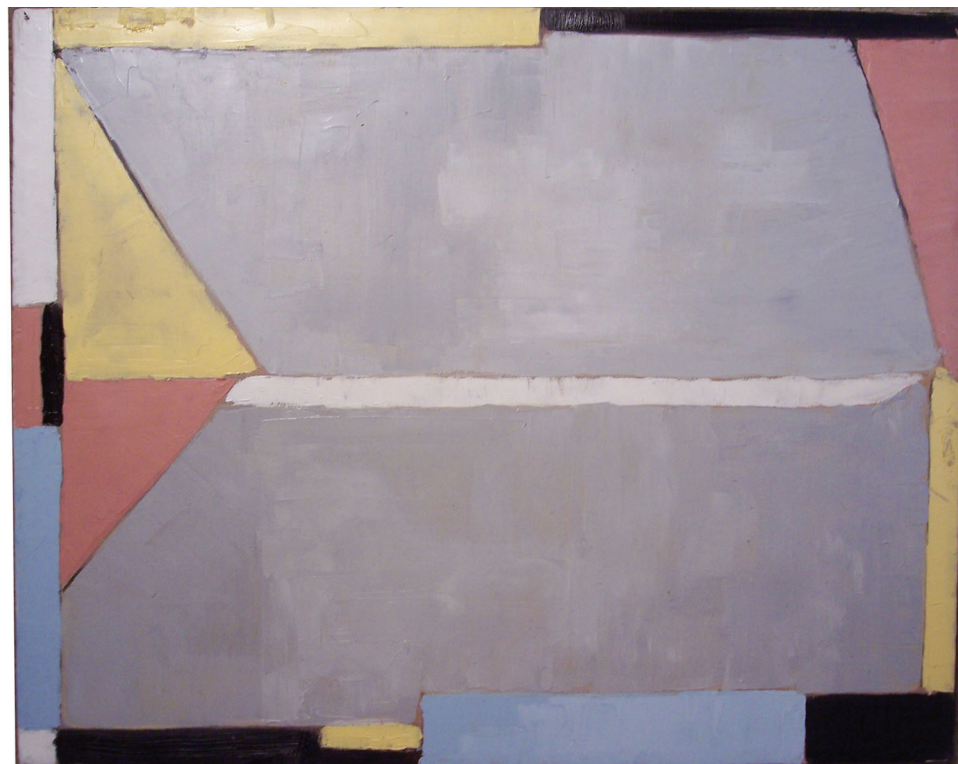


Transverse Section - Fine Arts

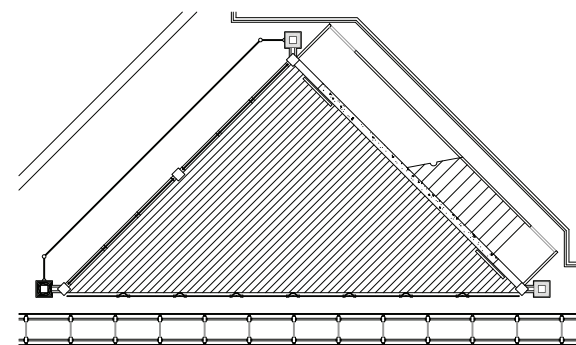
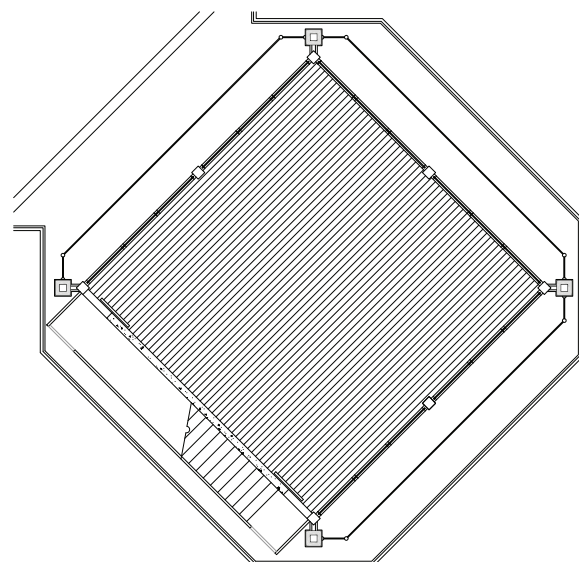
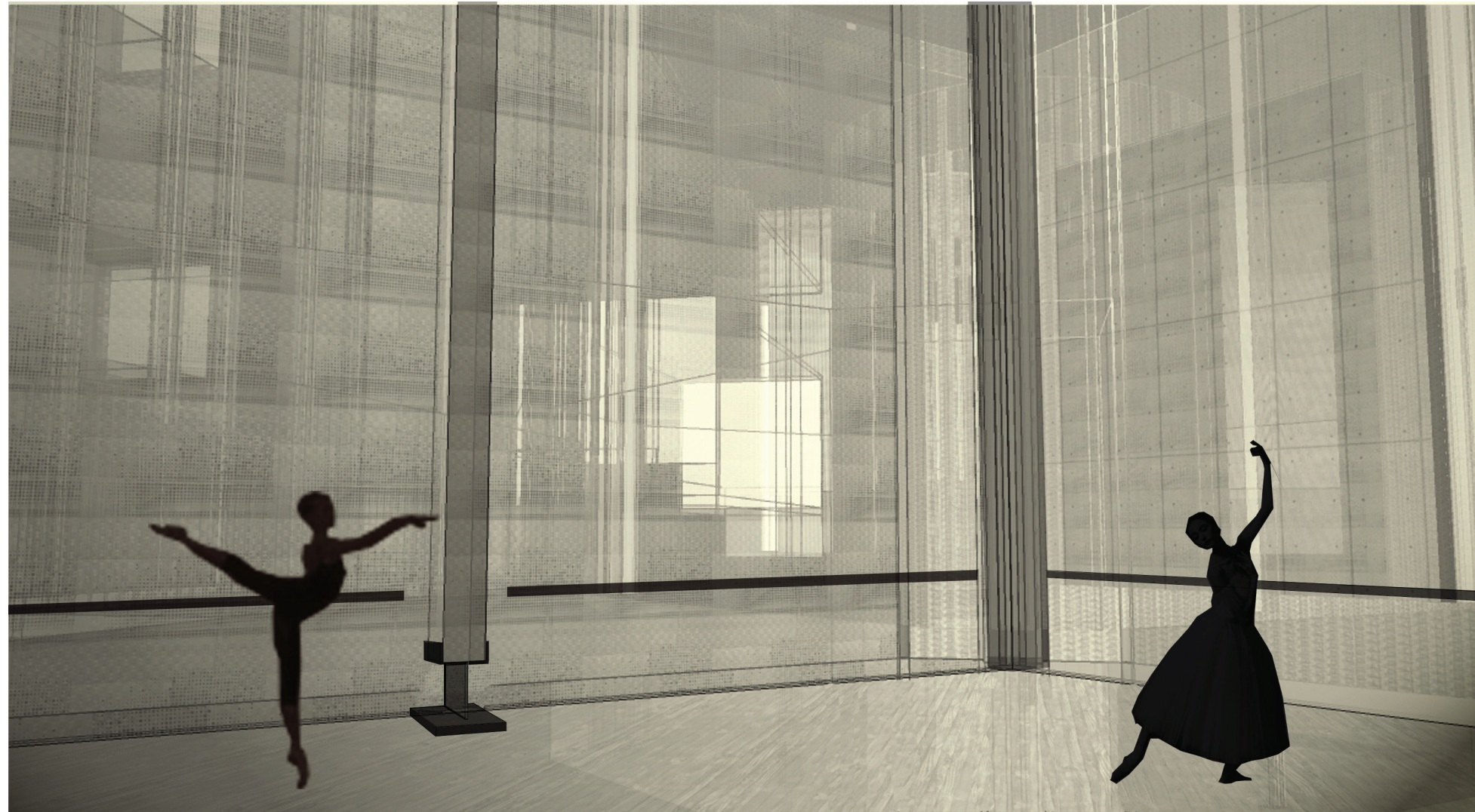




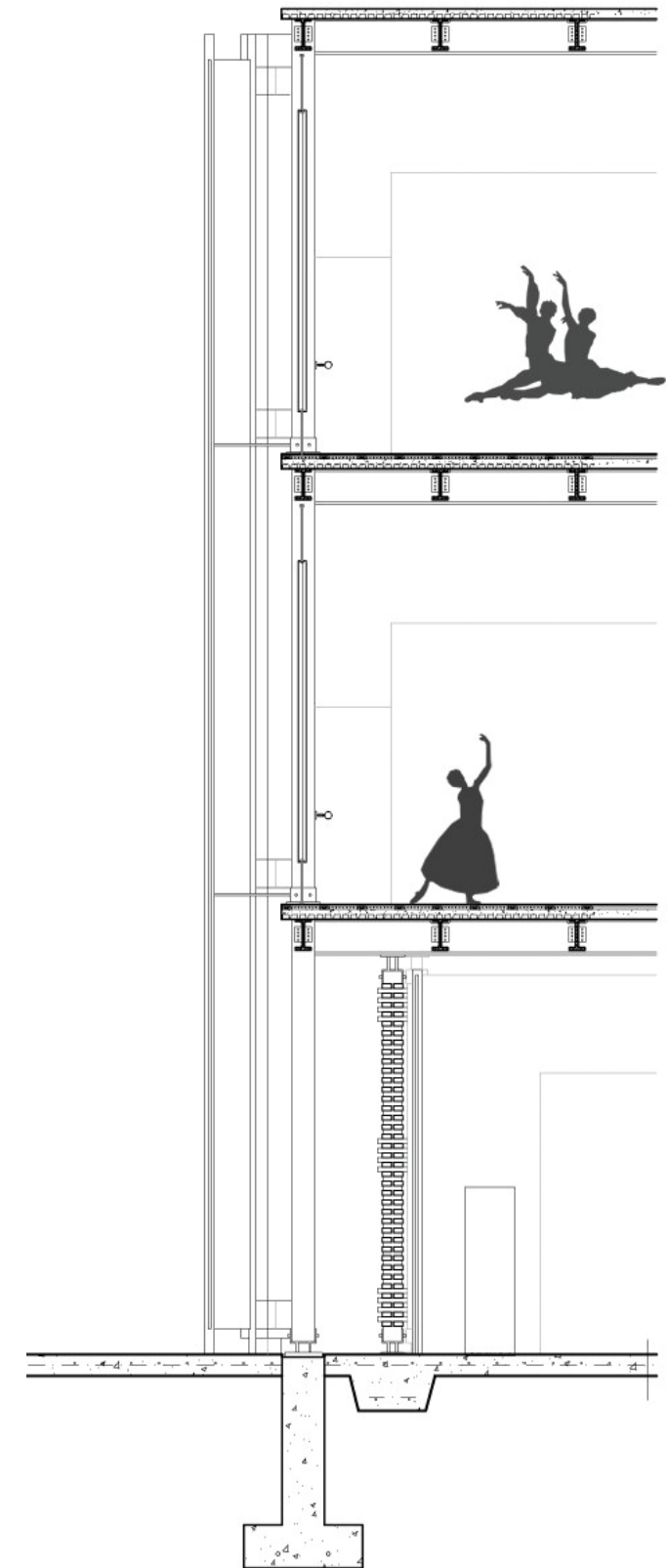
Transverse Section - Perf. Arts



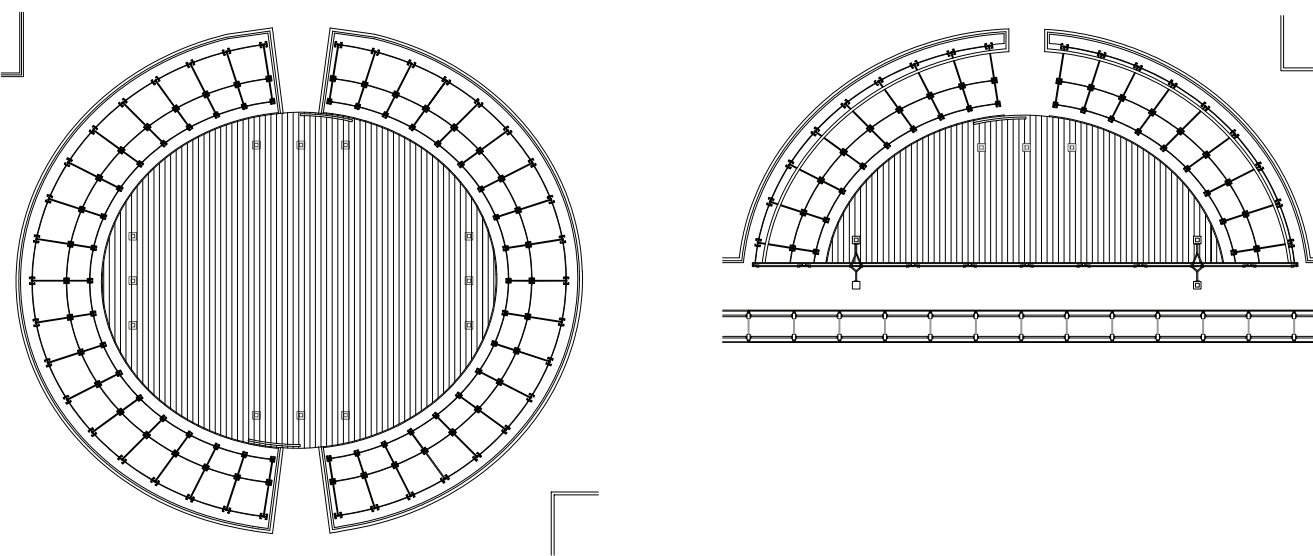
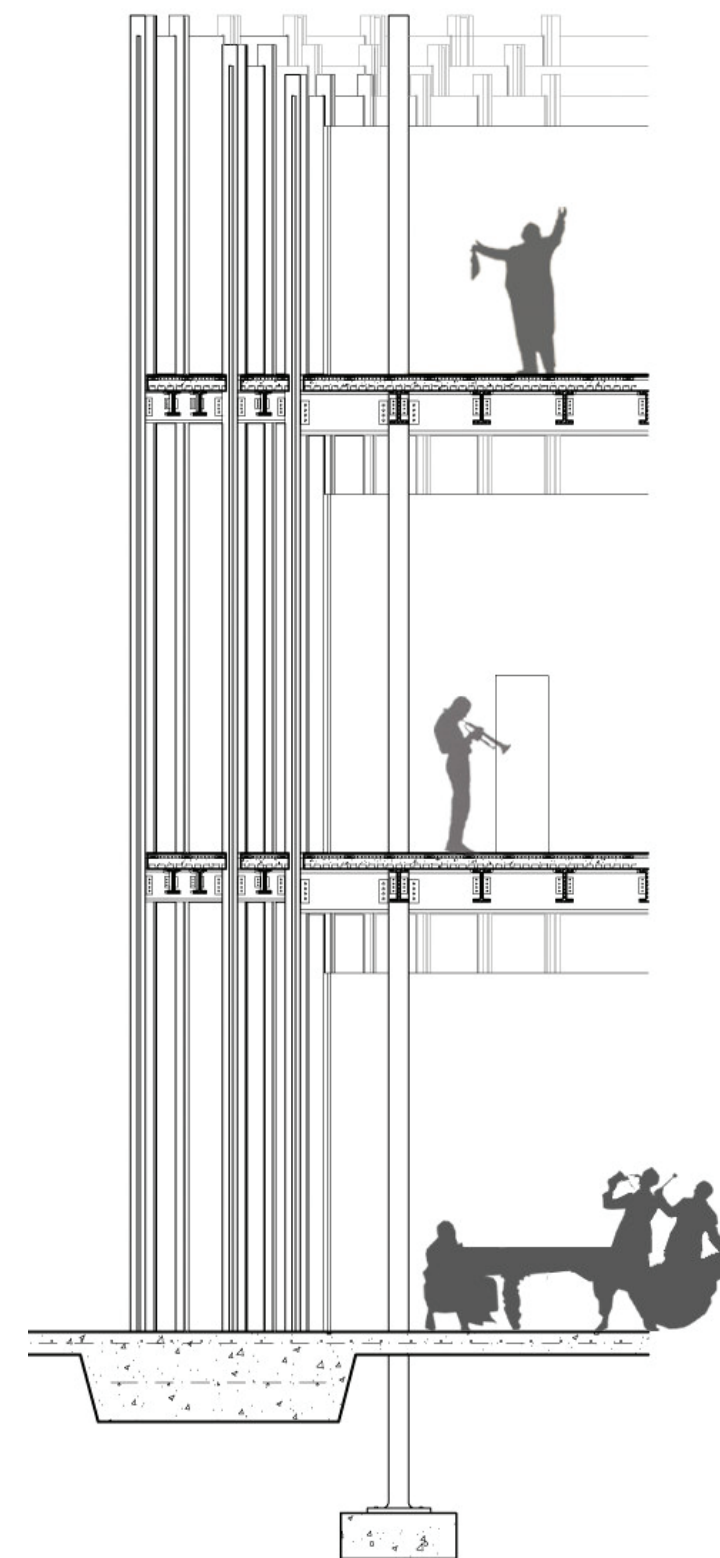
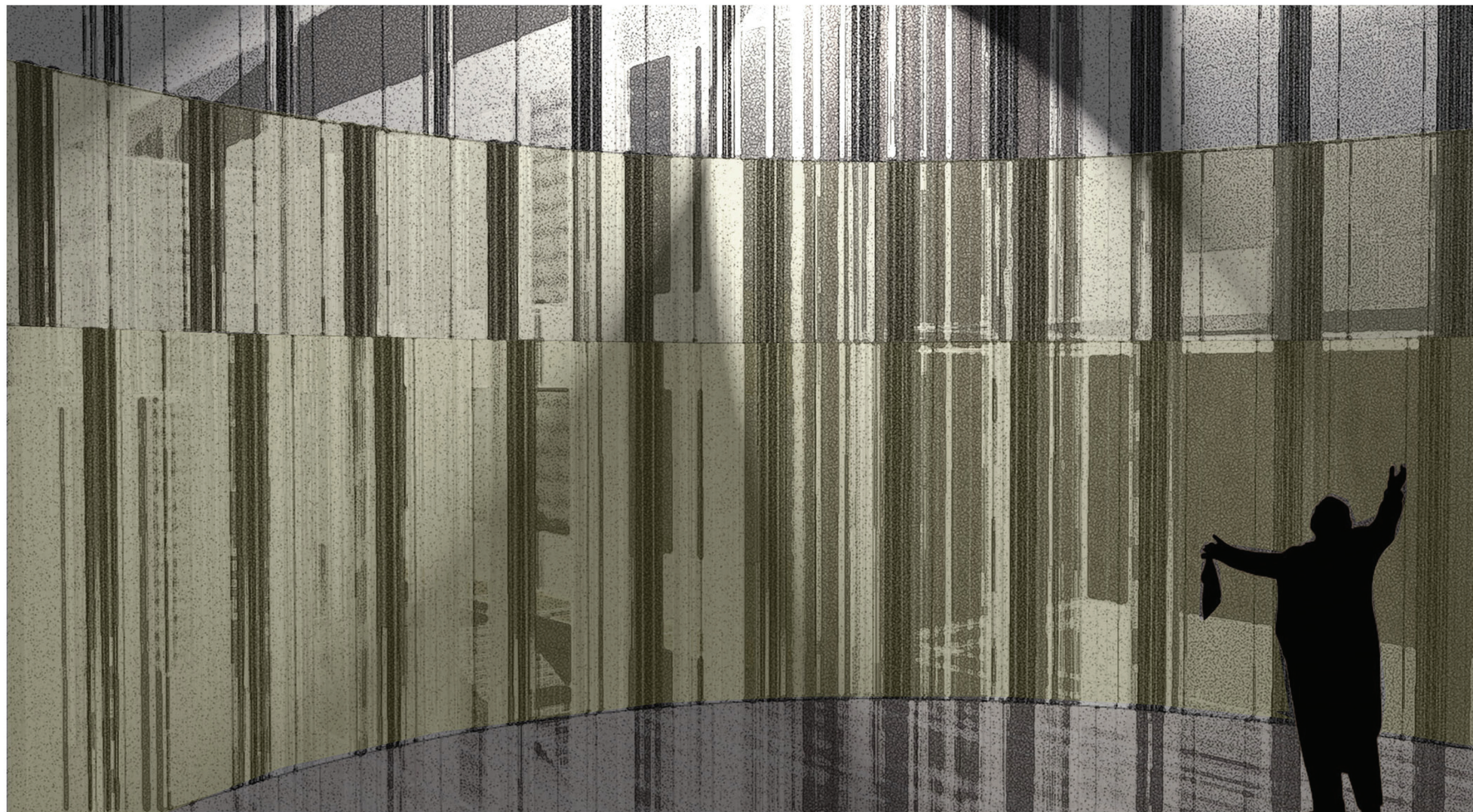
That the plan follows a grid system and rules of symmetry does not mean that a person inside of the building will perceive it that way. Due to the openness of the interior, long perspectives will occur which will be flooded with light and cast in shadow at different intervals. Also, because of the transparency of the interior forms, shapes will appear to overlap and light will play on the materials. This unpredictability led me to paint a series of abstract paintings which try to represent the relationship of light and perspective.



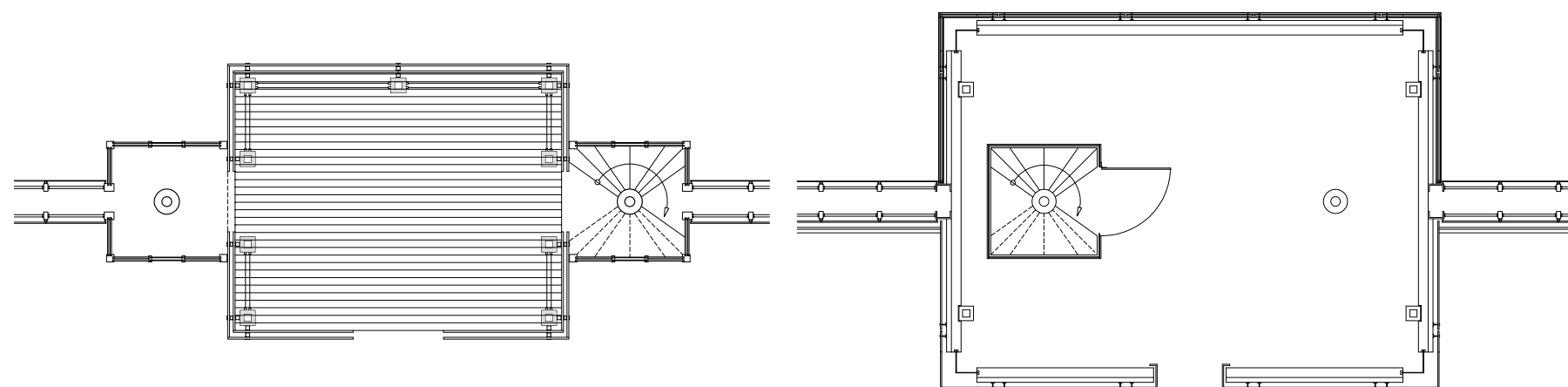
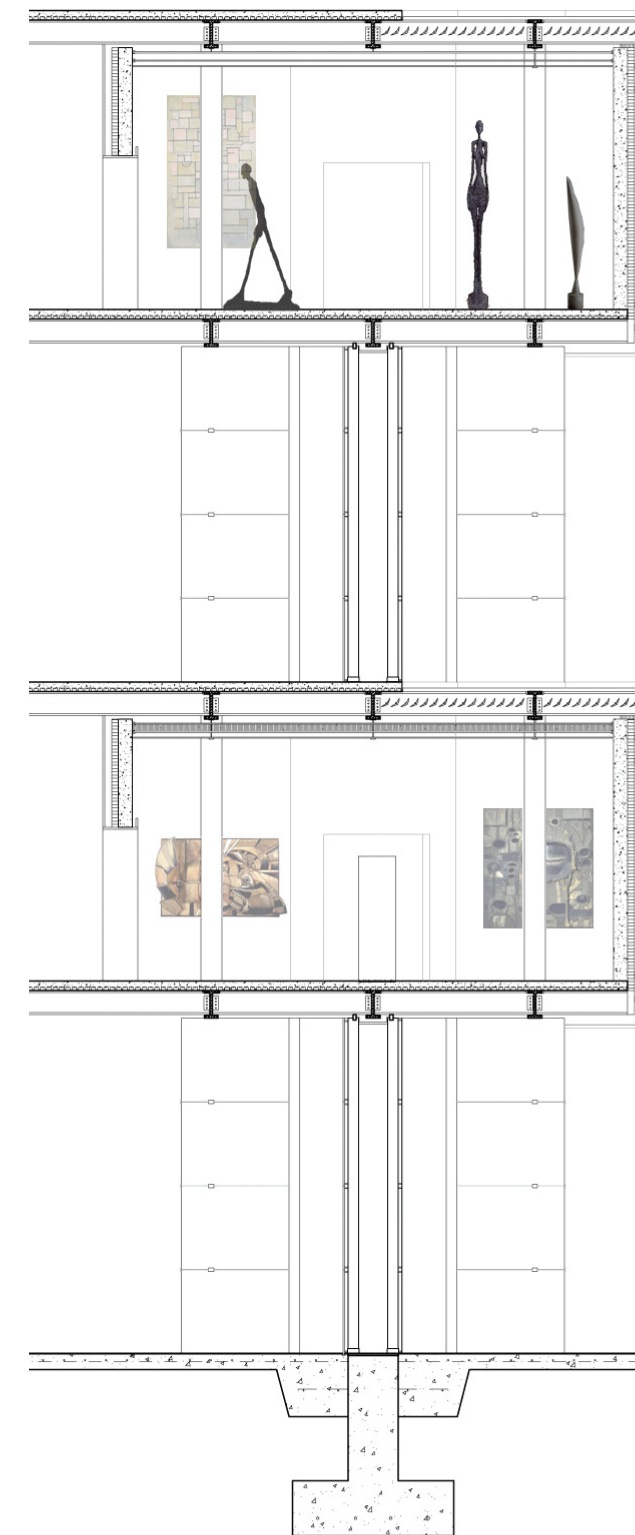
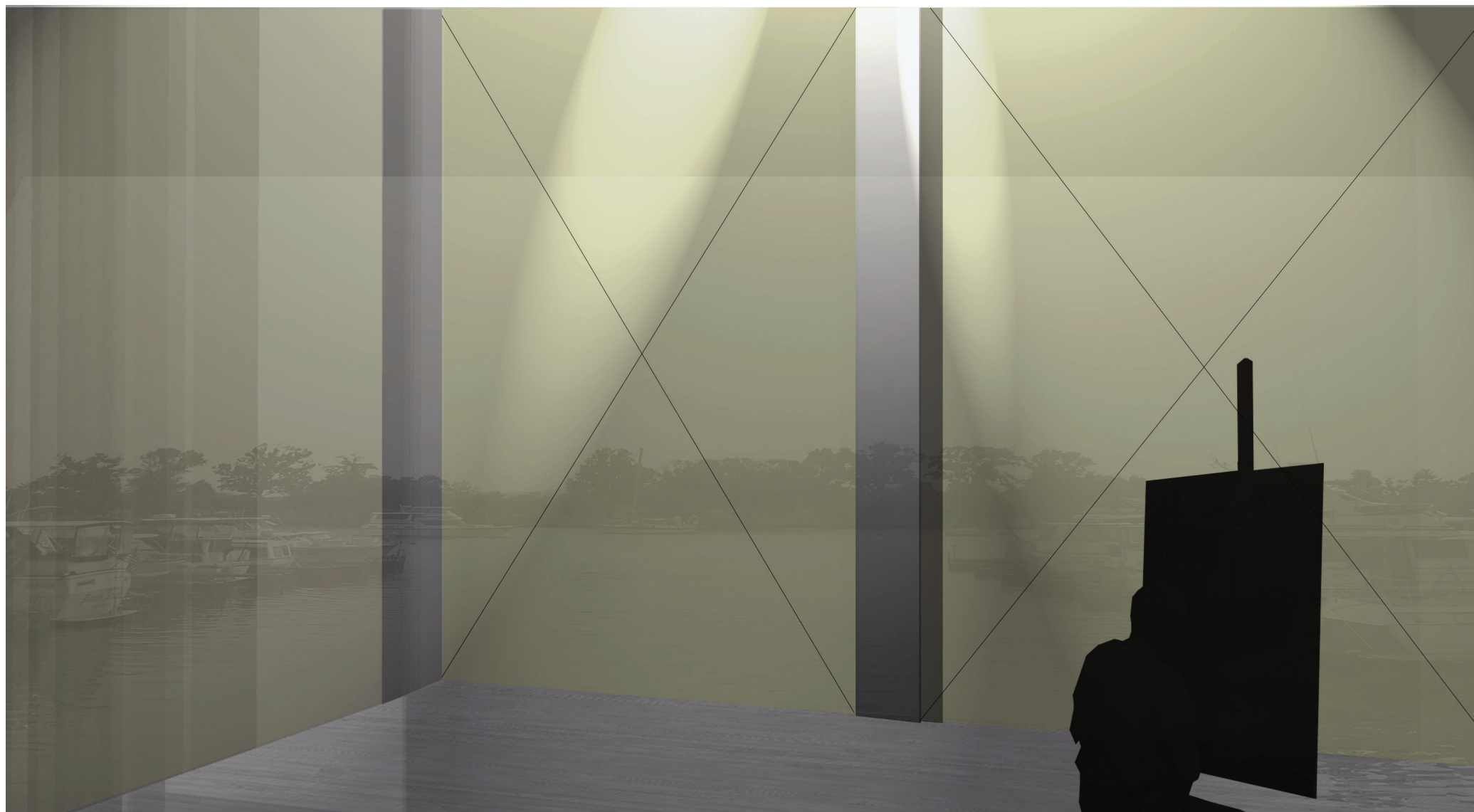
The structure of the dance space aims to mimic the grace and lightness of ballet. The interior steel columns are lifted off the ground as if "on point" while the main structural columns at the corners are held by supports which reach back to the floor slabs, recalling a female dancer lifted in the air. The thin mesh screens that wrap the space provides privacy, but which allow those outside of the space to view the silhouettes of the dancers.



Interiors - Dance Space

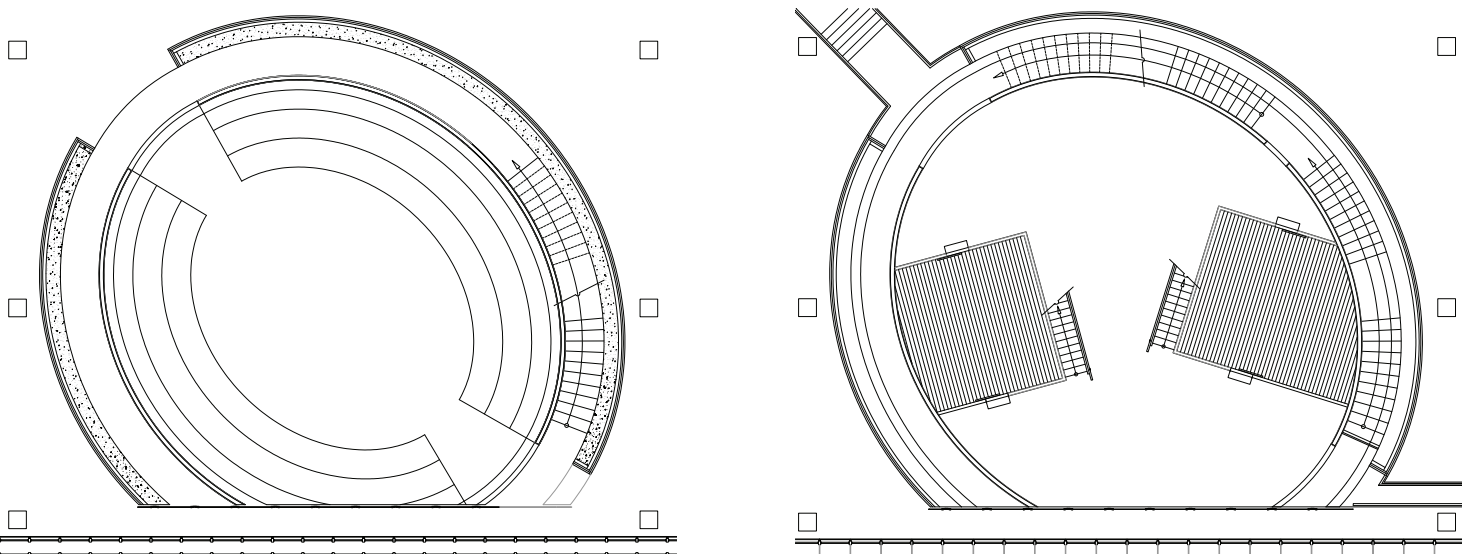
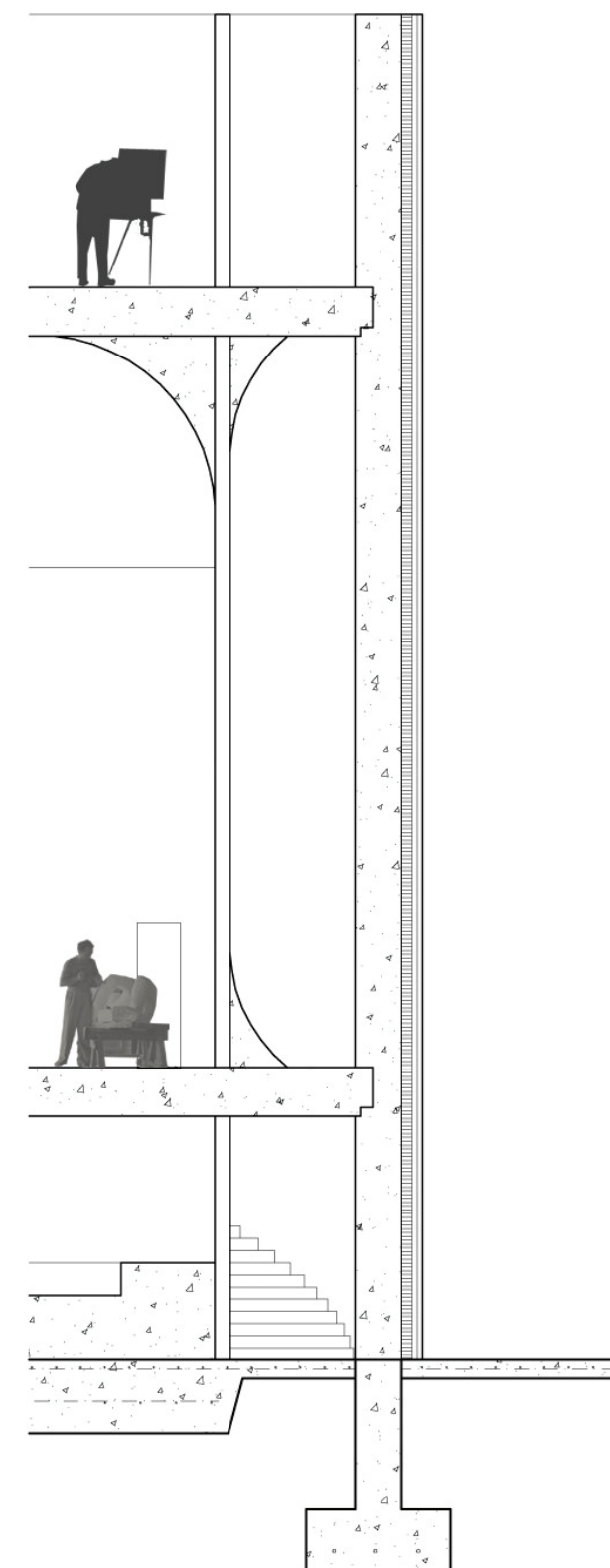
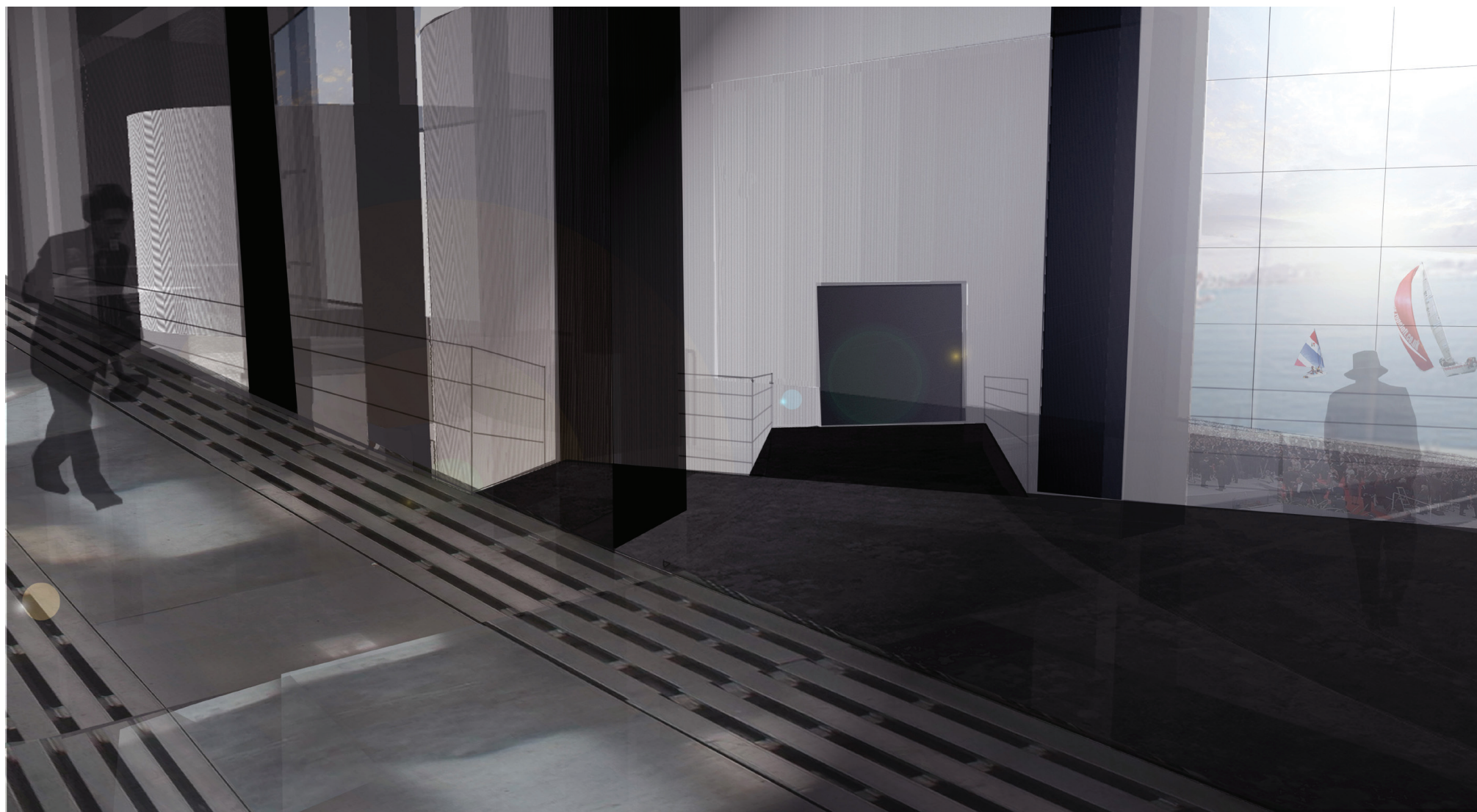


The structure of the music space is based on the movement of sound waves. The concentric elliptical rings are constructed of glass held together by steel mullions and are spaced wide enough to allow walkways to wrap around the form. These walkways afford a listener to experience the music differently as the sound waves reverberate within the glass walls.



The gallery and studio spaces are designed to act as frames, literally framing the art and artists. The roofs of the galleries permit filtered light to naturally illuminate the spaces, while the studios are wrapped with a double-skin of slightly translucent glass resulting in a bright spaces and privacy.

Interiors - Gallery & Studio



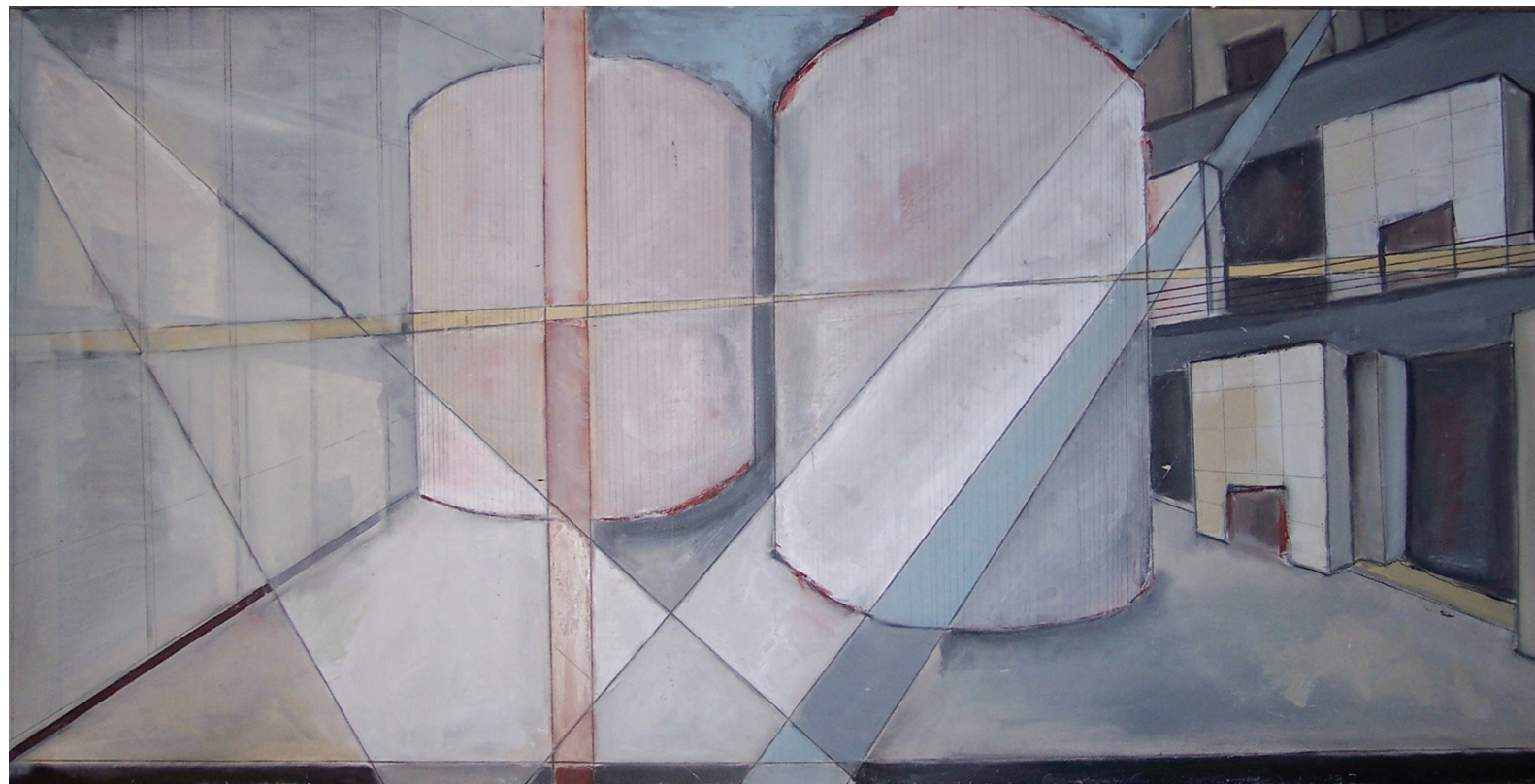
The large, elliptical art education and studio volumes are composed of reinforced concrete and wrapped with a corrugated-metal skin. The forms are intended to cradle the learning process and to center the focus on the students. On the second floor, separate volumes with lofts offer spaces for private classes and student exhibitions.

The relationship between art and architecture has been the focus of my education and is something that I have been entrenched in since working at the National Gallery of Art. Beginning as an artist, I have begun to see this relationship as inherently symbiotic and one that can elevate creativity, enthusiasm and curiosity of both an artist and an architect.

Architecture should not detract or distract, but should cultivate an environment where the art and artist in question can thrive unfettered. The most basic elements of architecture (structure, scale, proportion, material, and light) can be wielded in ways that allow the importance of art and artists to become elevated, while at the same time not taking the backseat.

The intention of this thesis is to explore such ways, and ultimately to design a space that one may be inspired to paint, sculpt or draw anything, to become energized to sing, dance and perform beautifully, and to acknowledge the beauty of architecture in its simplest components. I have attempted to relate the elegance of steel beams and symmetry, the complexity of glass as light alters it throughout the day, and the beauty of concrete and metal in this project.

While this thesis does not aim to reinvent the wheel, it does aim to use a common architectural language in a way that transforms the traditional model of an art atelier space into something more universal and raw, alive with excitement and energy.



I would like to thank all of my family, friends and colleagues for their endless support, advice and love.

To my committee, Hans, Frank and Jim, thank you for your great words of advice and enthusiasm.

To the Design Department at the National Gallery of Art, thank you for starting me on this path and for cultivating an excitement for the arts.

Mom, you are my inspiration and I cannot thank you enough for always being there for me. You constantly fuel my passion for art and architecture and I will always call you when I am excited about an idea or need help finding one. I love you.

Dad, your passion and hard work always inspire me, but it is your gentleness, kindness and character that I most admire. Thank you for everything. I love you.

Chris and Amy, you guys are the best siblings a little brother could ask for. Thank you for always being there when I need to talk and thank you for always making me laugh. I love you.

Jessica, I am so grateful for all of the help and love that you give me. I cannot imagine having this experience without you and cannot wait for the next chapter. I love you.

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IMAGES

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3. Water Towers, New York, NY. {www.mrjumbo.com}

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7. *La Citta Nuova*, 1914, drawing by Antonio Sant'Elia.
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8. Electric Station, drawing by Antonio Sant'Elia
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9. Richard Serra installation, Dia:Beacon
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2005	SKB Architecture and Design (Intern)	Washington, DC
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