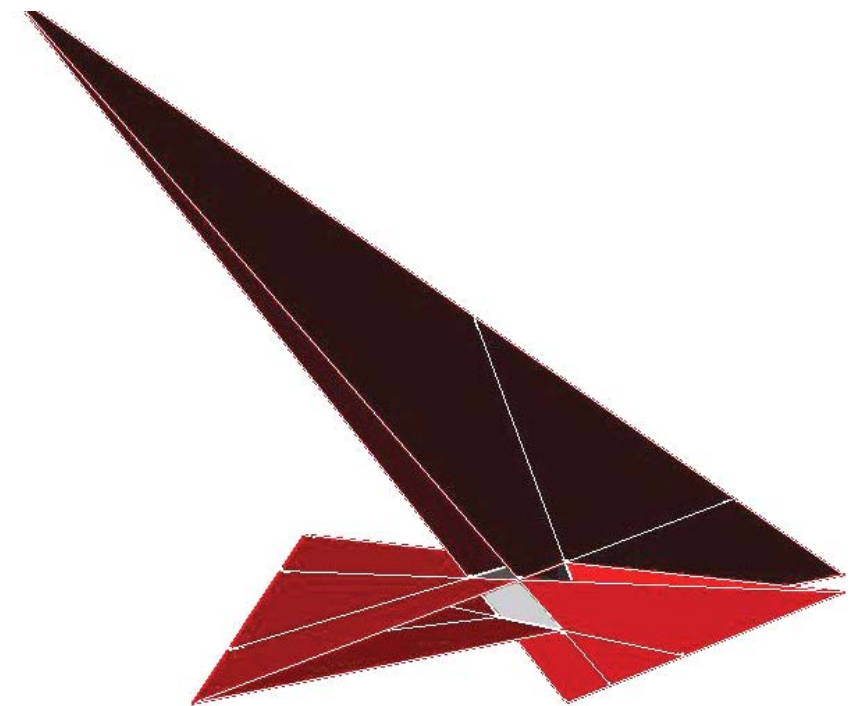




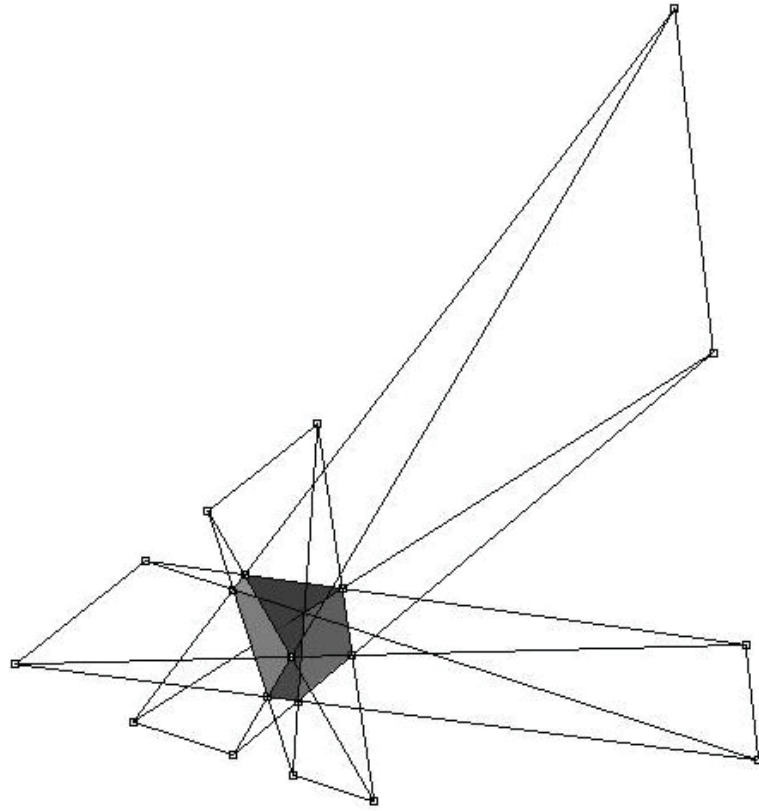
Kashuo Marley Bennett

Interstitial Geometries









## Advisory Committee

Hans C. Rott, Committee Chair

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Heinrich Schnoedt, Committee Member

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Steven R. Thompson, Committee Member

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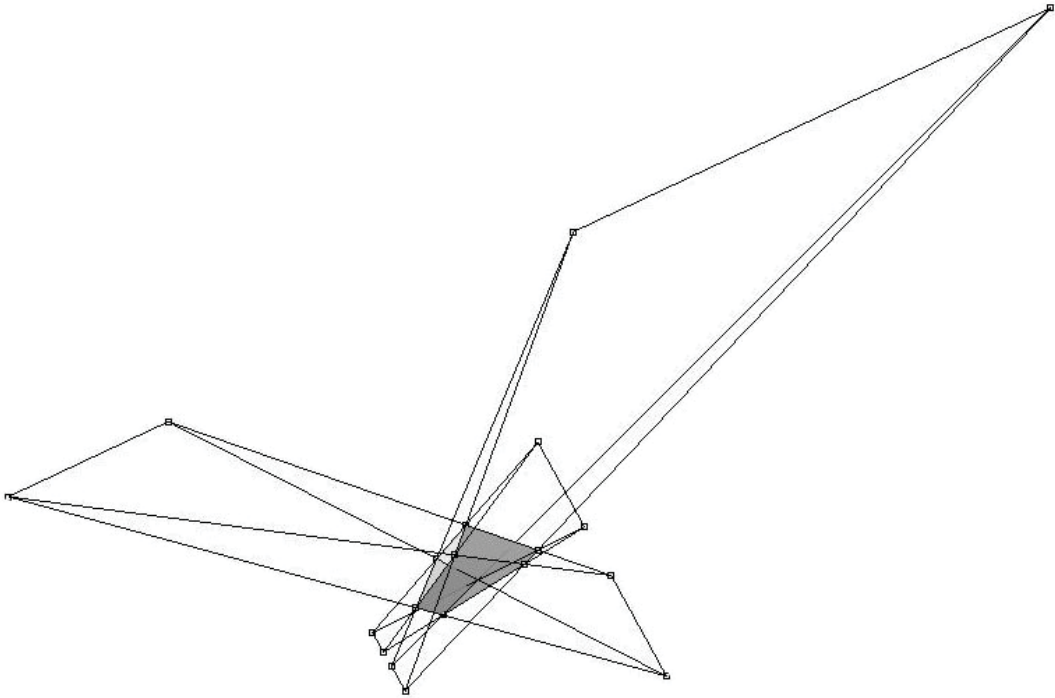
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## Acknowledgements



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I am extremely grateful to my esteemed advisory committee for the guidance, direction and patience to fulfill this project. Steve, thank you for showing me the course. Heiner, thank you for maintaining my intensity. Hans, thank you for reminding me to slow down. I am indebted to Elizabeth Dyer for her thorough reading of the manuscript for this book. Most of all I would like to thank my parents who, both in different, ways taught me how to make.

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## Image Sources

Page 16:

#1 insulin crystals:

Jurema Oliveira. Insulin Crystals. 2005. NASA, 4 April 2008

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Page 24 and 25:

#2, #3 perspective studies:

Evans, Robin. The Projective Cast. Cambridge: MIT

Press, 1995

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Page 29:

#4 Phaeno Science Center under construction:

Pfeifer, Gunter, Antje M. Liebers, and Per Brauneck. Exposed

Concrete Technology and Design. Basel: Birkhauser,  
2005

Used with Permission from Zaha Hadid, architect

#5 La Granja Escalator:

Lefavre, L., & Tzonis, A. Critical Regionalism. Munich: Prestel, 2003

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## Introduction

### Interstices

-noun

1. An object or area occupying the space between. The optical space between the ontological object and the perceiving subject; for example, a lense.
2. Crystallography. A generative imperfection in a crystal's structure caused by the presence of an extra atom within an otherwise complete and predictable lattice.

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**T**he design of this architecture academy for one hundred students is an exploration of educational function, geometric construction with digital drawing tools, perspectival manipulation, and minimalist architectural aesthetics. The resulting objects and spaces are intended to serve as an institution for the education of competent, imaginative architects. Its spatial planning and programmatic layout are designed to facilitate the everyday operation of an engaged faculty interacting with a productive student body. Within the school are studio spaces, a shop, a library, a lecture room, faculty studies, and outdoor building yards. I have attempted to arrange these spaces for optimal interplay between related functions, their layout and construction being tailored to their uses. The design is heavily influenced by my thoughts and observations as a current architecture student. Hopefully this integration injects the project with a theme of dialectic critique important for the success of any creative work.

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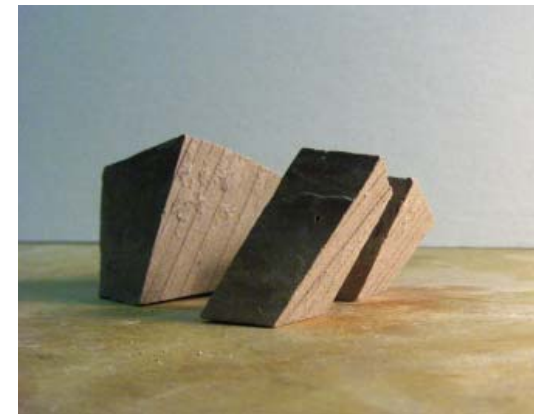
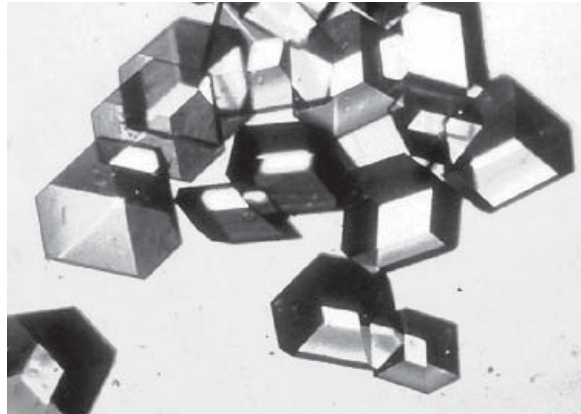
As an undergraduate I studied analytic philosophy along with math and computer science. After years spent steeped in logical determinism, architecture school awakened me to the academic study of the indeterminate, the subjective, and the unpredictable. It was a place where thinkers from an incredible variety of backgrounds came together and conversed. Rather than each focusing on a common universal, the diverse perspectives enriched each of our experiences with greater sophistication and complexity. I came to see the world in a way that excited me more than my previous studies ever had—a way that did not seek to uncover the foundational building blocks behind a functional reality. This new mode of observation was focused in the opposite direction, away from the tautological, towards the creative, the synthetic, the synthesis.

The building laid out here is a place for learning, but it is intended to serve even further as a teaching tool in itself. It is my hope that the form of the building might interact with the student's mind in such a way that it challenges him or her to strain for creative synthesis, thereby continuing to evolve the disciplines of art and architecture. This claim may seem difficult to prove, but my intention is important. Based on my experiences as a student of architecture, I hold that the

most effective learning is accomplished through interplay of diverse points of view and constructive dialectical exchange. The physical form of the architecture school metaphorically represents this understanding. I have attempted to construct a confluence and cacophony of perspectives through a formal language of large sloping and canted walls which are precisely arranged based on the datum lines of an original geometric construction. The system of regulating lines has been carefully engineered to act as a three-dimensional mechanism for warping the conventions of two-dimensional perspective drawing. The enclosed and surrounding spaces compose a contemporary tromp d'oeil. No edges in the building are parallel. They are all carefully arranged so that if extended, they would meet at specific points in three-dimensional space. This graphical signature on the eye, of these lines receding to artificial "vanishing points," overlays with the natural image of perspective that we have all learned to navigate in the orthogonal rooms of traditional architectural space. Ideally, the result is a visual image of the building that is difficult to grasp within the expected framework of familiar spatial experience. While my pedagogical convictions may at times supersede my technical skill, my earnest intention is to offer students a challenging and intriguing visual experience in the very space in which they become architects.

The form of this architecture school, while it may appear unconventional to the uninitiated, in fact fits within the architectural movement known as deconstructivism. Practitioners of this mode have been operating from a position critical of the conventions of contemporary design, thought and society. Deconstructivism appeals to me as a model because though it is "post" modern in a philosophical sense in that it is aware and critical of the so-called modern movement, it is distinct from the artistic movement known popularly as "postmodernism." The irony of iconic pastiche is far too cynical for a place of forward-looking learning. With roots in the constructivist art period of early twentieth century Russia, the deconstructivists' focus on geometry, honesty in material, and lack of representational imagery aligns fluidly with my existing interests and abilities. I have been able to employ my previous affinities for mathematics, geometry, and logic to the exploration of a creative, generative and subjective realm of art. Though inspired and regulated by geometry, this project is ultimately directed towards the resultant perceptual and psychological conditions of the human observer - rather than any presumably underlying mathematical structure.

A critical restructuring of enlightenment thought has been offered before me by the romantics, as well as by the post-modern generation of Venturi and Graves. However, this breed of thought with its celebration of myth and the irony of iconic pastiche feels just as overly determined and restrictive as the analytic philosophy of symbolic logic that they were attempting to eschew. Instead, I want to celebrate the variable contexts of logic, the shifting space of participatory exchange through which we approach various conclusions by the acts of dialectic and criticism. I want to voice a multiplicity of narratives, but not by pointing out any particular historical examples. My strategy is to focus on the subject's perspective and on his or her potential to experience infinitely numerous but perpetually creative visions of reality. I seek to celebrate the psychological experience of the perceiving human and to explore how everyone sees the world from a unique position. To me, difference is the only universal.



## Part One:

## The Interstices

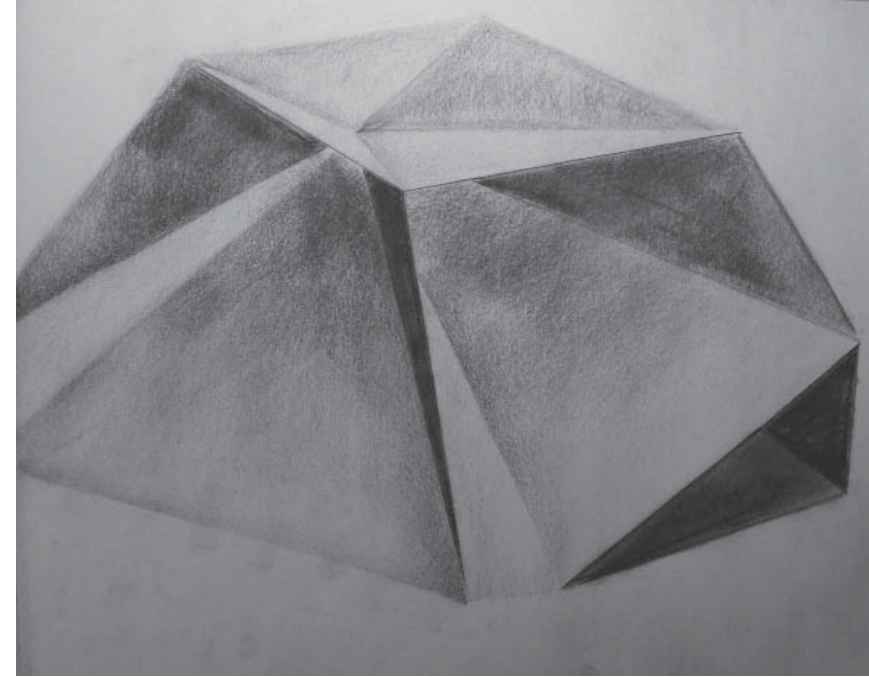
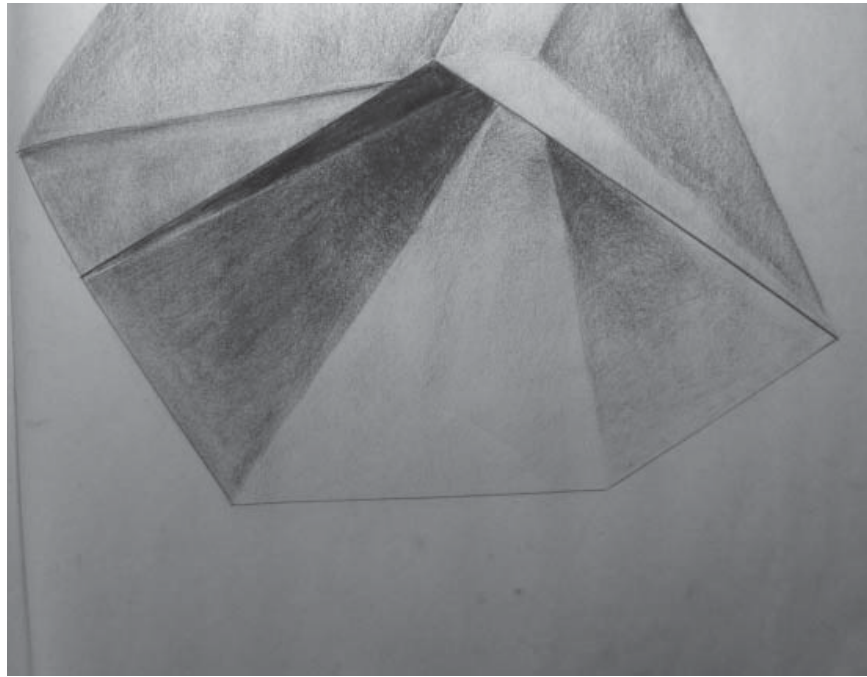
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Jurema Oliveira. Insulin Crystals. 2005. NASA, 4 April 2008  
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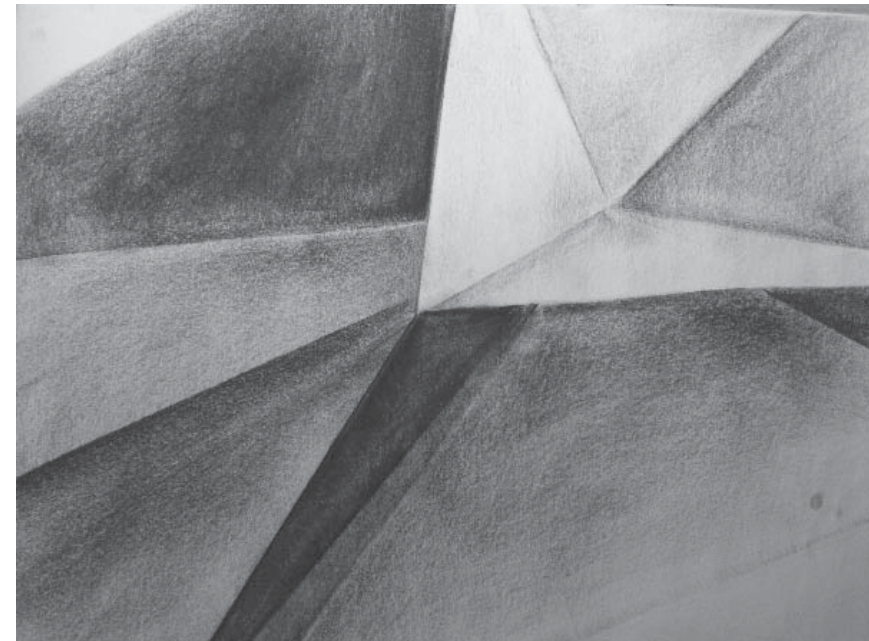
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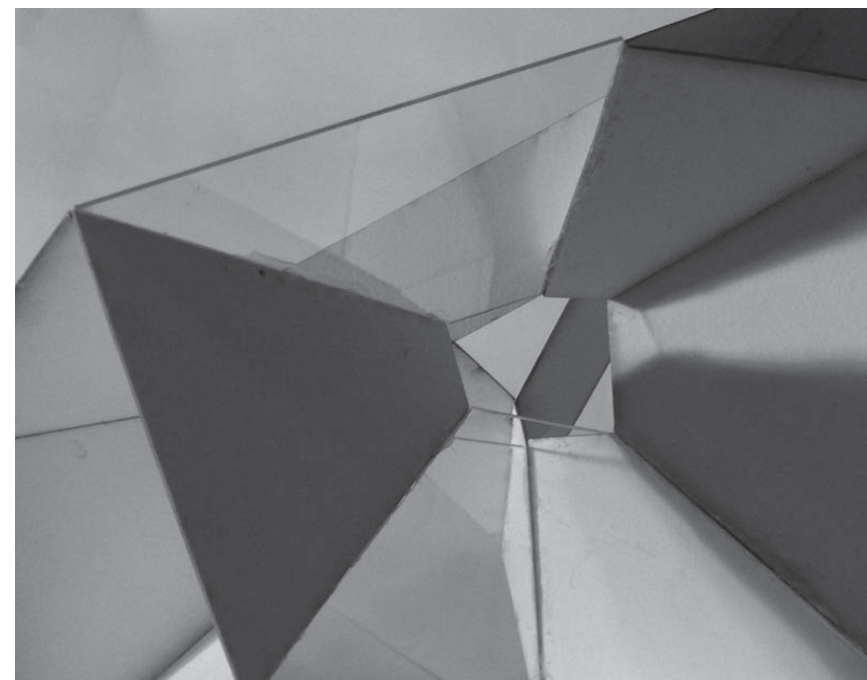
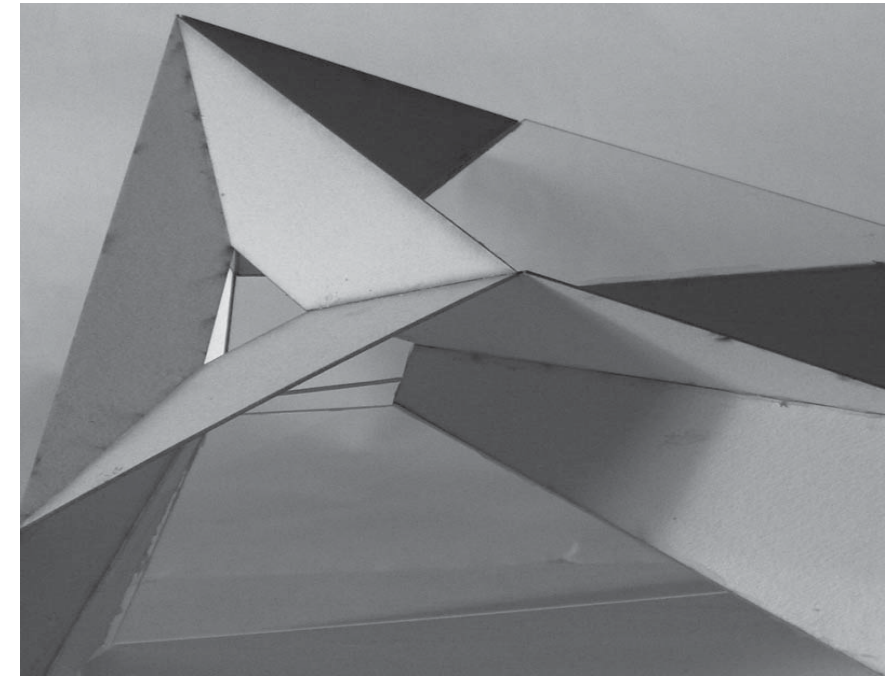
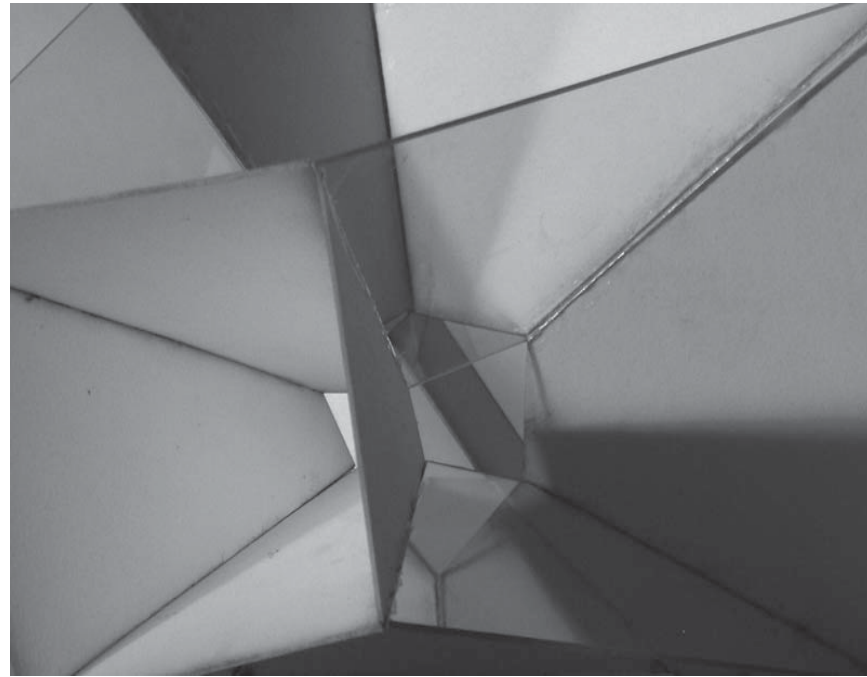
**W**

ith the integration of high technology and the avant garde, deconstructivist forms are becoming more prevalent in the built world. However the vast majority of buildings are still constructed from templates of orthogonal boxes. It is my position that this overwhelming sameness of shape of architectural space has led to stagnation of cultural origination. Bold as it may be and untrained though I am, I seek to break free of these restrictive conventions of normativity. I am not doing that by authoring an entirely unprecedented structure, but by squaring my weight behind a movement I believe in (deconstructivism) and by exposing the open minds of students to this ever-evolving project as they learn, where they learn. Employed as a metaphor for the act of seeing, I have engineered illusions of perspective into the angled shape of the building. My hope is that the jagged and fractured forms will encourage students to reach beyond what is well established in the building tradition and towards what has yet to be conceived of by current modes of art technology and design.



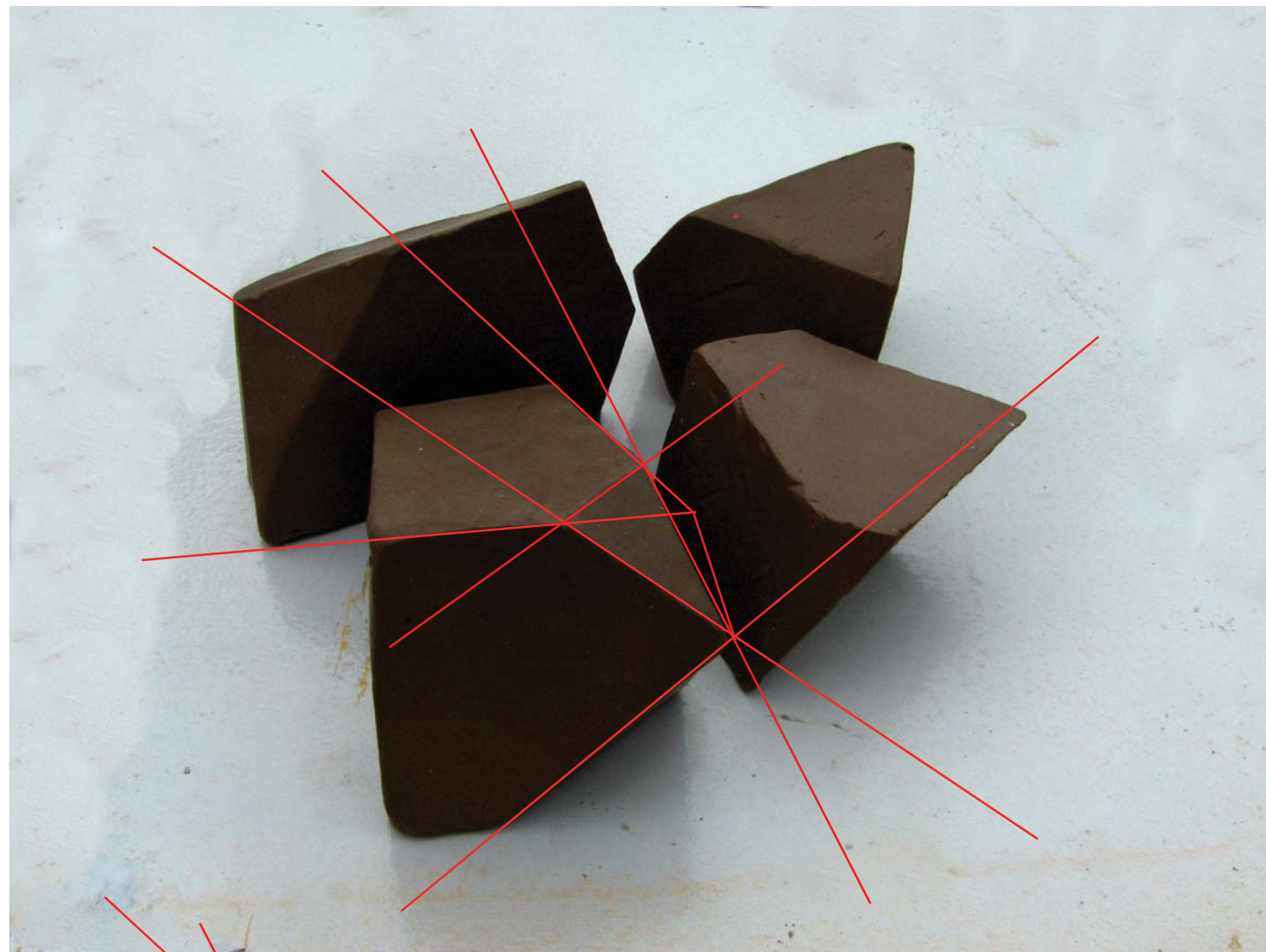
The explorative design process by which the final shape of the building was generated began with an inspiration found in the atomic structure of solid minerals. In these organic constructions, the combination of individual units emerges into an overall form that has an internal coherence among its parts. The localized structure is rigid and simple, based on immutable physical laws. At the same time, the iterative combination of molecules at a grand scale creates an emergent form that can not be detected anywhere in the original fragment. Clay was an appropriate initial modeling material whose soft mass, sliced with a sharp blade the way a jeweler would cut a gem, can take on any conceivable faceted form. When the plastic masses harden, they share the formal character and mineral quality of a crystal, but their shape is actually born of an unpredictable act of human artistry. Effectively, the objects are "crystals" that were formed not by a molecular growth process that yields to mathematical analysis, but by a human logic of perception and exploration.



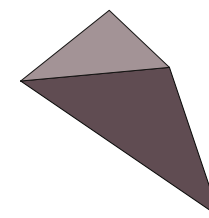
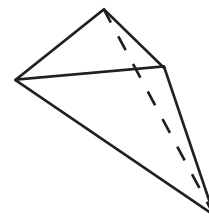
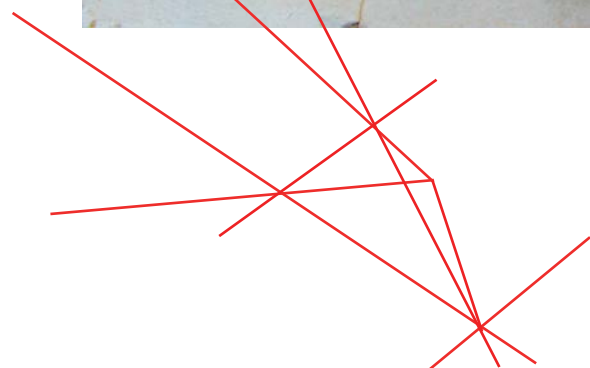
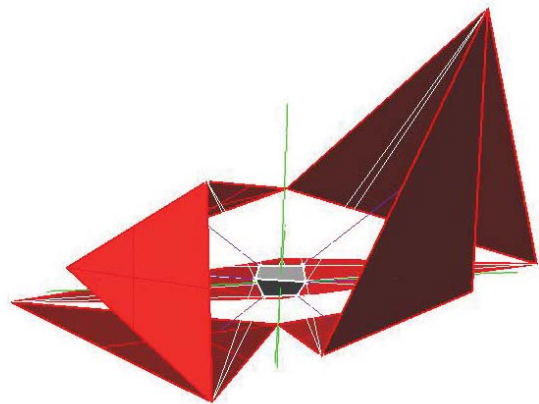
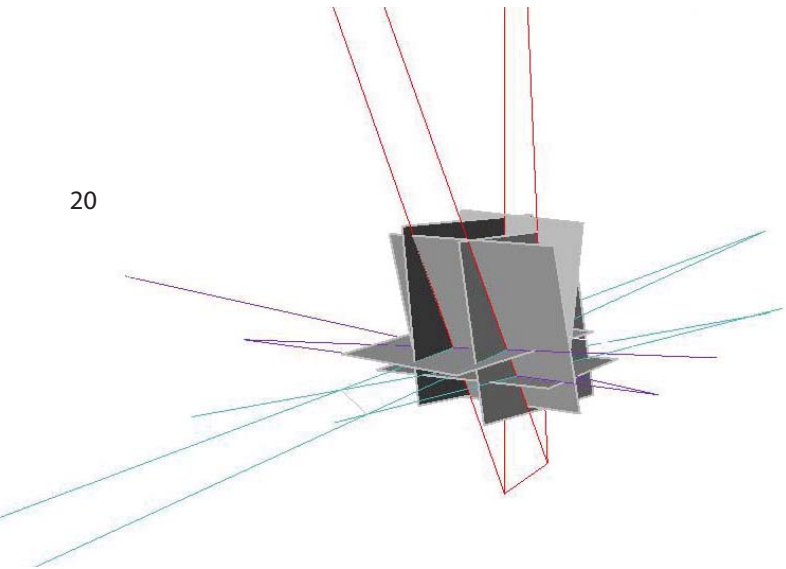


Through charcoal drawings and small sculptural models I explored variations in the perceptual qualities of the formal shapes. The individual polyhedral faces of the models were made either transparent or opaque, investigating light and shadow patterns of various arrangements. Digitizing the clay pieces and models into 3D computer drafting software allowed for rapid and comprehensive visualization of an iteration of shapes. Perspective, as a metaphor for the act of seeing and as a mechanism of optical distortion, is now incorporated into the project. I located a single point within the volume of the digitally modeled nuggets and then fractured each facet of the original shape into triangles so that they all share this internal point as a corner of each face. The planar sides of the original shape are now perceived to recede inward. Because of the optical effect of converging lines towards a “vanishing point” like those constructed in a perspective drawing, the appearance of the receding vertexes is one of exaggerated depth and distance. The effect is difficult to represent with a static image, but when held in one’s hand and rotated, the object seems to have a greater volume of internal space than is geometrically possible.

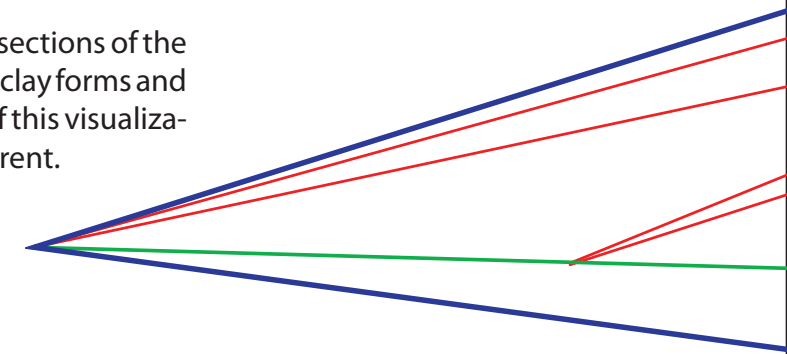


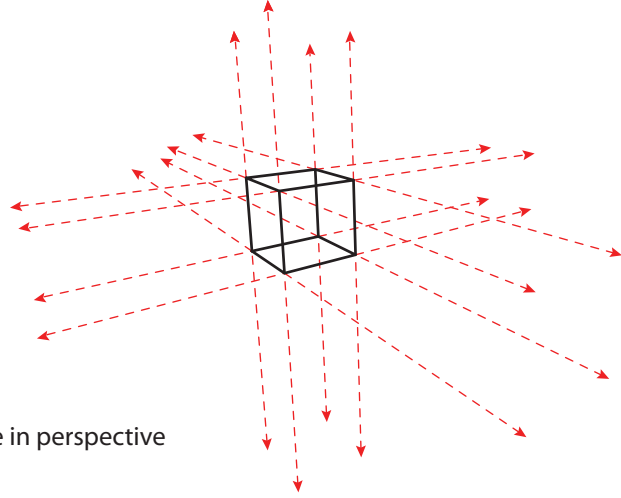


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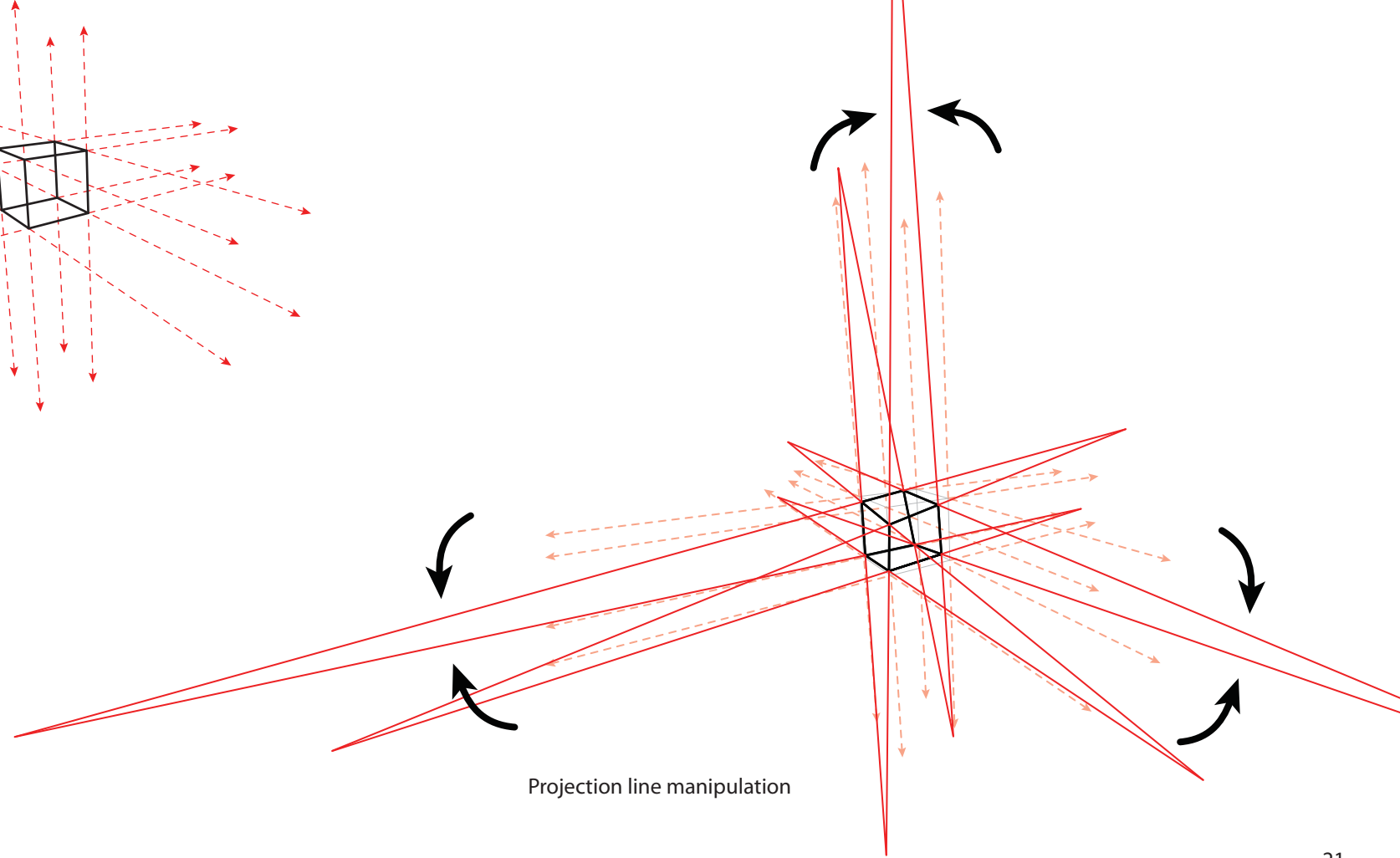


Orienting the projection outward from the crystalline solid, I extended the lines resulting at the intersections of the faces out into space. This action made visible the shape of the pieces that had been cut off the original clay forms and it located points of intersection of those lines on the exterior of the solid form. Playful modification of this visualization led to the invention of a remarkable new shape, the geometry of which is sound and coherent.

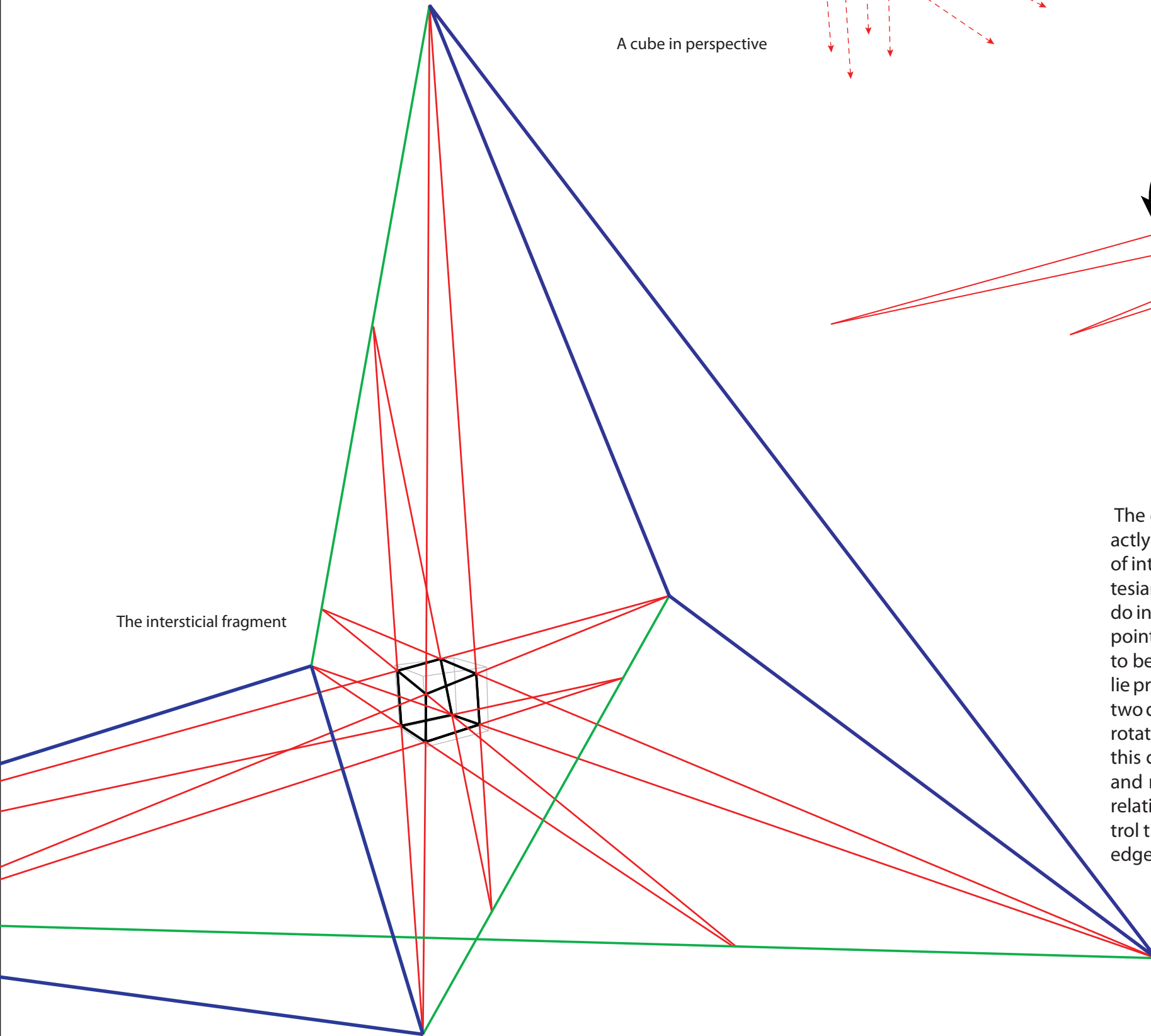




A cube in perspective

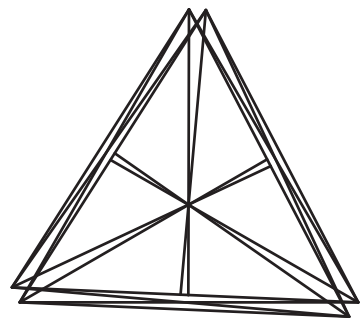


Projection line manipulation

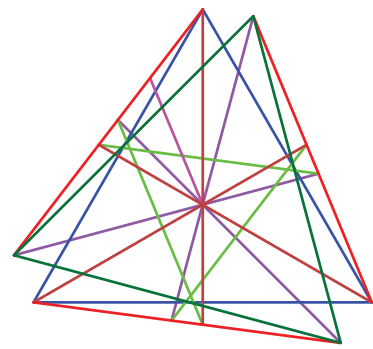


The interstitial fragment

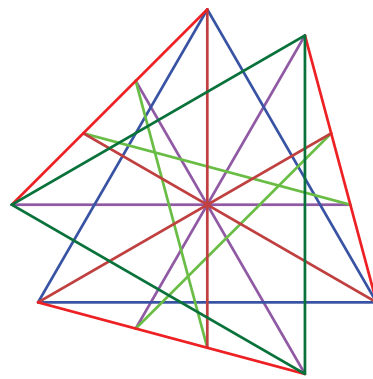
The configuration is similar to a cube in that it has six sides of exactly the same four-sided outline. But rather than the twelve lines of intersection of those sides extending infinitely on a parallel Cartesian grid where they never meet, the projection lines of this shape do in fact meet at 12 precise points in the surrounding space. These points are not random, but rather for this geometric construction to be sound, it is necessary that three groups of four of the points lie precisely on three lines. The endpoints of these three lines make two distinct triangles which lie in parallel planes and have a specific rotational difference from one another. The geometric validity of this construction is proven from the other direction: the distance and rotational difference between the two triangles dictates the relative orientation of the three spanning lines which thereby control the intersecting condition of the projection lines acting as the edges of the cubic object itself.



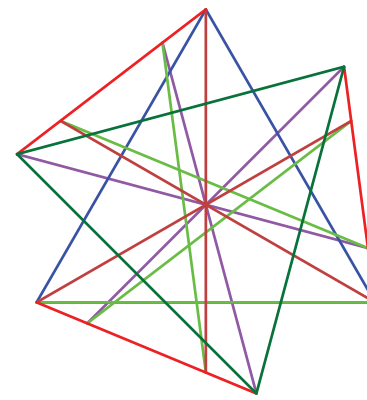
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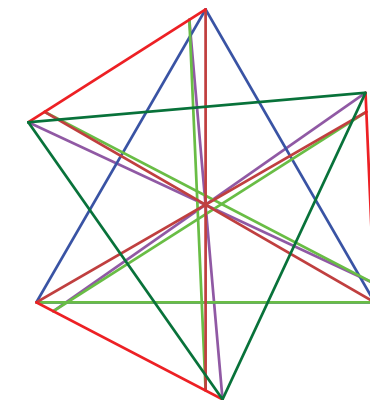
15°



30°

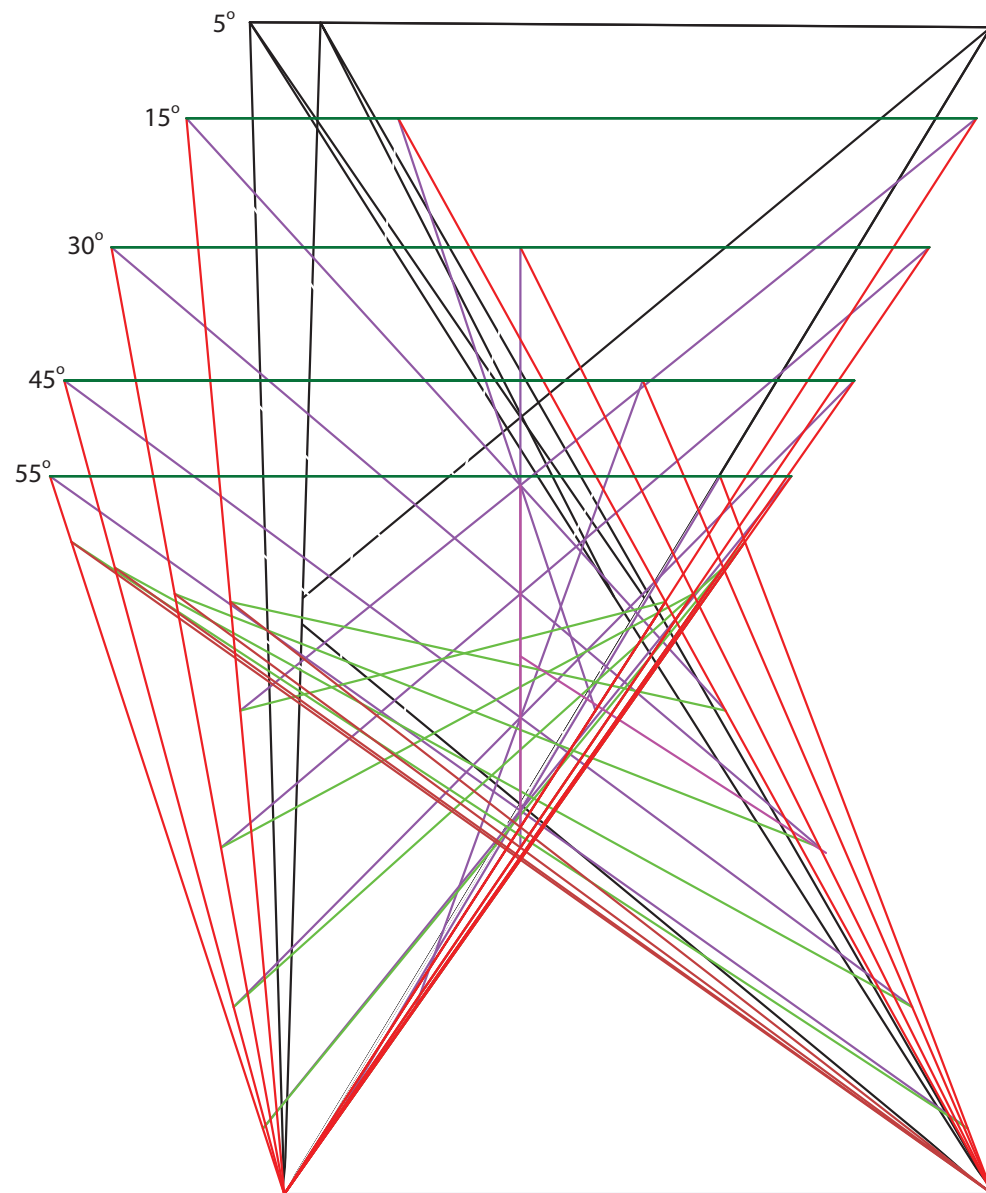


45°



55°

Plans

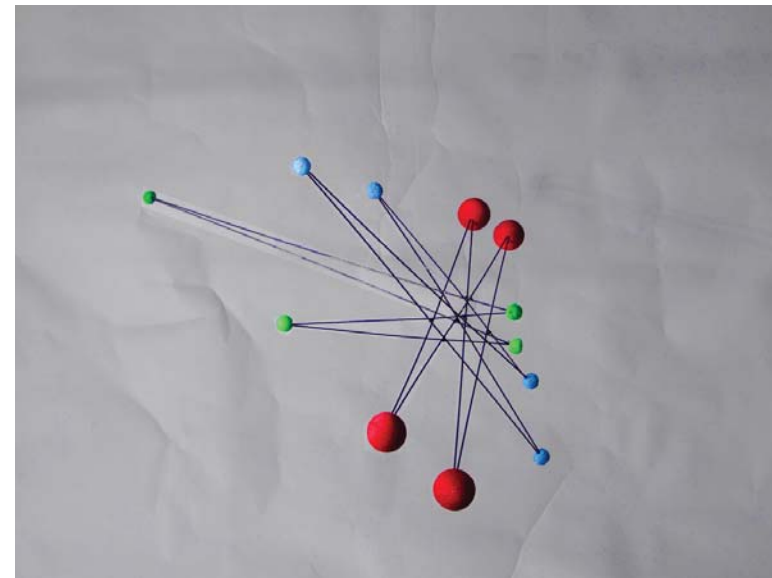
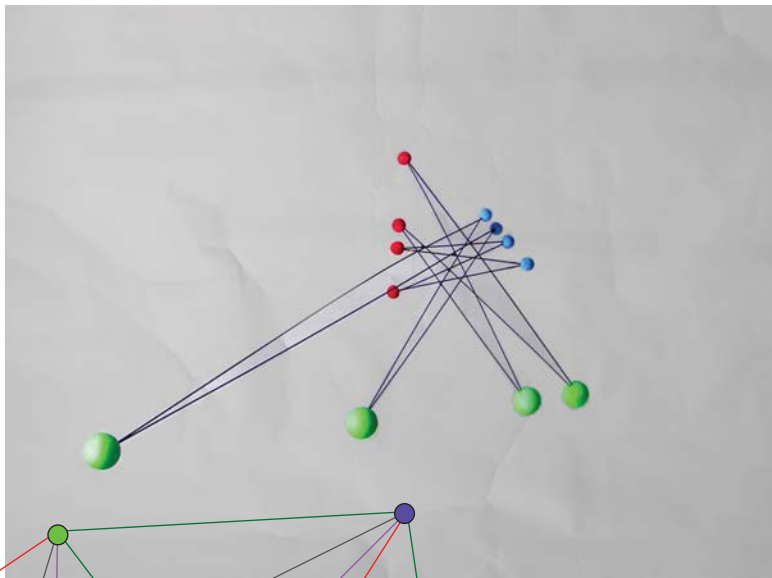
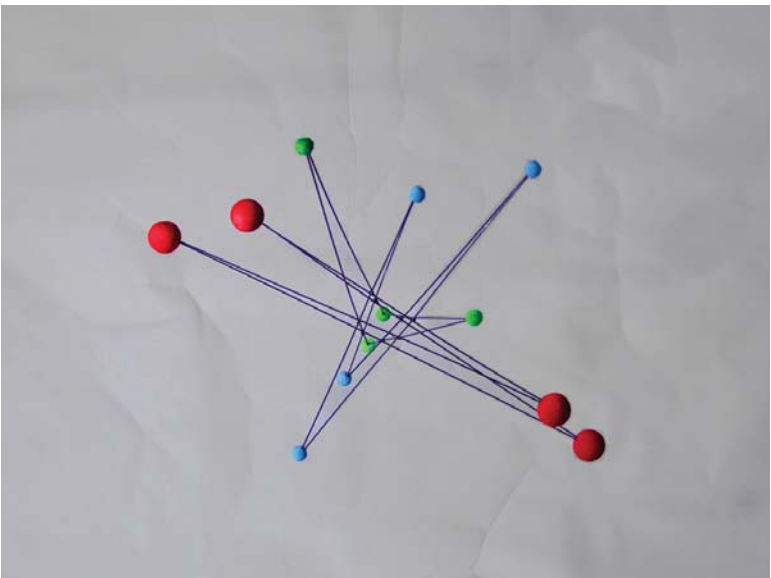


Elevations

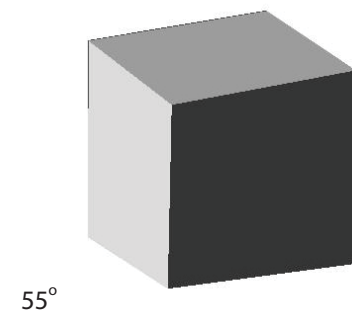
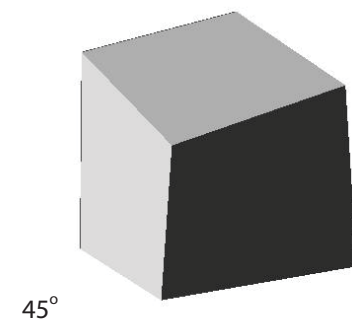
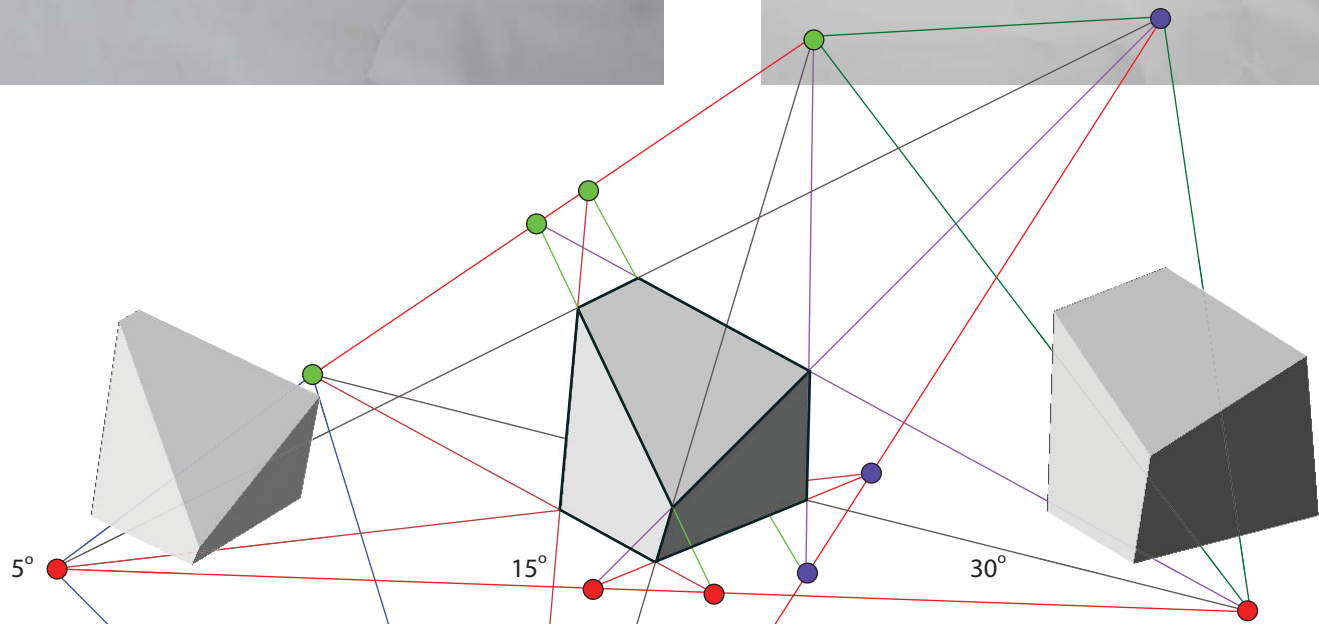
This system of proportions and relations provides a spatial framework of regulating datum lines that orders the composition of the academy building. Employing this geometric construction to the design of the physical shapes yielded an arrangement of sloping planes which, though apparently random, are based on a strict system of intersecting lines and planes. There is a skewed symmetry to the overall form. The determining geometric structure is difficult to discern immediately, but the derived shape has an undeniable dynamic balance. At once, the building appears cacophonous and harmonious. The rational language and technological expression of the modern world are present and recognizable. But they affect the visitor in a way that is far from familiar.

Space is a central concern of the work, but it is not the clear, open, consummate space of the moderns. Overlapping spatial conditions joined with geometrical complexity and perspectival contortion are intended to render space difficult to identify in familiar ways for those accustomed to a tradition of orthogonal buildings.



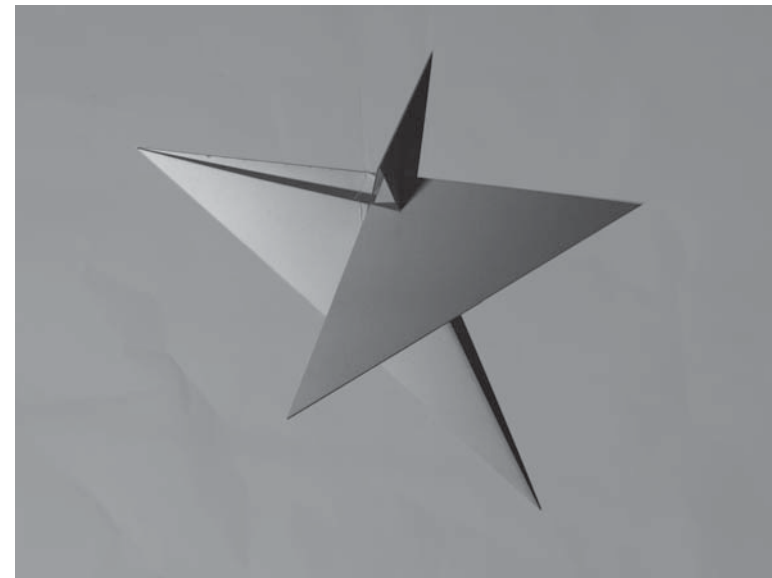
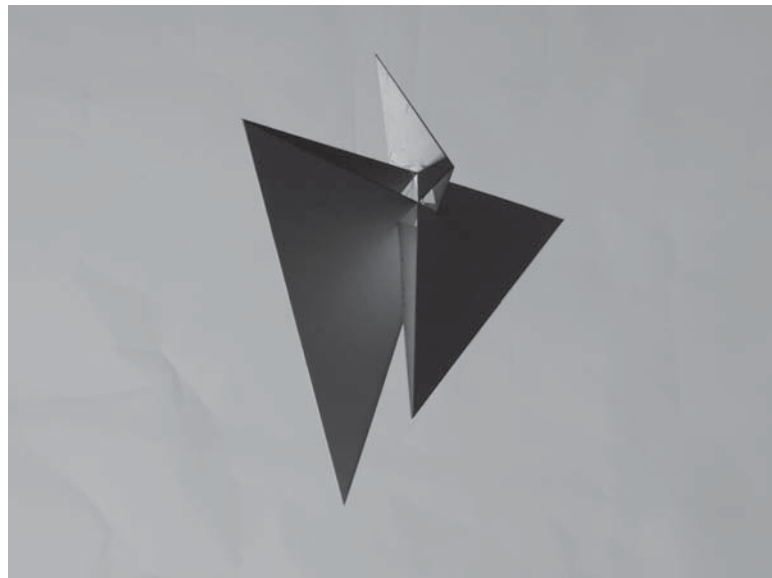
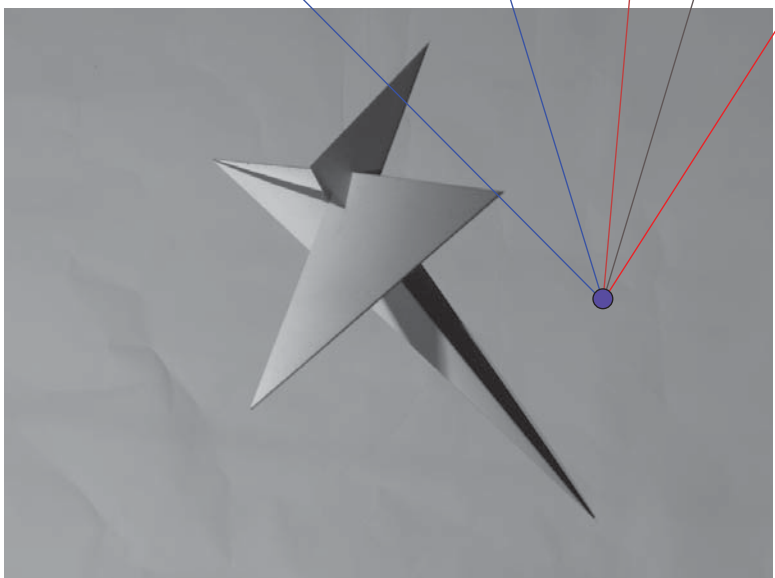


Welded steel models with color aids



23

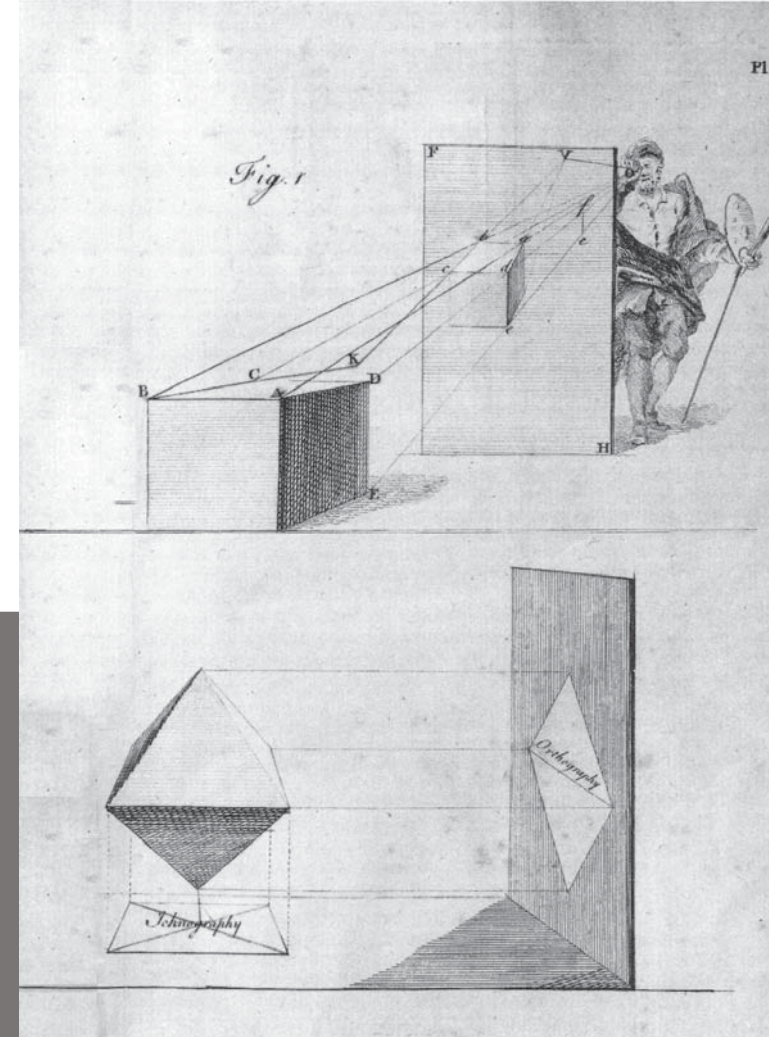
Axonometrics



Paper sculpture

If projected, the lines of the intersection of walls, floors and ceilings would in fact meet at specifically defined points in physical space. Therefore, the optical appearance of perspective in the eye, that of parallel lines receding to a vanishing point in the distance, is overlaid with the appearance of a carefully composed physical construction, the lines of which do in reality meet at an array of single points. This offers the observer a radically distorted image of space. The intention is that this visual image would challenge the viewer's expectations and thus deconstruct and reorganize notions of traditional perception. The philosophical suggestion is that one's optic or analytic frame never mirrors reality exactly as it is; that it is always warped and mediated by one's pre-given assumptions and values. It also suggests that any one particular perspective can never illuminate or grasp all facets of a complex object or situation. As Nietzsche articulates, all perspectives are finite and incomplete. Since there is no one true point of view, we must open the discourse up to other origins and directives of thought, eschewing dogmatism and closed theories.

The building stands as a dialectic response to the tradition of modern thought, but it does not entirely discard the paradigm of modernist design. Salvaged from the impoverishment of Venturian postmodernism, it incorporates and expands on certain modern elements in order to progressively move forward. Effectively, a critique of modernity is mounted from within the language of modernism, thus rendering the message more germane. Into this reordered framework of the moderns I am suggesting a very important integration of an additional consideration: the cognitive perception of those inhabiting the architecture. Analogous to the interstitial molecule in a crystal's otherwise predictable matrix, the incorporation of subjective experience into modern design will open a fissure into a latent realm of potential and exploration. Like Thales, geometry was my operational starting point, but considering the effect that the sloping walls and inclined ceilings have on the students and faculty is of paramount importance to the project. What students see (the building itself) is



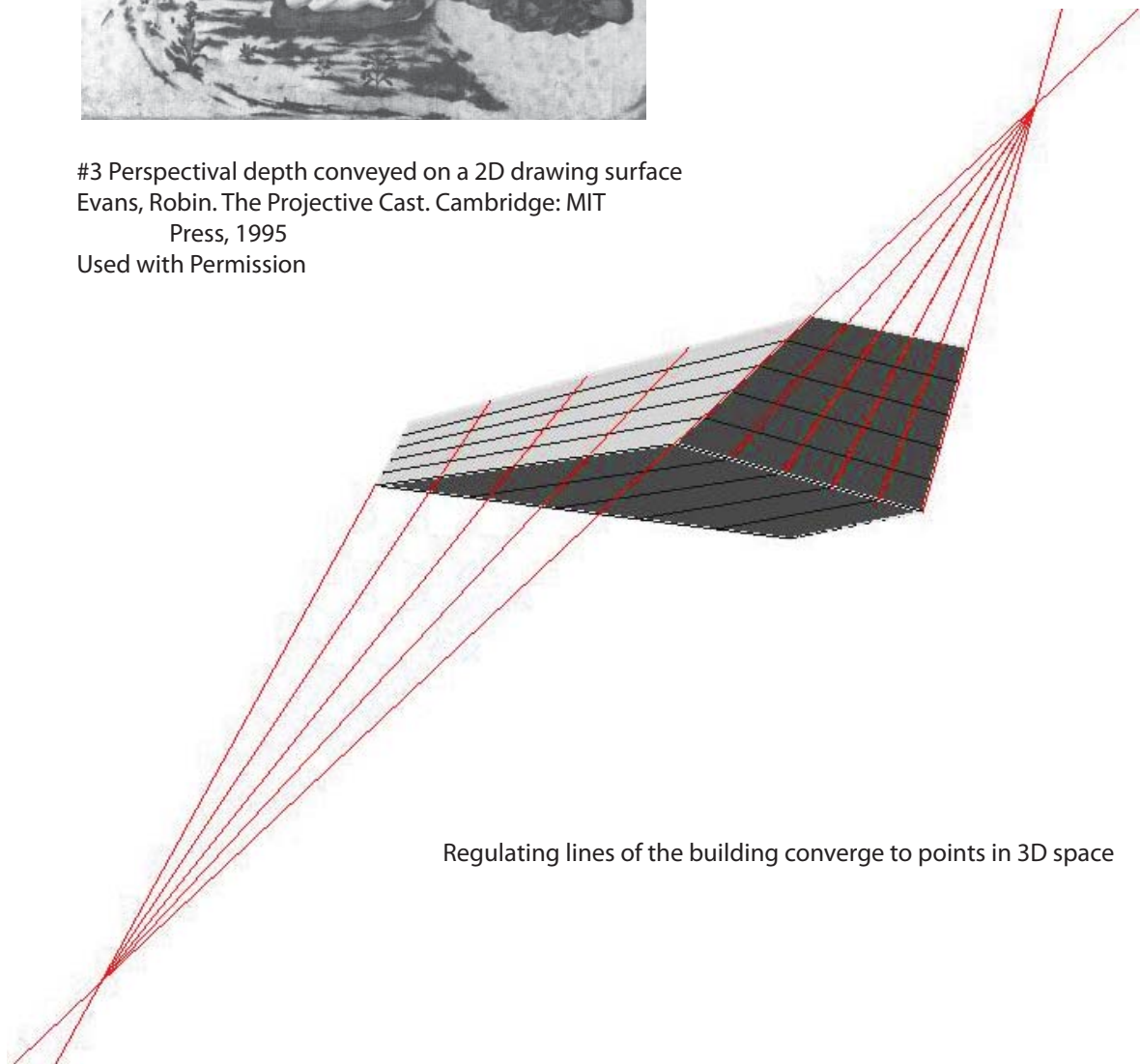
#2 Fournier's study of visual form detection in 3D space  
Evans, Robin. *The Projective Cast*. Cambridge: MIT Press, 1995  
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Perspective view of digital massing study





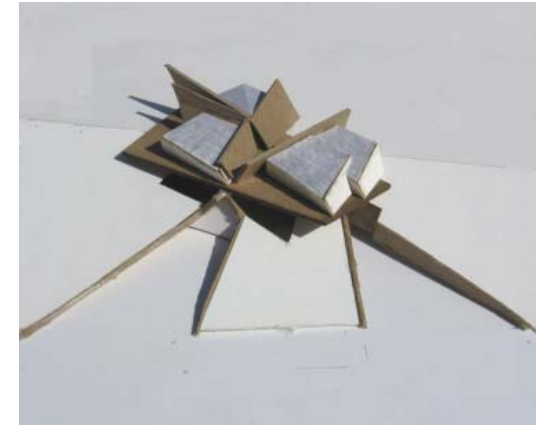
#3 Perspectival depth conveyed on a 2D drawing surface  
Evans, Robin. *The Projective Cast*. Cambridge: MIT Press, 1995  
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Regulating lines of the building converge to points in 3D space

only the prompt for what I am attempting to create: a way of seeing. The ontological object-hood of the building is carefully considered, but so too is what happens in the psychological mind of the subjective viewer. The end towards which my project is directed is not encompassed in the built thing of physical matter. The thing to be constructed actually occupies an interstitial realm between the objective world of intentionally arranged material and the subjective world of the unpredictable mind of the viewer. The completion of the greater work requires its witnessing by the inhabitants and the effects of that observation on their perception and cognition.

I have constructed the shape of the building so as to poetically represent and interact with the interior workings of the student's mind. The mind of the student is not a blank slate on which can be directly written objective wrote knowledge. The building's form reflects this understanding. One's impression of the building's shape changes drastically from different perspectives. The building itself seems to change shape as one moves around and through it. Reflective and transparent surfaces interplay with opaque ones, presenting fragmented images of the surrounding space. I do not conceive of the mind as the back surface of a pinhole camera, ready to receive whatever it is presented without distortion. Rather, the mind is already impregnated with rigid folds according to certain innate ideas (analogous to my geometrical structure). That arrangement of folds is in turn further transforming and reorganizing itself according to the nature of the information coming in from the outside (visual images projected into the interactive student's mind). The projection and reflection of those impressions reorders the dynamic internal folding. The brain is no static collector of pictures; it acts to construct new images out of combinations of those already received. This investigation is about the interaction of what can be rationally abstracted within the mind and information empirically available to the senses.

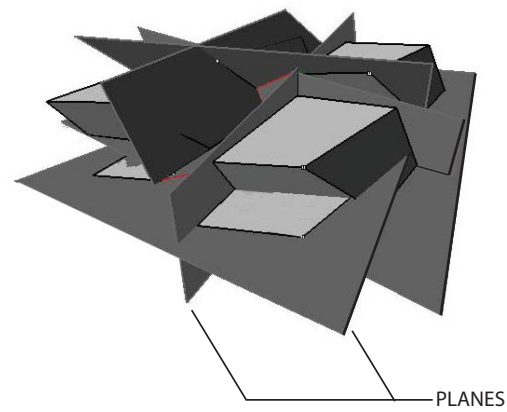
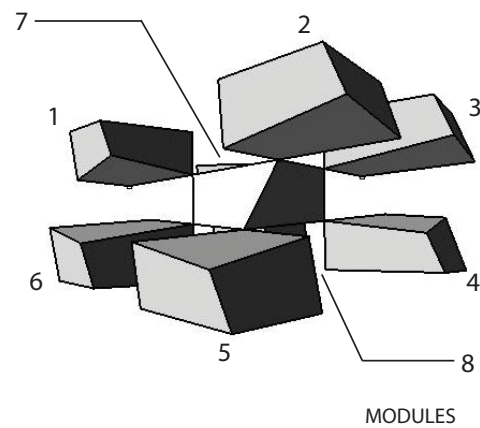


Part Two:

The Academy

PROGRAM COMPONENTS

1	SHOP	2,509 SF
2+3	UPPER STUDIO	4,970 SF
7	LECTURE ROOM	2,700 SF
6+5	LOWER STUDIO	4,390 SF
4	LIBRARY	2,160 SF
8	FACTULTY STUDIES	2,100 SF
	HALLS AND EGRESS	5,720 SF
	MECHANICAL	4,000 SF
	TOTAL	28,550 SF

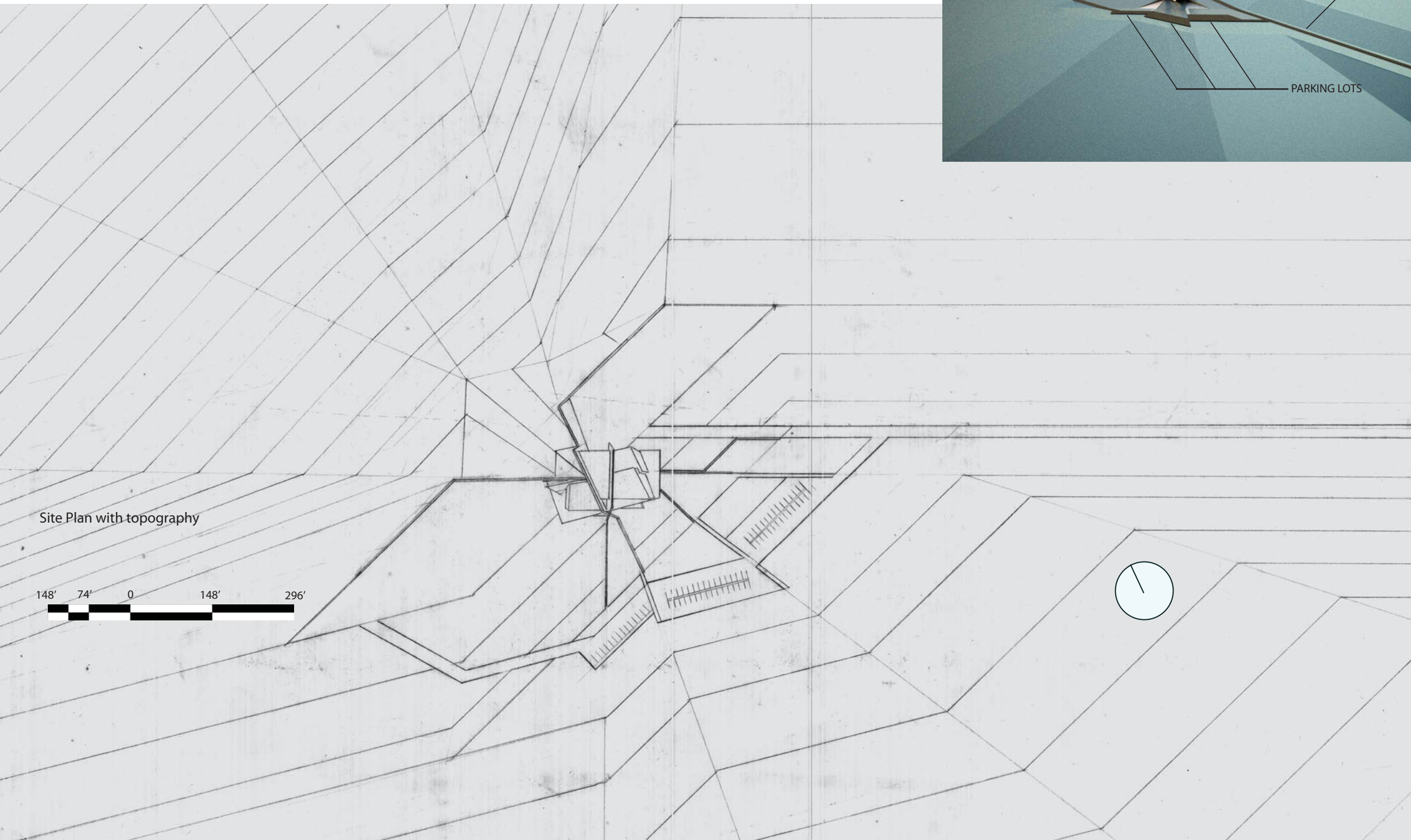
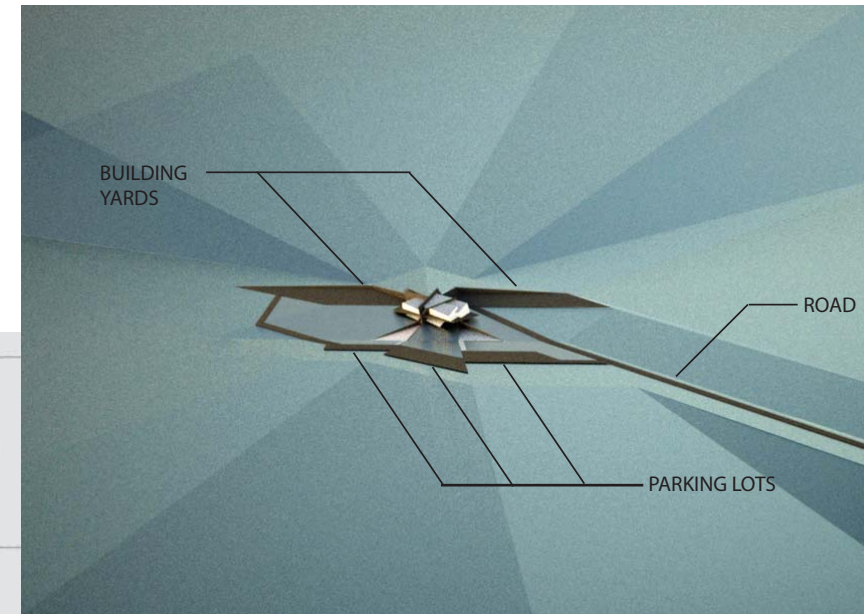


Massing studies

The academy is comprised of eight major spatial modules arranged around a central composition of intersecting planes. Entrances and circulation are accommodated within the space between the central planes, while various programmatic uses are arranged throughout the eight units. The lower four modules on the first floor include a library in one unit adjacent to the faculty studies in another. Two modules are combined to create a large space for the lower studio. The four modules on the second floor house a wood and metal shop in one, a lecture room in another, and again two units are combined to accommodate the large upper level studio space.



The treatment of the site and surrounding area considers the land an extension of the plastic material composing the building itself. The geometry of the intersecting planes is projected out into the landscape, flattening the once undulating surface of the earth into widening planar facets. Main approach to the site comes from the south-east, along a straight road that delivers visitors into a progression of three parking lots. There are two entrances to the building from these lots on the lower level. The second level provides access to outdoor building yards for full-scale construction projects.



Site Plan with topography

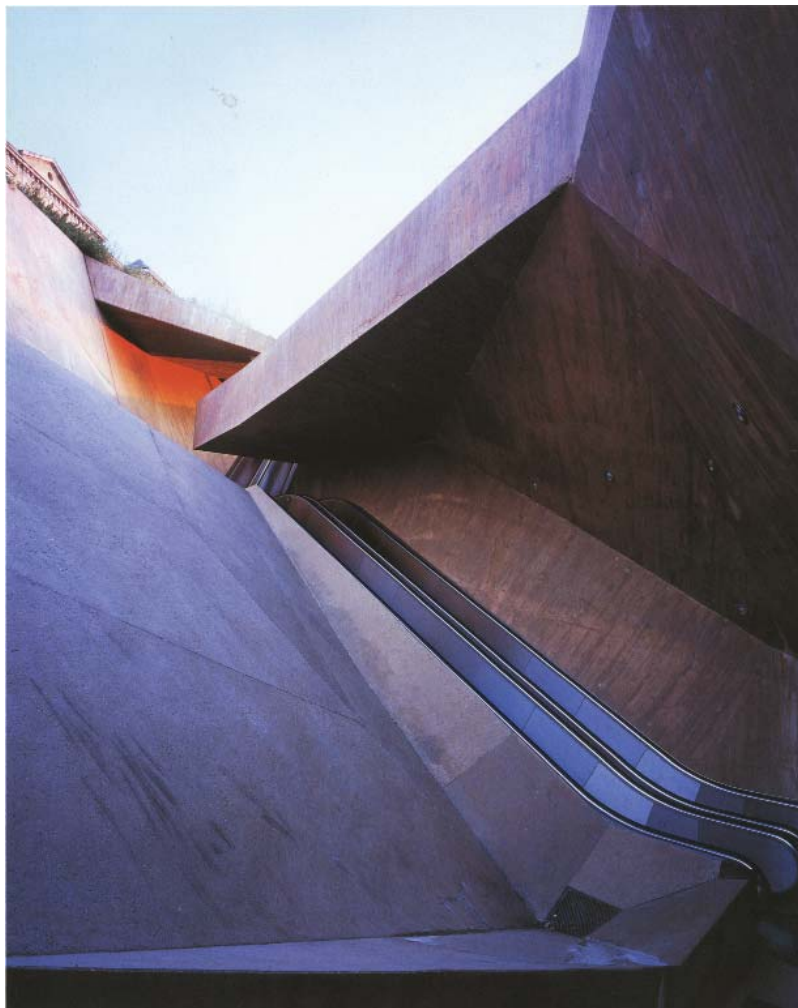
148' 74' 0 148' 296'





#4 Phaeno Science Center, Wolfsburg

# 5 La Granja Escalator, Toledo

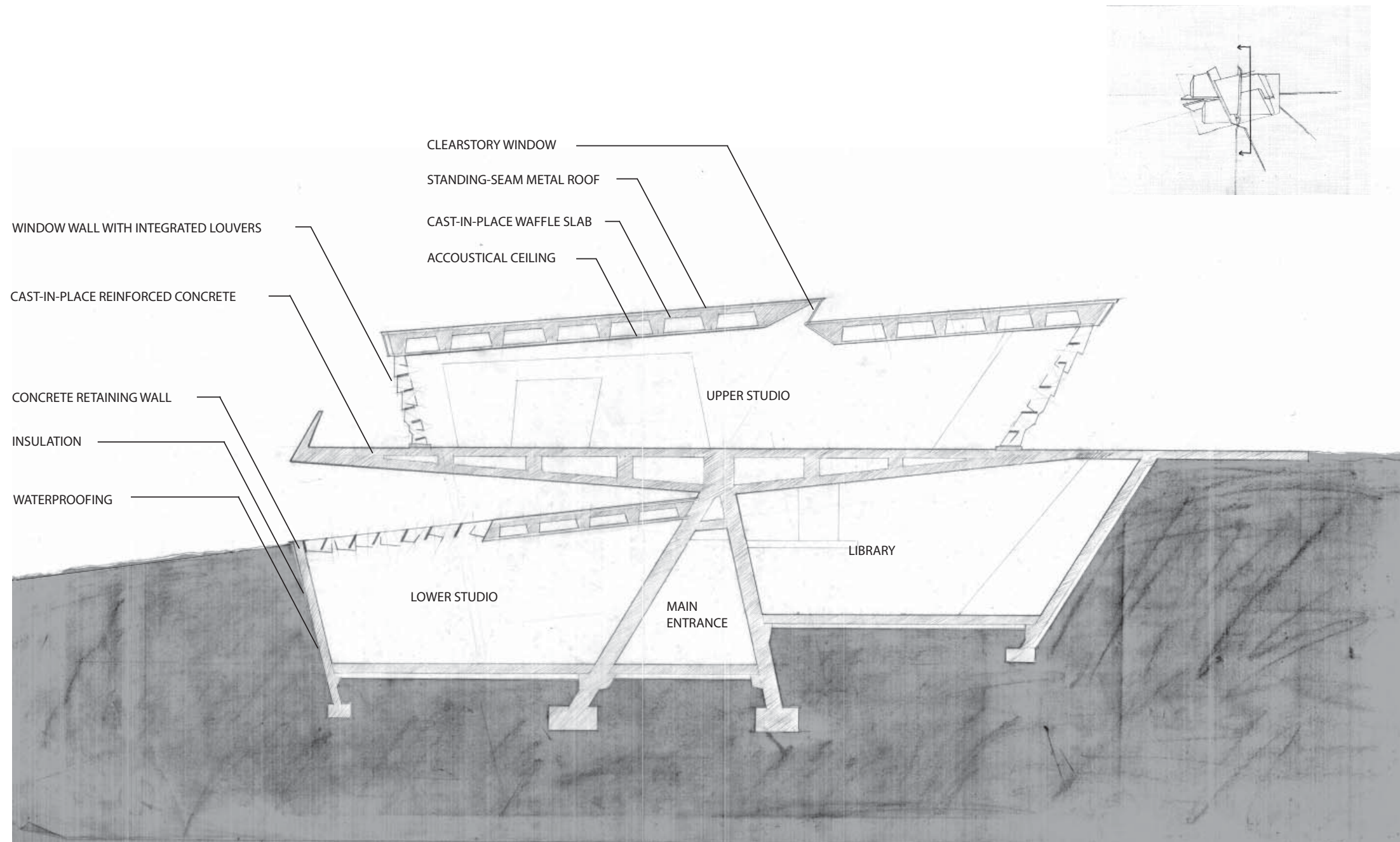


Cast in place concrete is the main construction material of the building. The complex form of the academy makes a special concrete mixture necessary that includes an additive called plasticizer. Also known as SCC (self compacting concrete) this product is notable for its ability to flow very easily without blocking and to expel entrapped air. It is used when compaction by conventional means is impossible. In the case of the academy, SCC is needed due to the high amount of reinforcement in combination with a thin section, as well as complex shapes such as inclined areas where a vibrating poker might damage the face of the formwork.

There are three categories of exposed concrete surfaces to be specified within the building. Category a: exposed concrete surfaces on horizontal planes of the building serving as floors. Category b: exposed concrete surfaces on vertical or inclined surfaces. And Category c: unseen concrete surfaces with no special requirements. The surfaces of category (a) are polished to remove between 6 and 10 mm of concrete. This leaves a shiny dark surface which shows the aggregate. It gives the impression that one is able to see "inside" the solid mass of concrete, exploring contrasts between transparency and opacity, unit and whole. After being sealed with water repellent, the shiny impregnated finish provides corrosion resistance. The surfaces of category (b) areas are smooth and soft to the touch with a light grey matt finish. The formwork panels for the entire building require custom fabrication, the pattern of which is very important for the areas of category (b). The seams between panels follow the same regulating geometry as the edges of the wall, all of them receding as if in perspective to a single point beyond the edge of the physical wall. This accentuates the optical effect of exaggerated perspective along the entire visible surface.

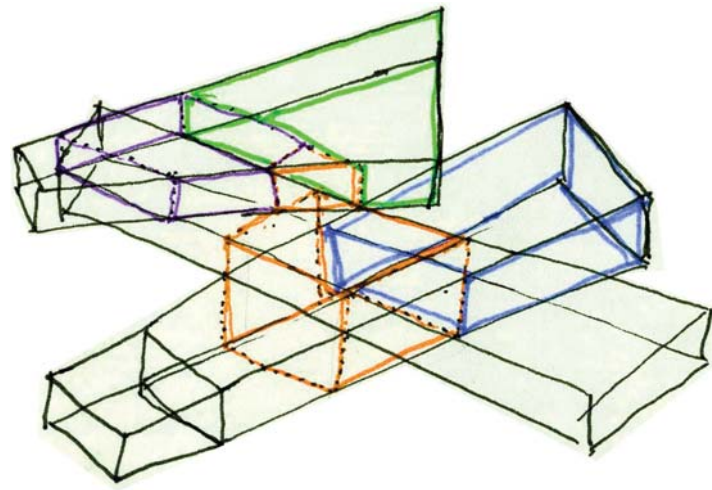
#4 Phaeno Science Center under construction:  
Pfeifer, Gunter, Antje M. Liebers, and Per Brauneck. Exposed  
Concrete Technology and Design. Basel: Birkhauser,  
2005  
Used with permission from Zaha Hadid, architect

#5 La Granja Escalator:  
Lefaivre, L., & Tzonis, A. Critical Regionalism. Munich: Prestel, 2003  
Used with permission from David Cardelús, photographer



Section

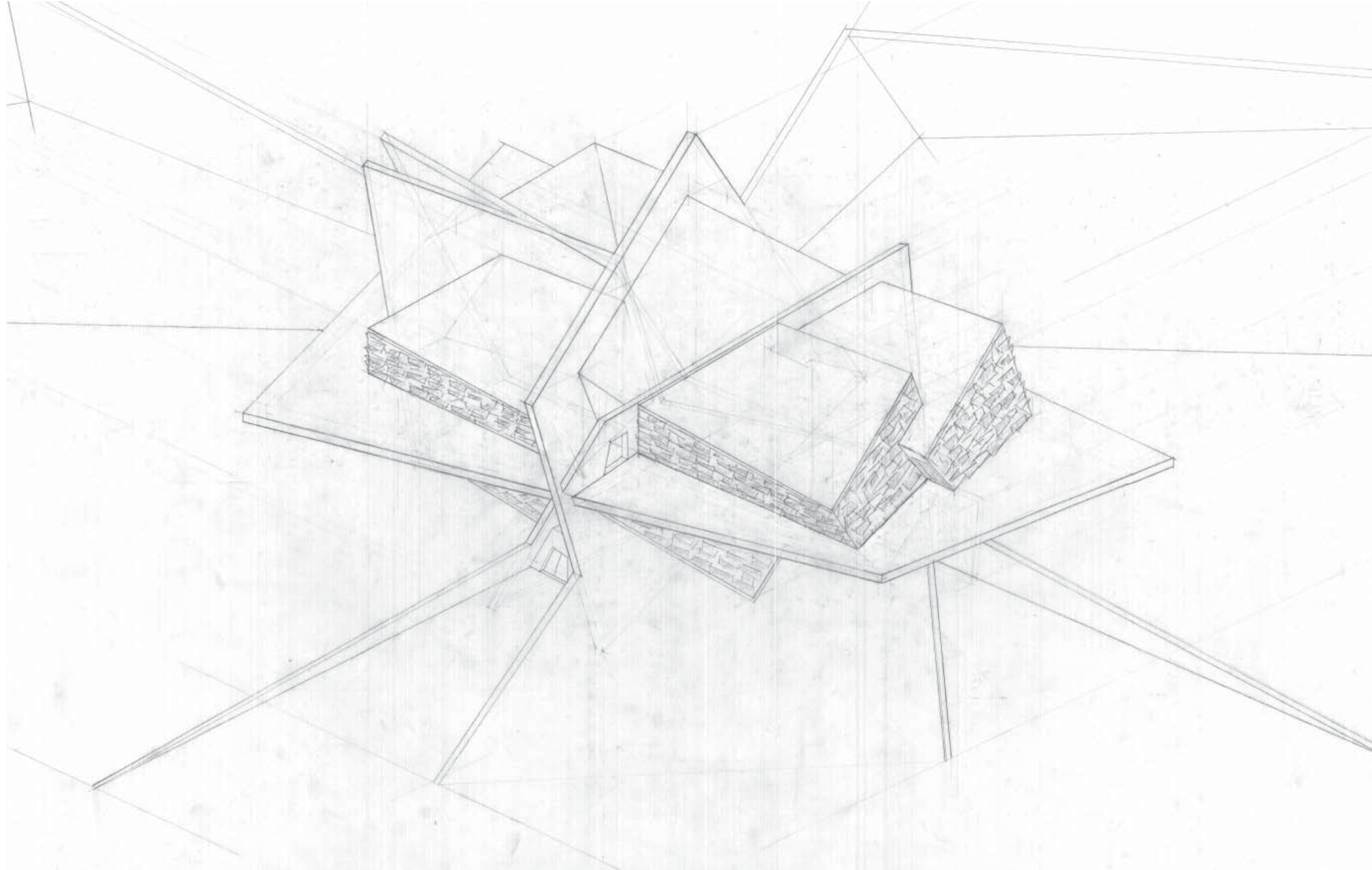




Early programmatic diagram

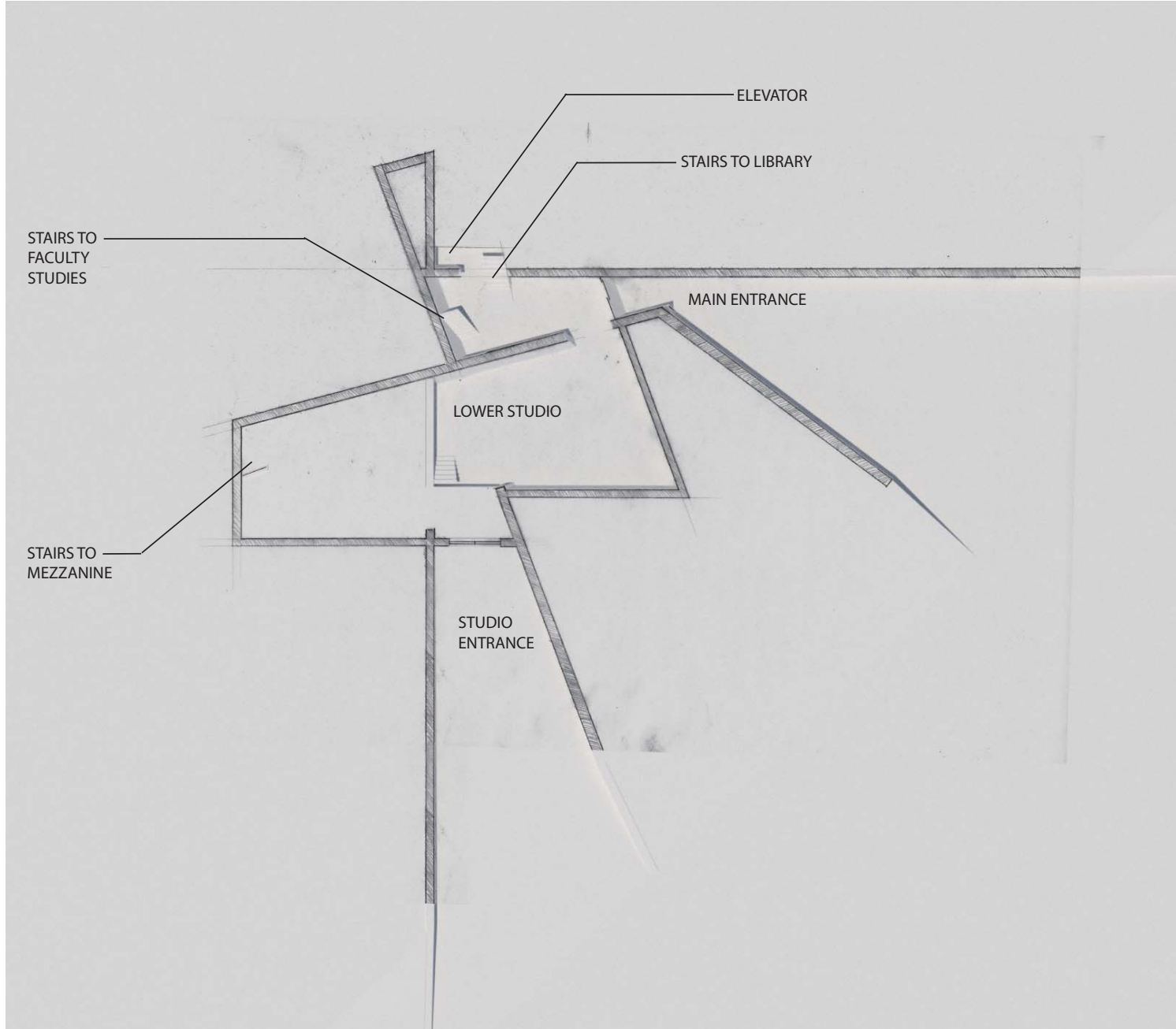


First level Plan

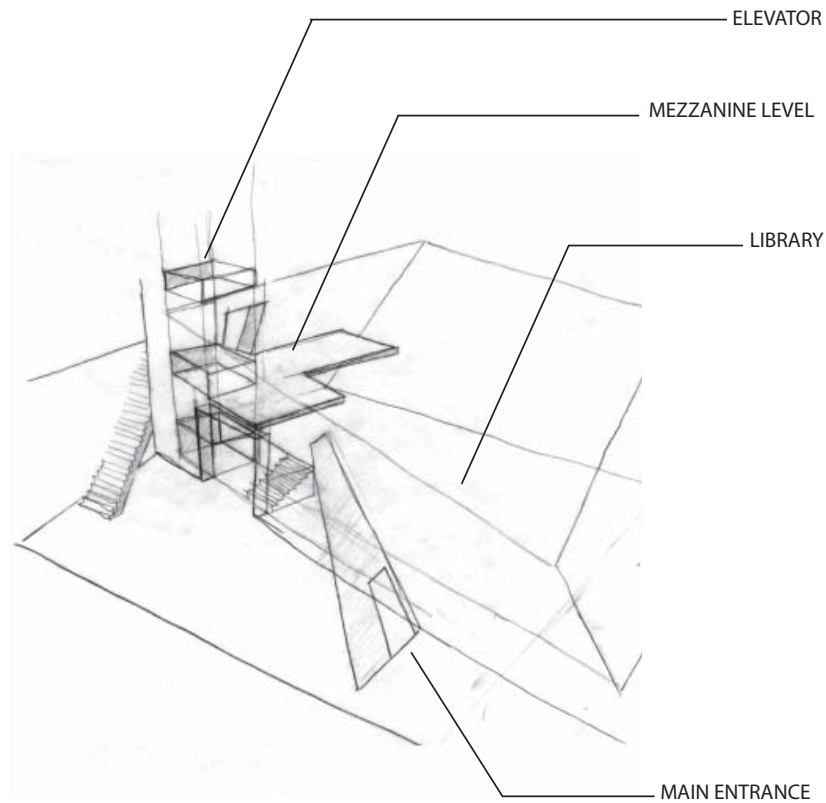


Axonometric from South

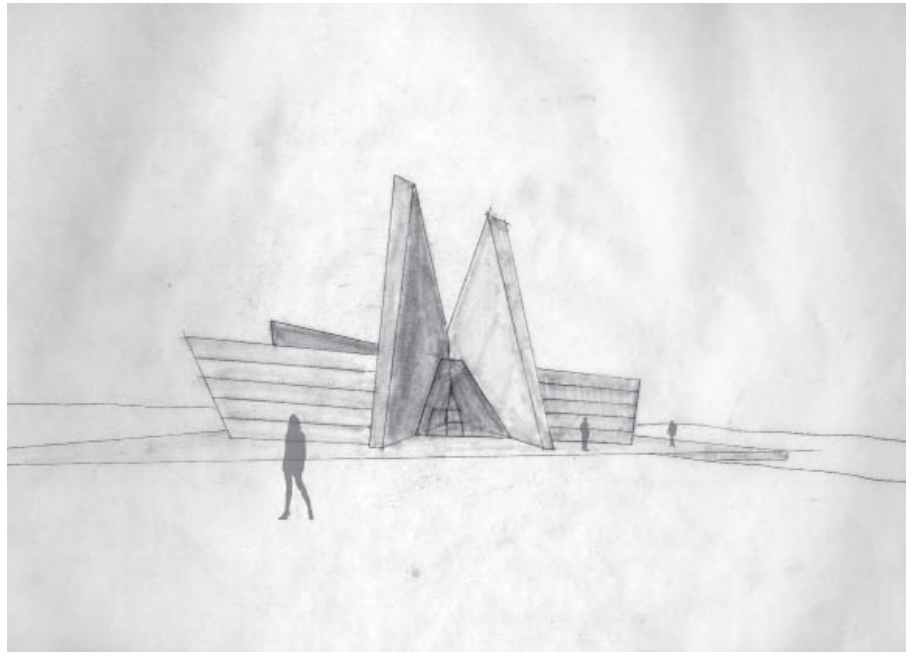




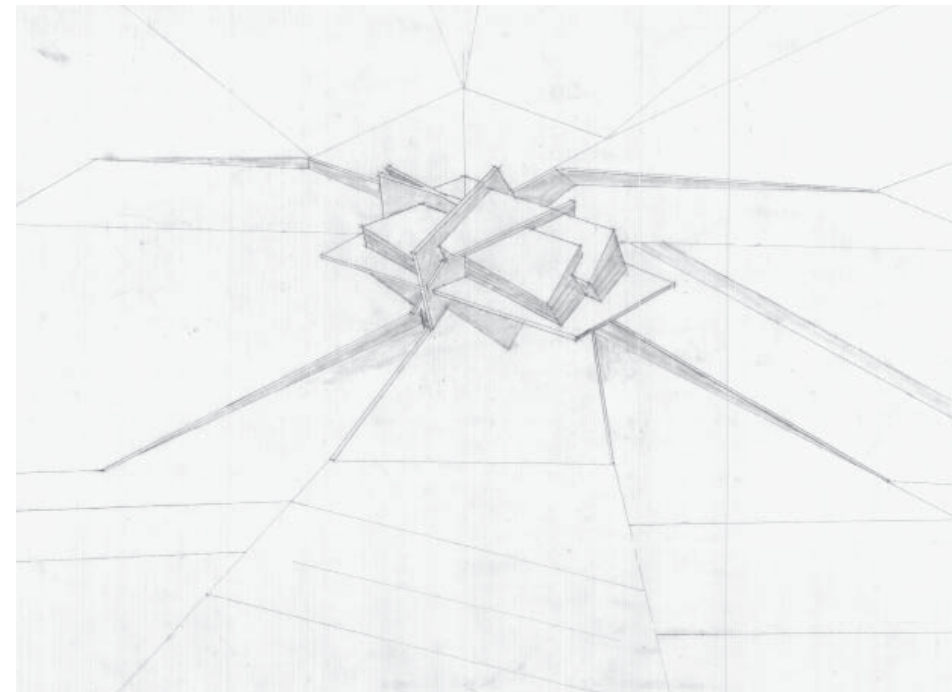
Lower Level Plan



Entering the building through the lower level main entrance, one can pass into the lower studio space to the left, enter the library to the right, or go up the stairs straight ahead into the faculty studies on the mezzanine level. There is also an elevator at the entrance to the library from which every floor of the multi-level complex can be accessed.



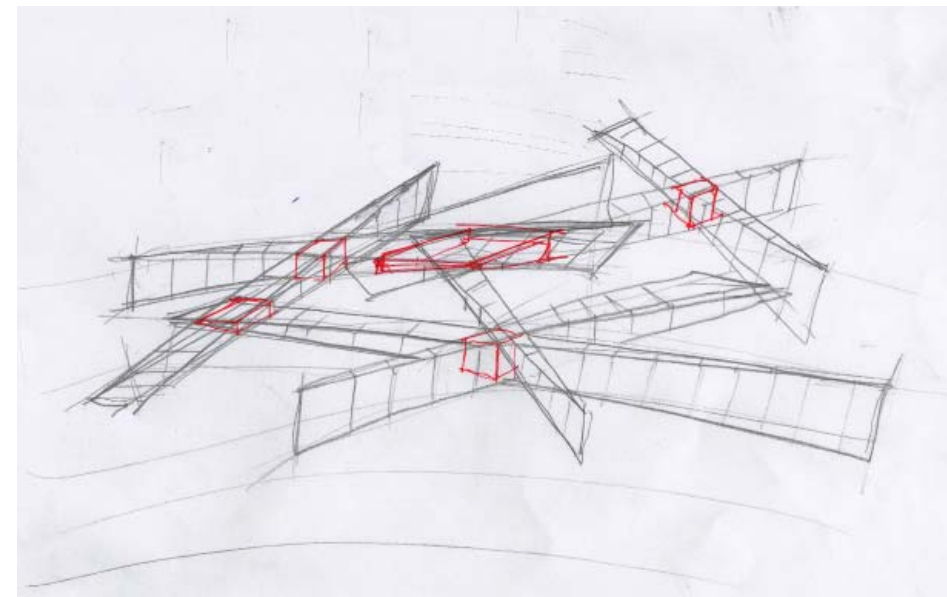
Entrance to Shop from Building Yard on Upper Level



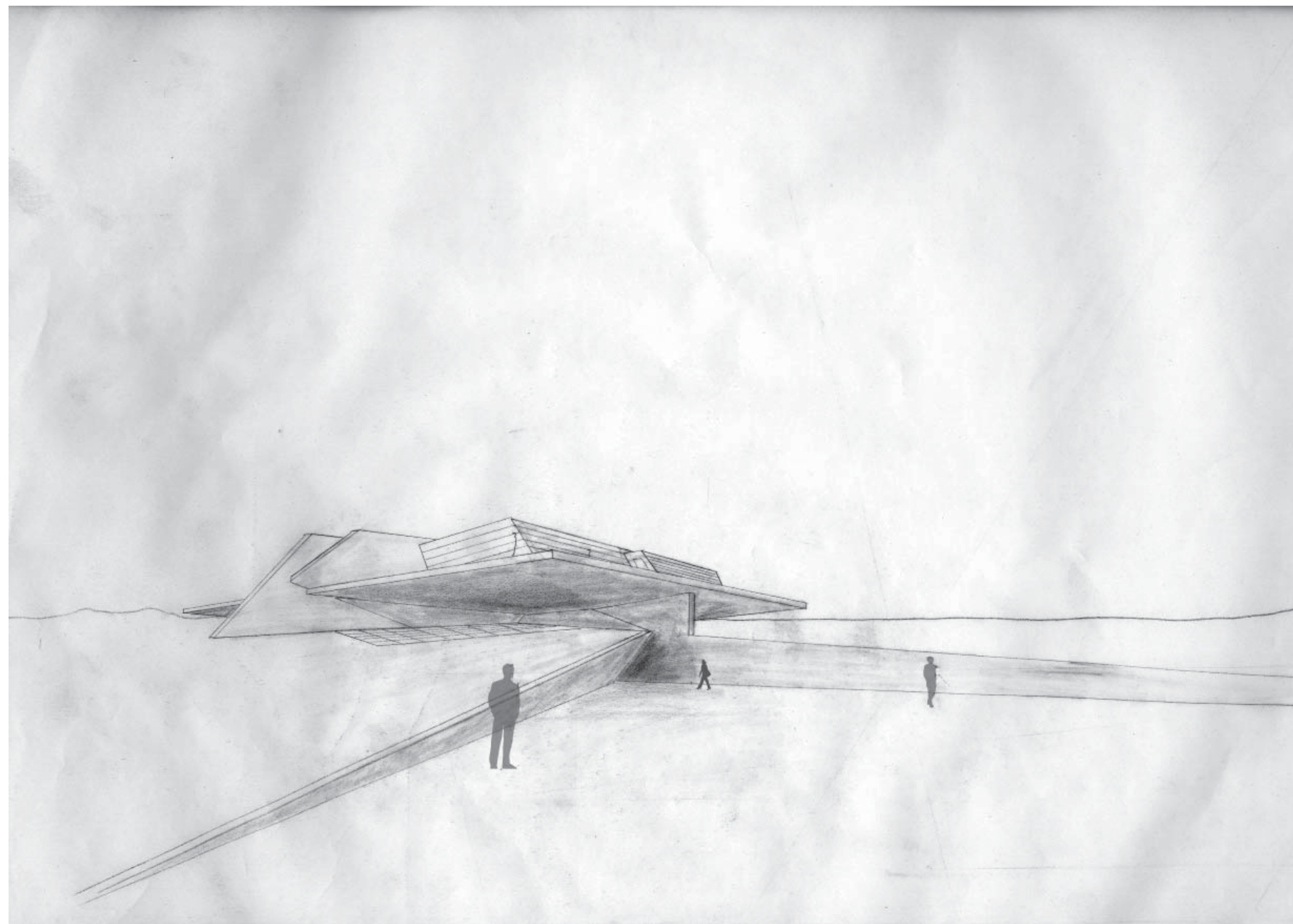
Site Axonometric

The exterior shape of the building protrudes from the ground like a jagged crystalline fragment. Inspired by the mineral structure of crystals, the building's form is evocative of natural processes while at the same time clearly a product of an era of technology.

The long low retaining walls lining the approaches to the building serve as visual markers to the entrances, guiding the visitors from the adjacent parking lots. They slice into the gently sloping earth, rising out of the ground as you advance along their path. Because they change in vertical dimension over their distance, these long rifts in the landscape create a distorted effect of perspectival perception. These contemporary versions of Borromini's tromp d'oeil recede into our distant vision faster than rectangular dimensions would allow.

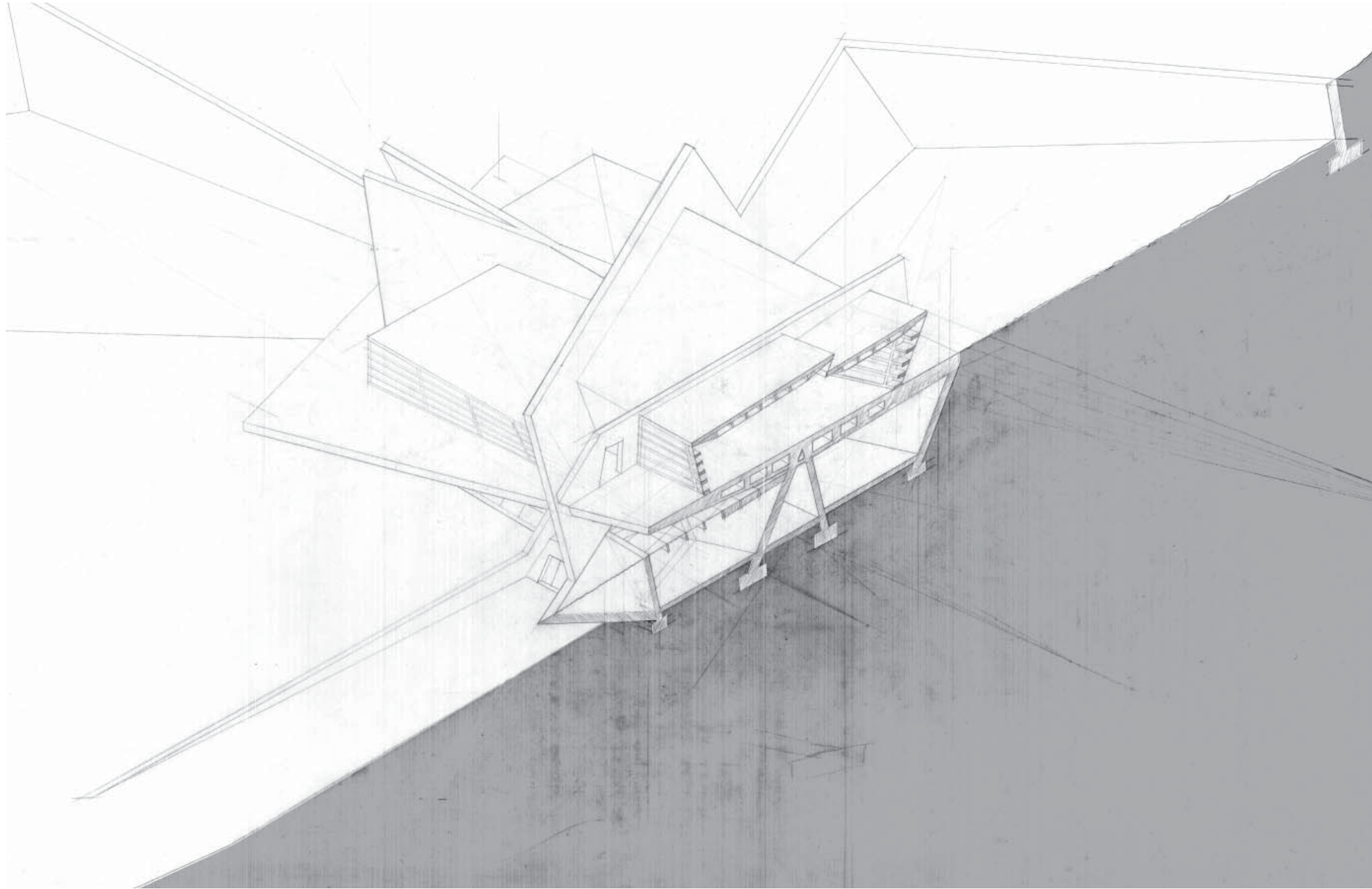


Initial concept sketch

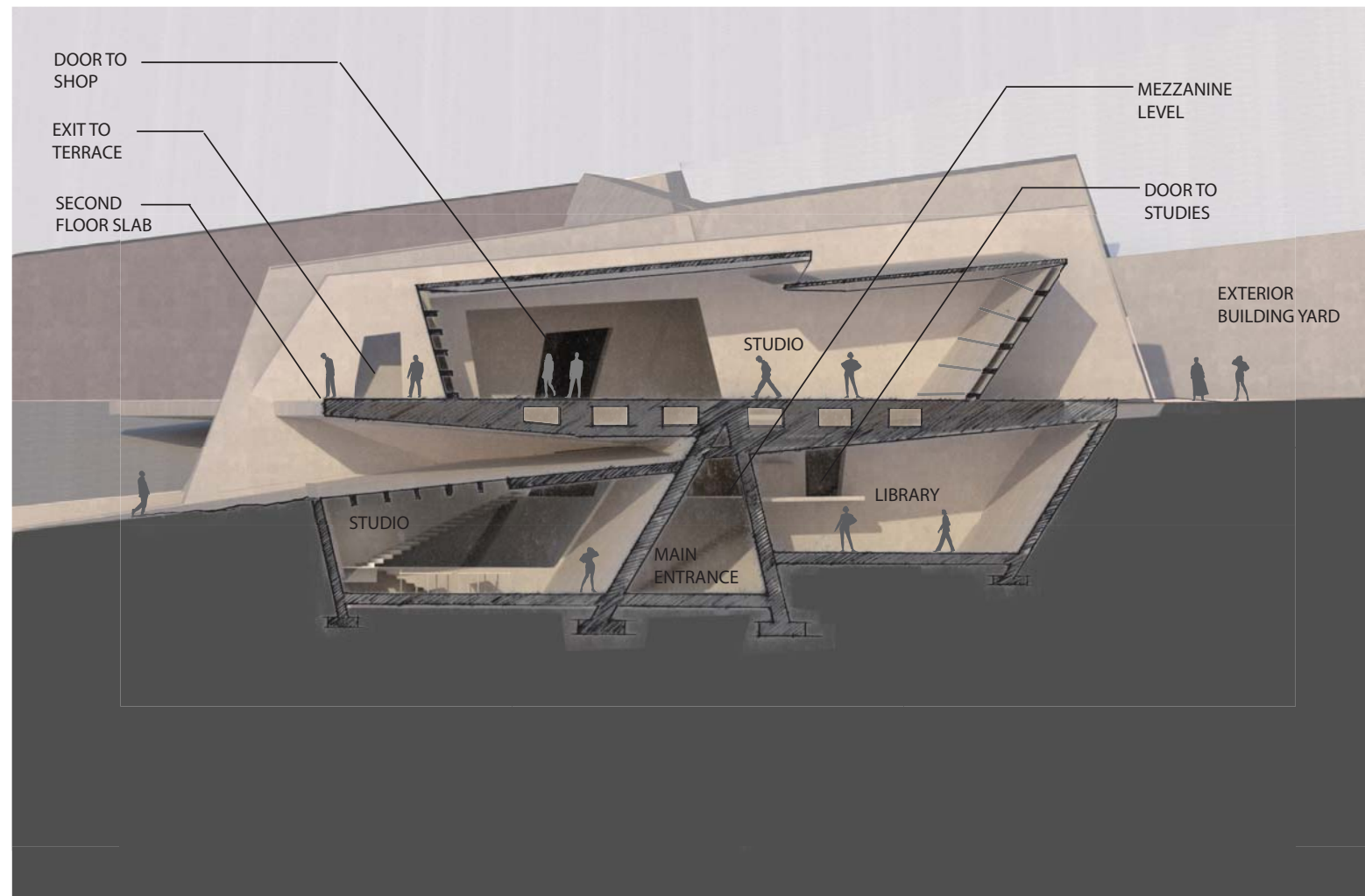


Approach to Main Entrance on Lower Level



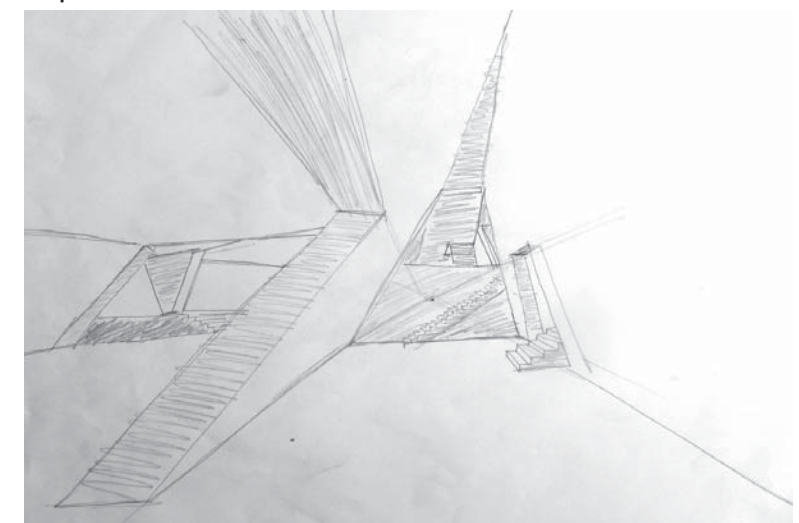
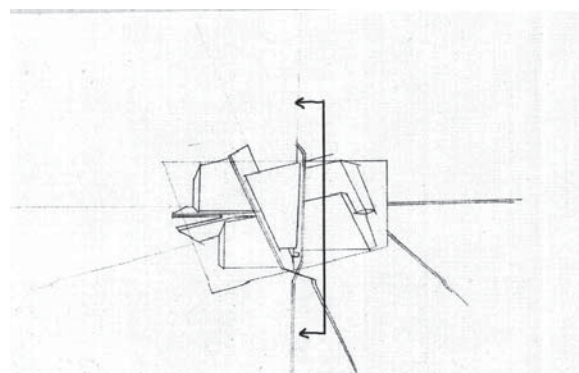


Axonometric section from South



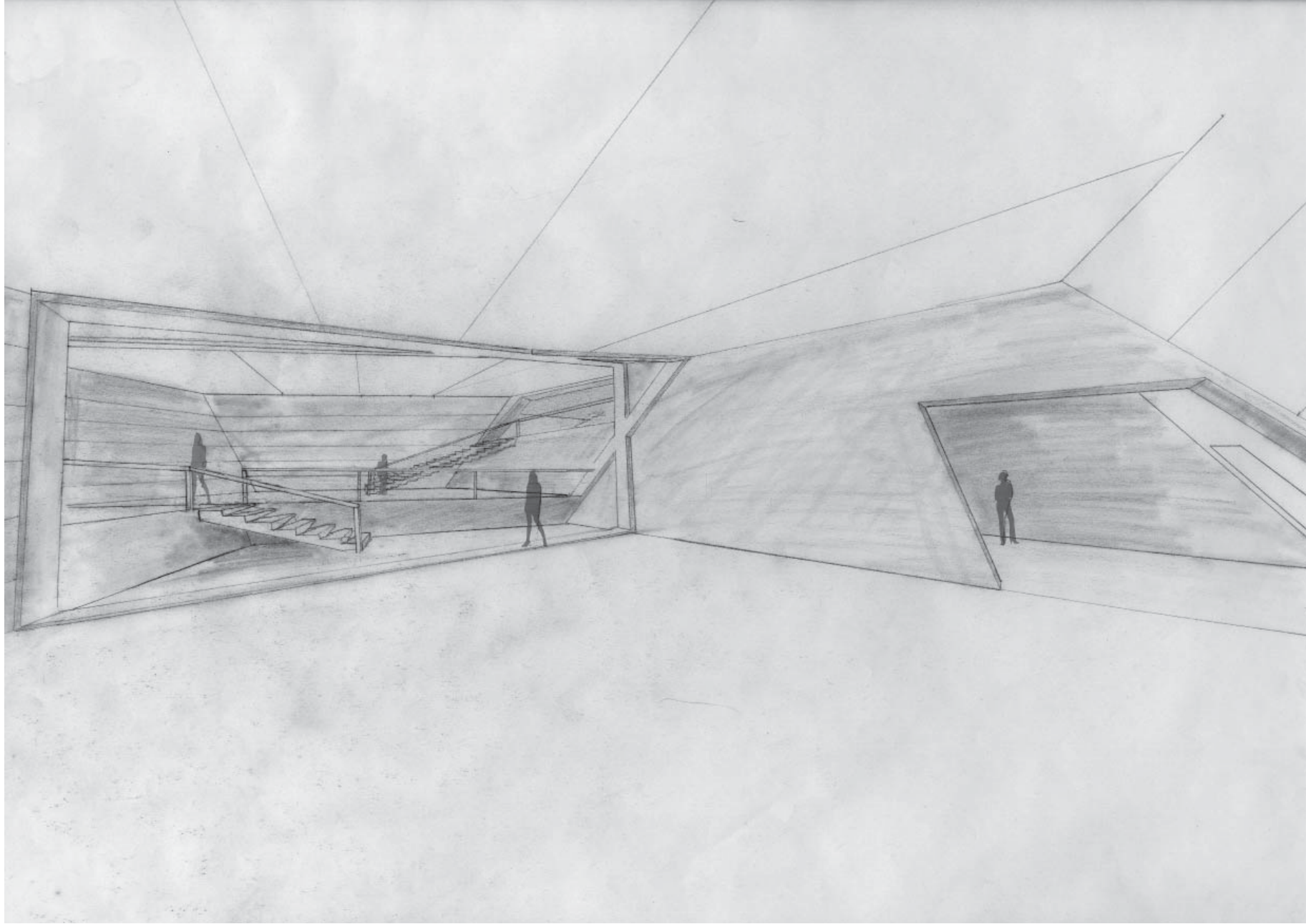
Spatial Model of Lower Studio

The building is set into the side of a sloping hill. The topography of the land is aligned with the orientation of the ceiling of the lower level spaces. The above-ground spaces rest on a large tapered concrete slab that is flush with grade on the uphill side of the building and it extends out into the air on the downhill side, shading the glass ceiling of the lower studio. This horizontal surface provides terrace space and external routes to get around the building. The structure for the cantilevered slab is accomplished by thickening the concrete towards the interior of the building mass. To reduce weight, cavities are cast within its thickness. Steel reinforcement is also cast into the slab between the voids to provide tensile structure.

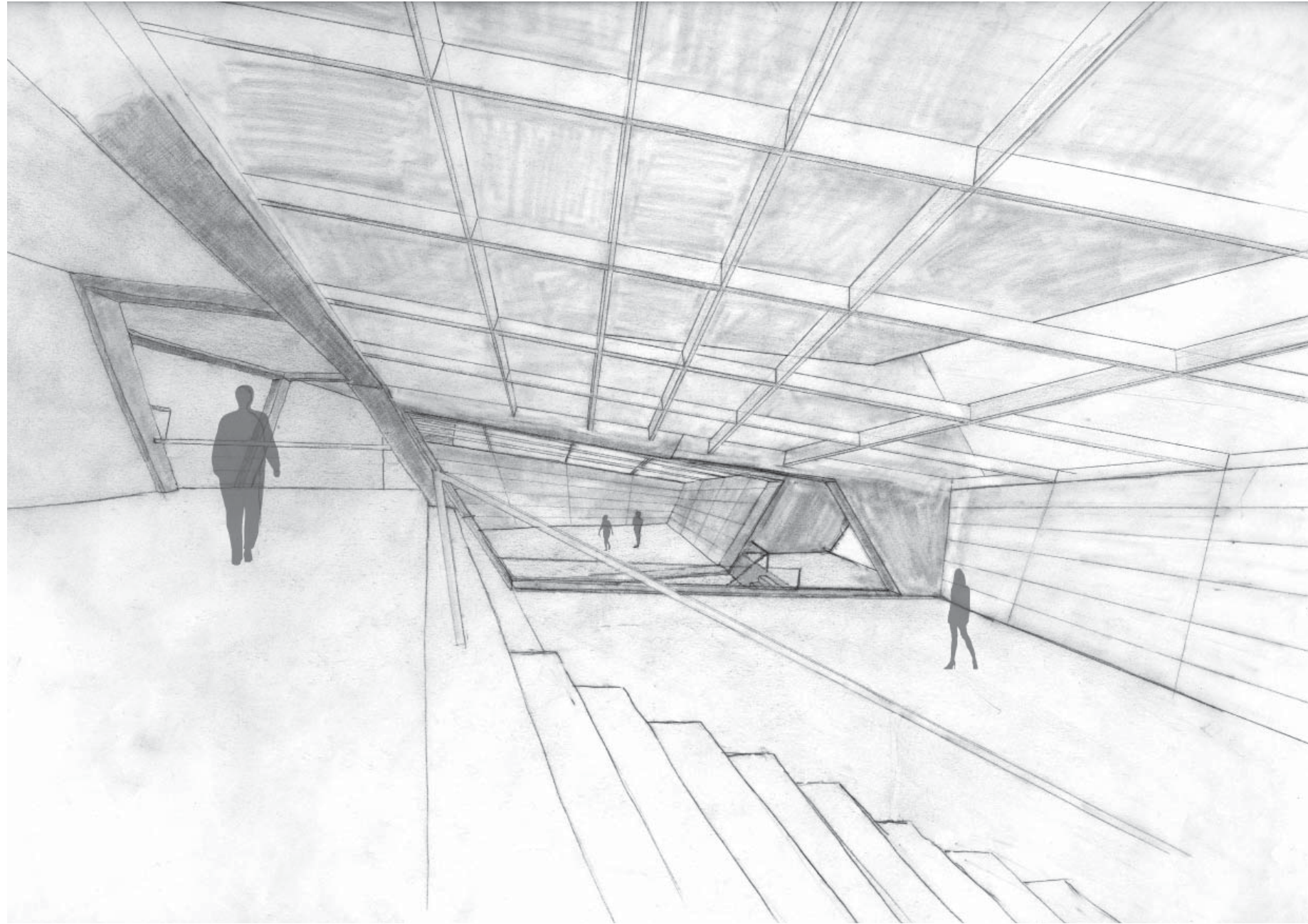


Main Entrance Hall



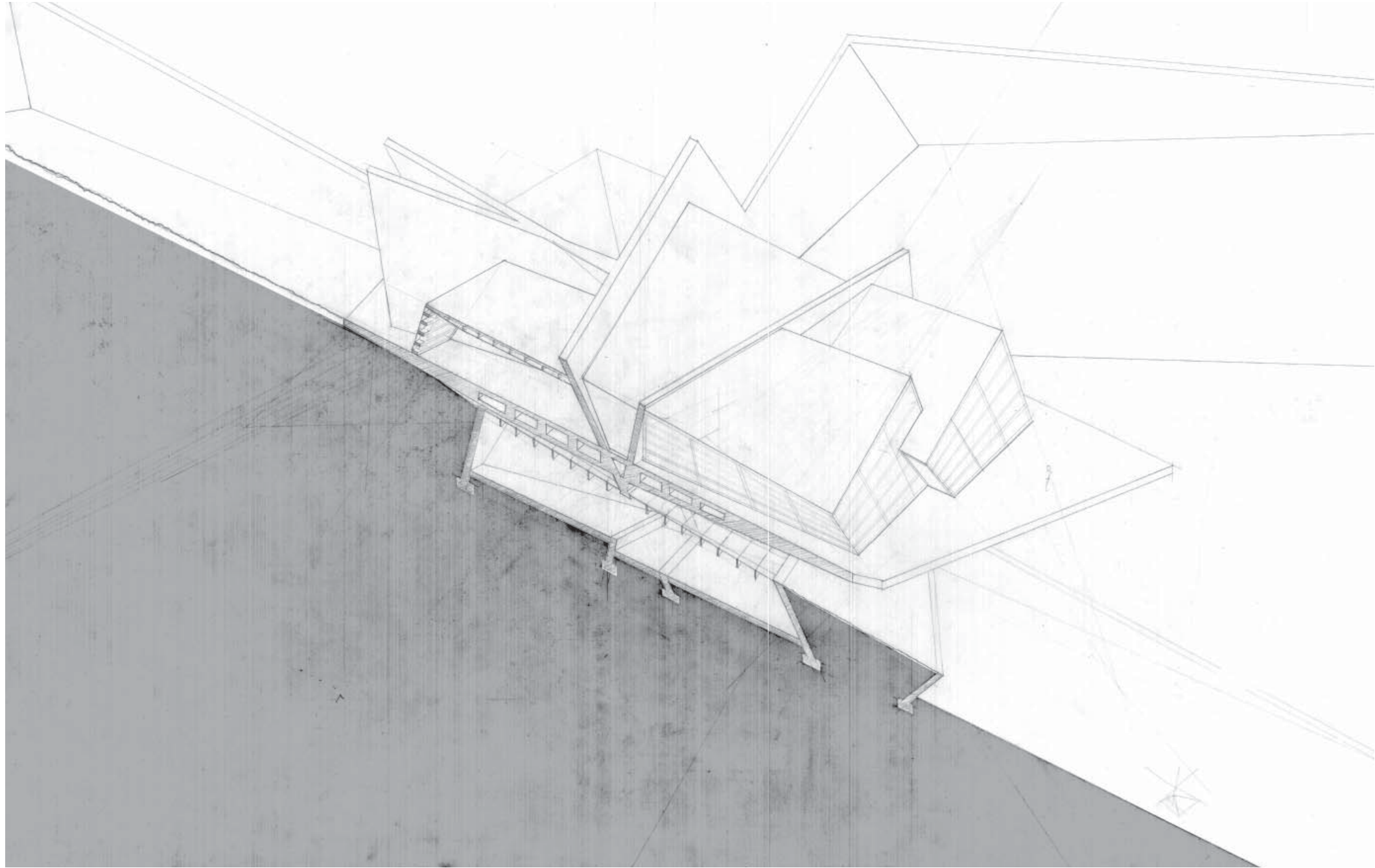


Lower Studio



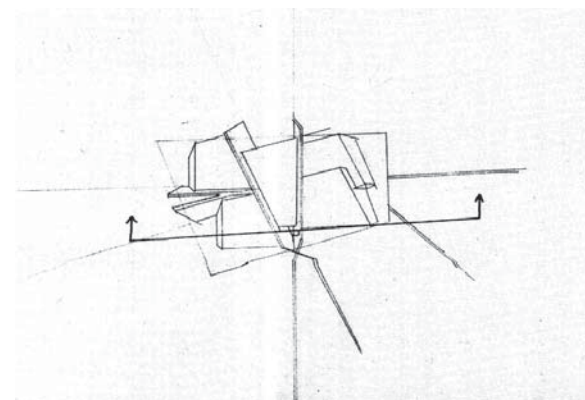
Lower Studio from Mezzanine



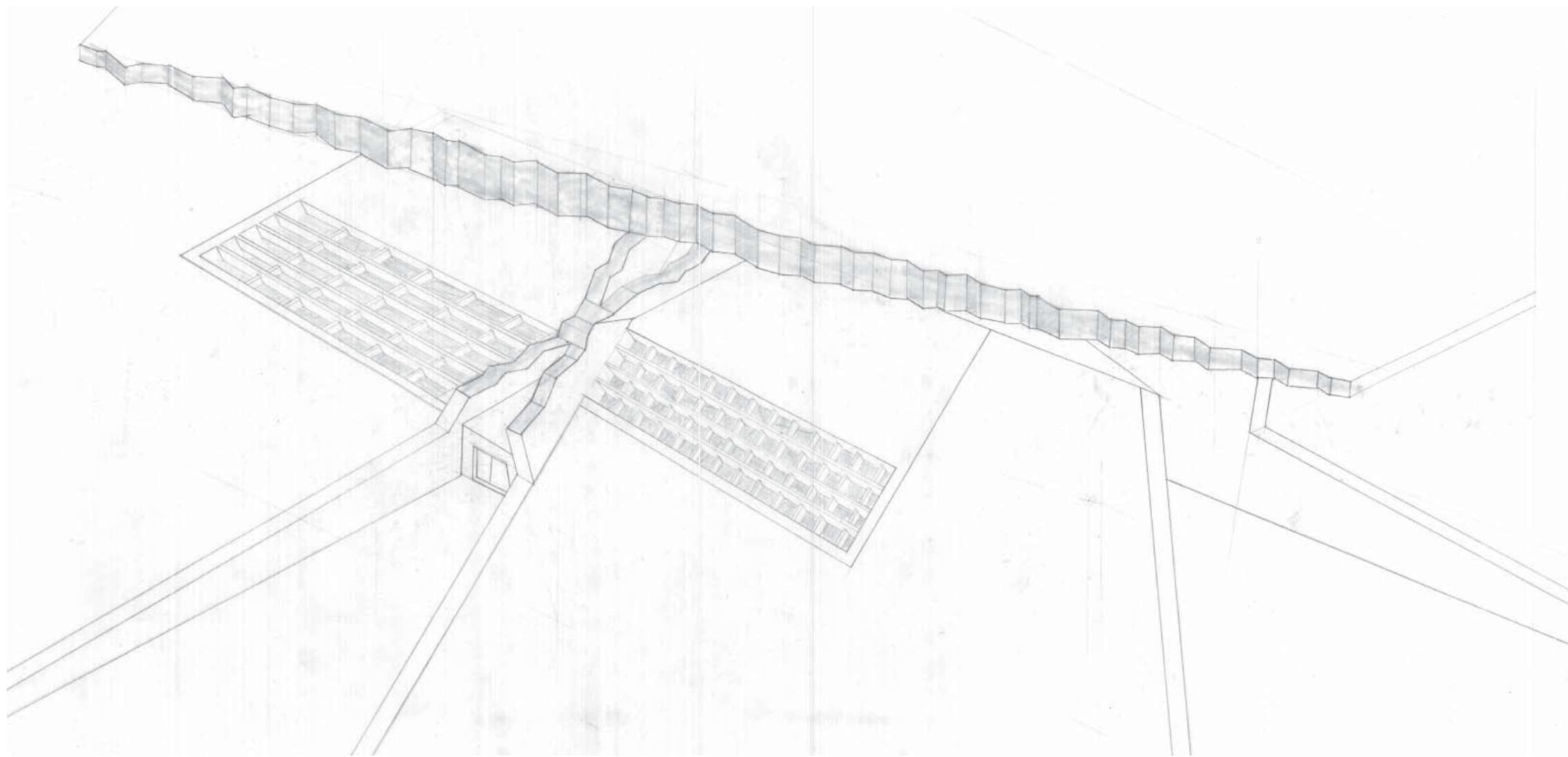


Axonometric section from South

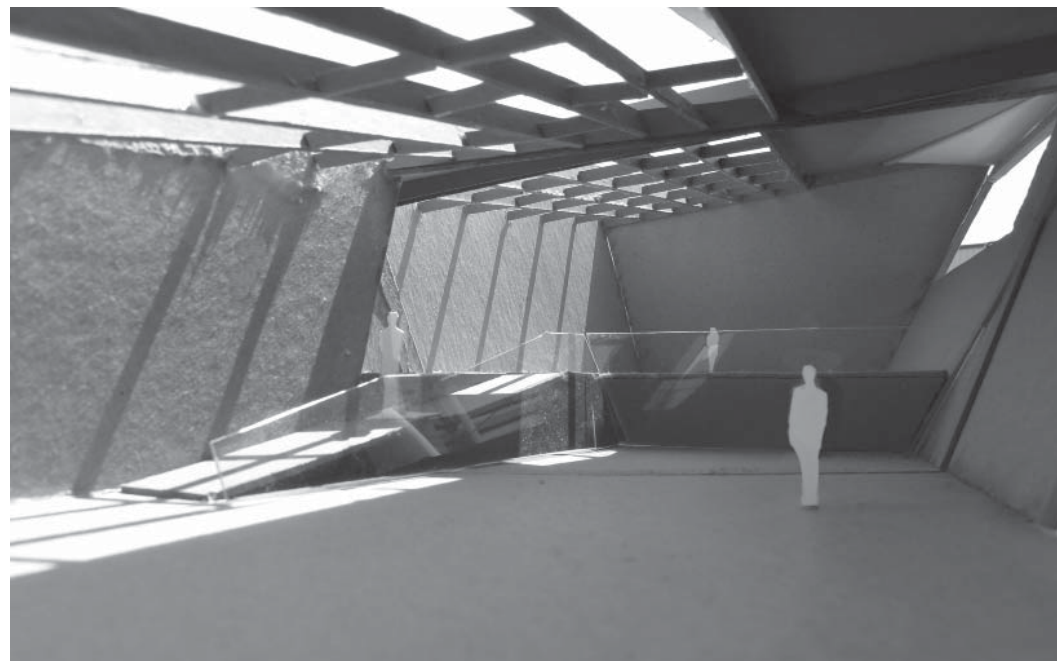




The shop on the second floor is a large space relative to the number of students, and there is exterior construction space available as well. Large-scale projects can be undertaken in a building yard immediately outside the shop, adjacent to the upper level floor slab. This amount of space is made available to students because of a belief in the importance of hand work and physical construction in the education of an architect. While designing, the architect must be corporeally aware of the means and materials of construction on a manual level. Only then can we craft truly poetic buildings. The tip of the mason's hammer is an extension of the architect's pen. When the architect is drawing a line on the drafting table, he must be able to understand the reality of the edge of that tool making the cut on the building site.

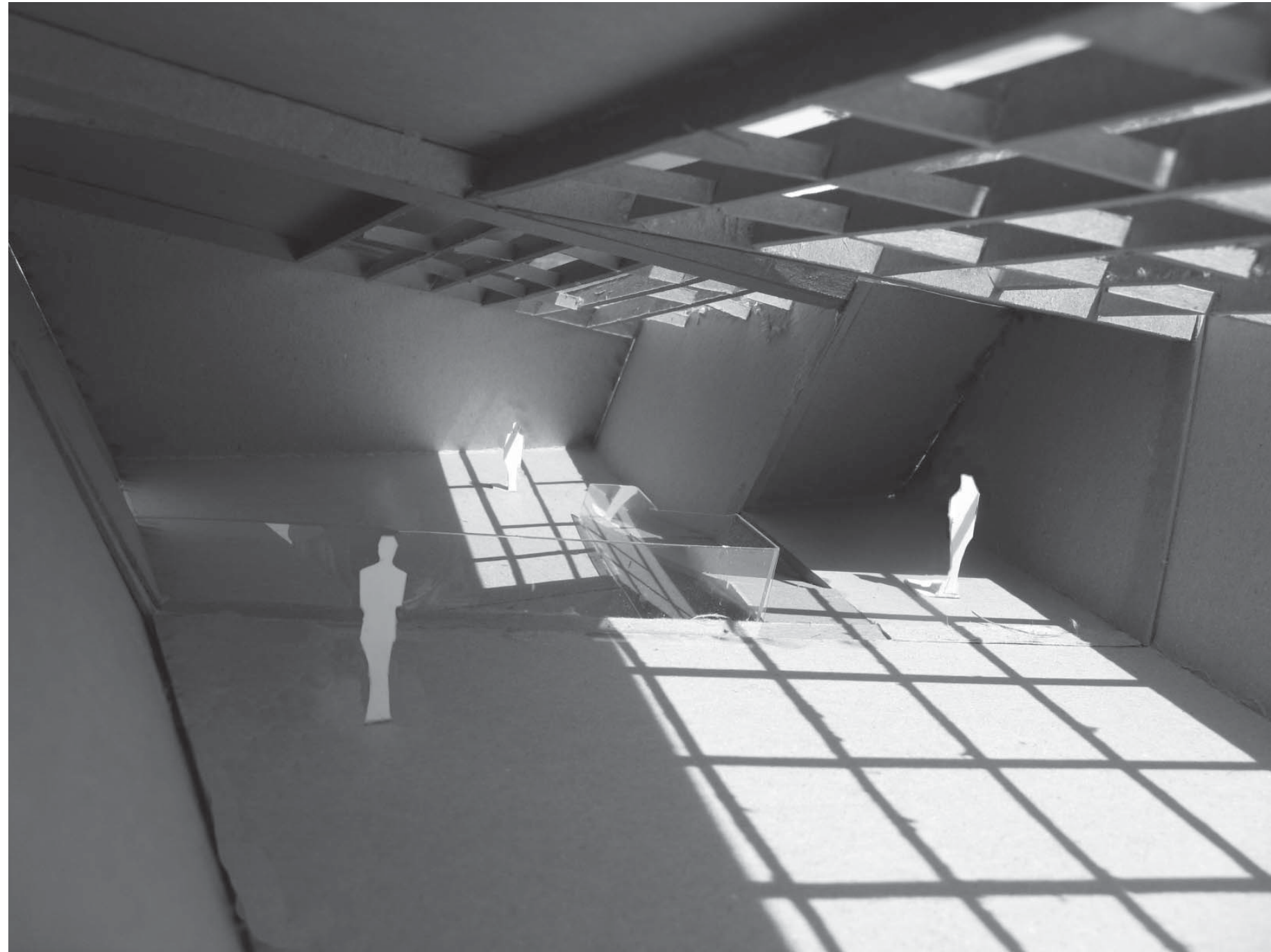


Lower Studio Ceiling and Side Entrance



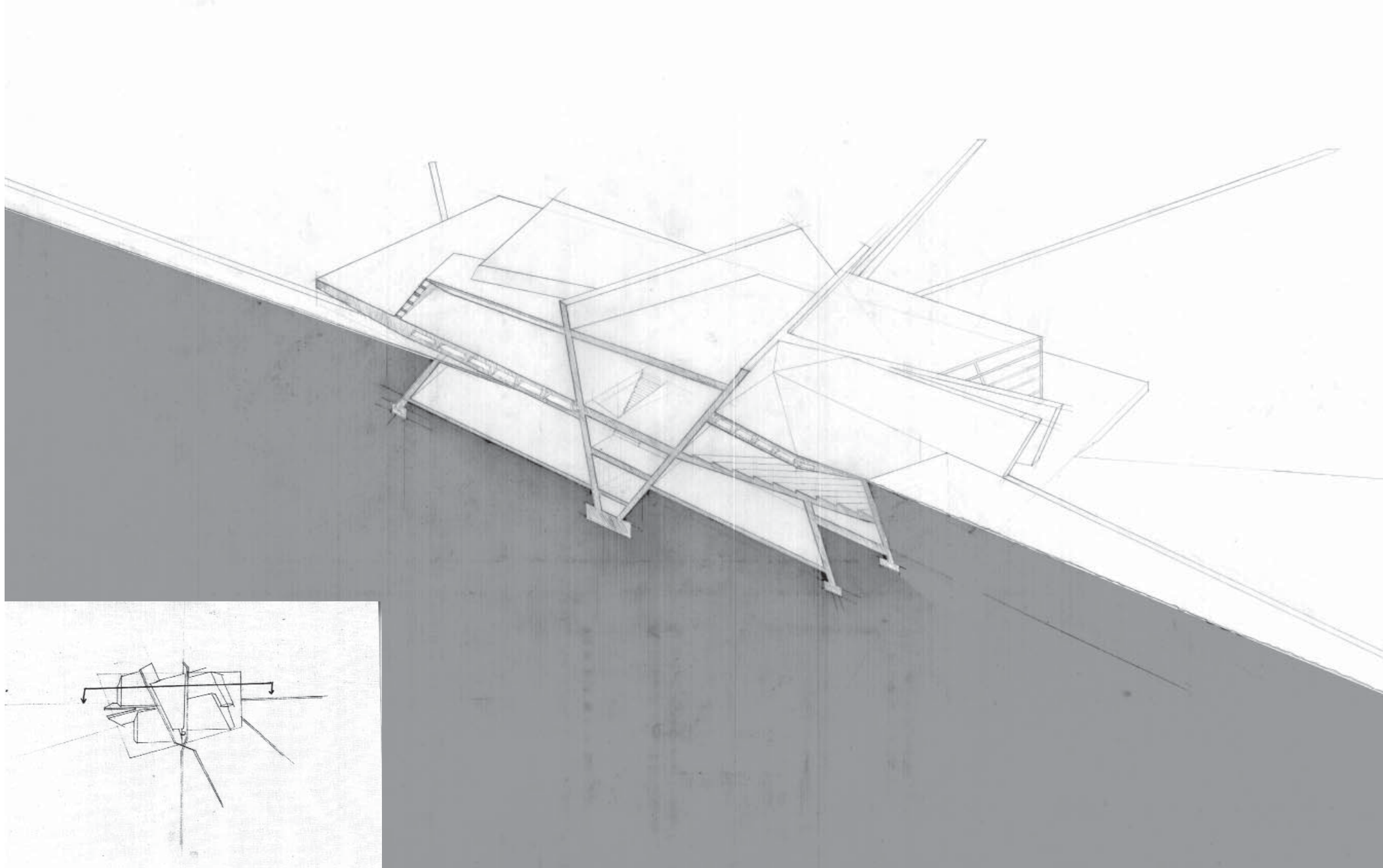
Lower Studio from Entrance Hall

The studio on the main entrance level is a multi-level space with a passage to the building's central entrance hall on the lower level and an exit to the parking lots on the upper level. The mezzanine level of the building can also be accessed from a set of stairs on the studio's upper level. The two floor heights are connected by a ramp and a set of stairs. The transparent portion of the ceiling allows for ample illumination while the lower system and second floor slab that extends out over the ceiling soften high-contrast direct light.



Lower Studio from Mezzanine





Axonometric section from North

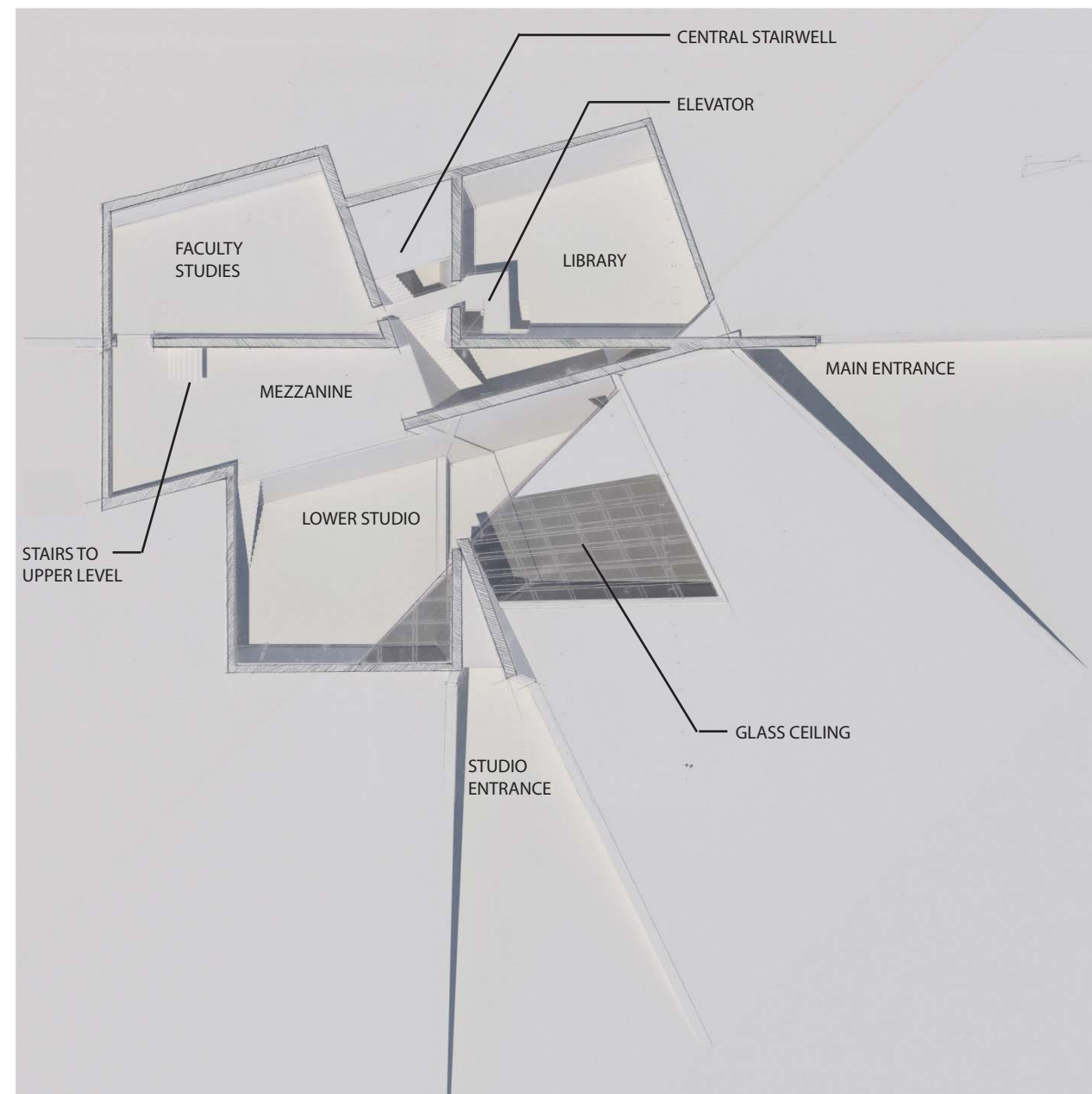




Approach to Lower Studio Entrance

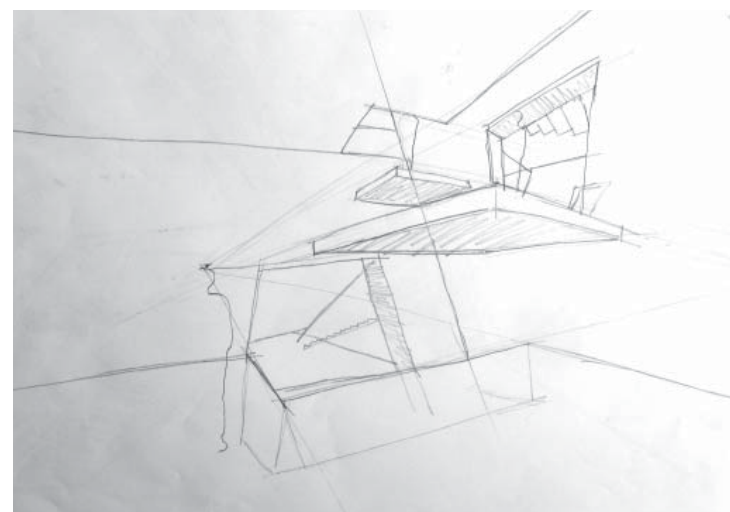
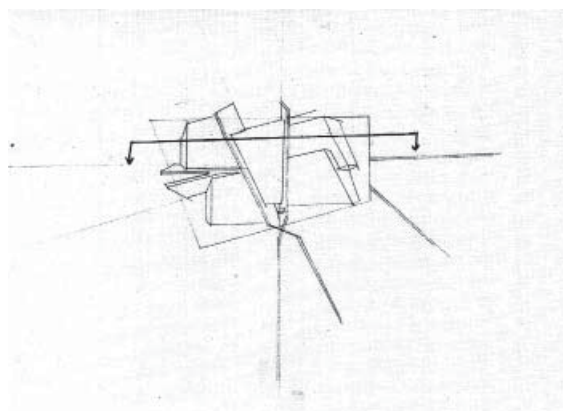
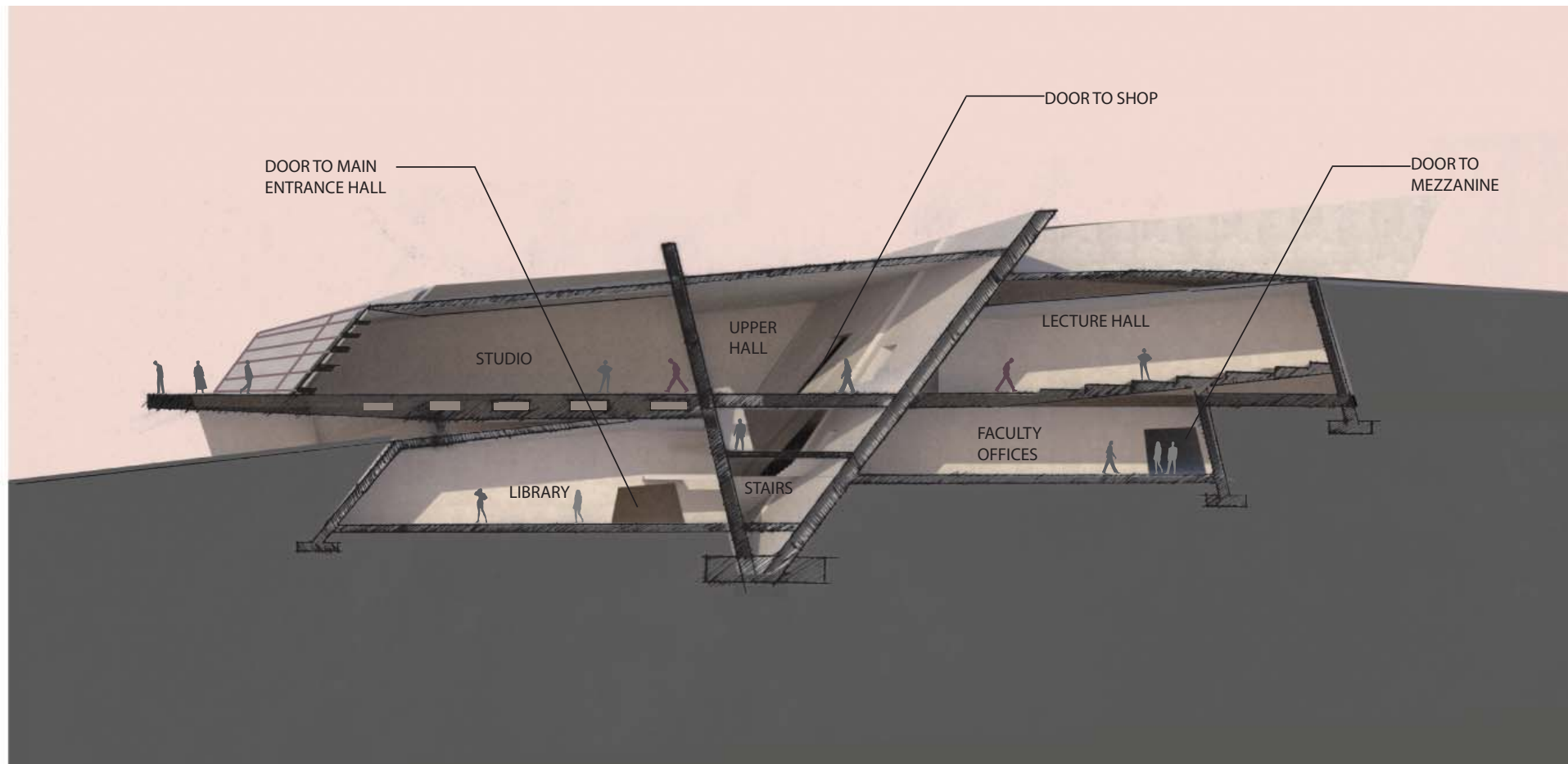
The seven main rooms exist on five different levels of elevation. Movement from one level to the next has been carefully directed through the structure of the building so as to take the trace of a spiral. These paths are inspired and directed by the rotational orientation of the regulating geometry. The counter-clockwise route progresses from the level of the main entrance, up through the lower studio and onto the mezzanine and then up through the second floor slab to access the lecture room, shop and studio on the top level.

Along with the elevator, there is a more direct internal passage to access the second floor. The efficiently designed stairwell is positioned between the two North-South oriented planar walls. It travels from the main entrance hall next to the elevator up to the central hall of the second floor.

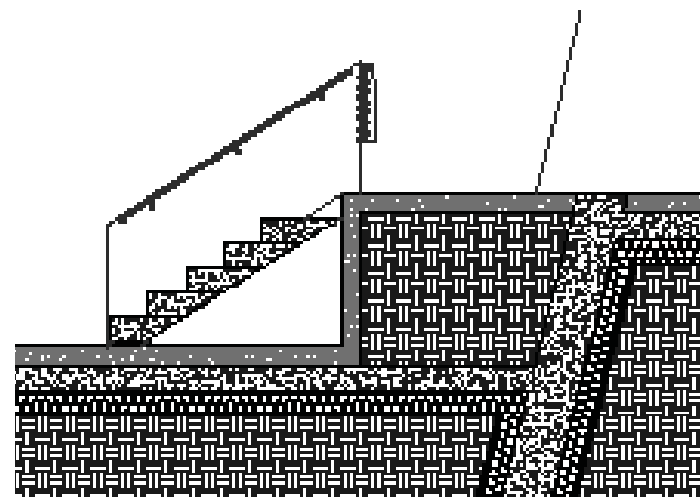


32' 16' 0 32' 64'

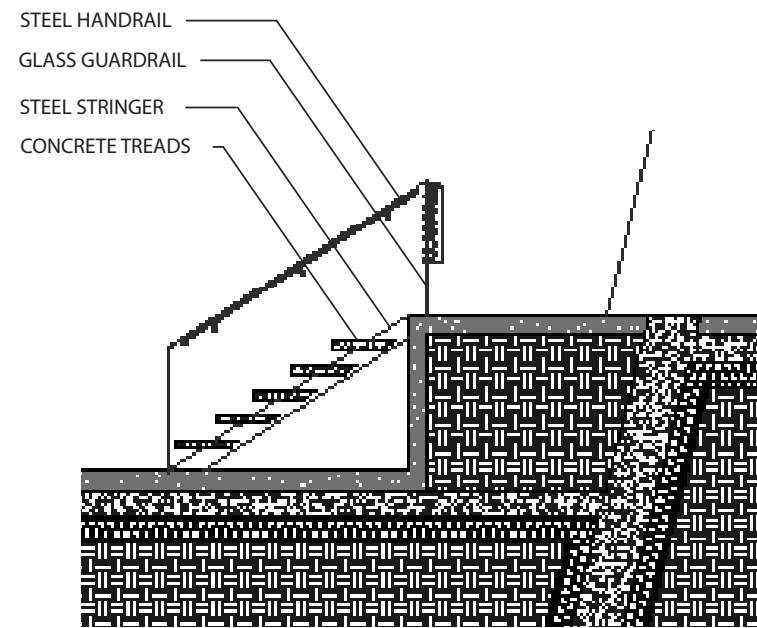
Mezzanine Level Plan



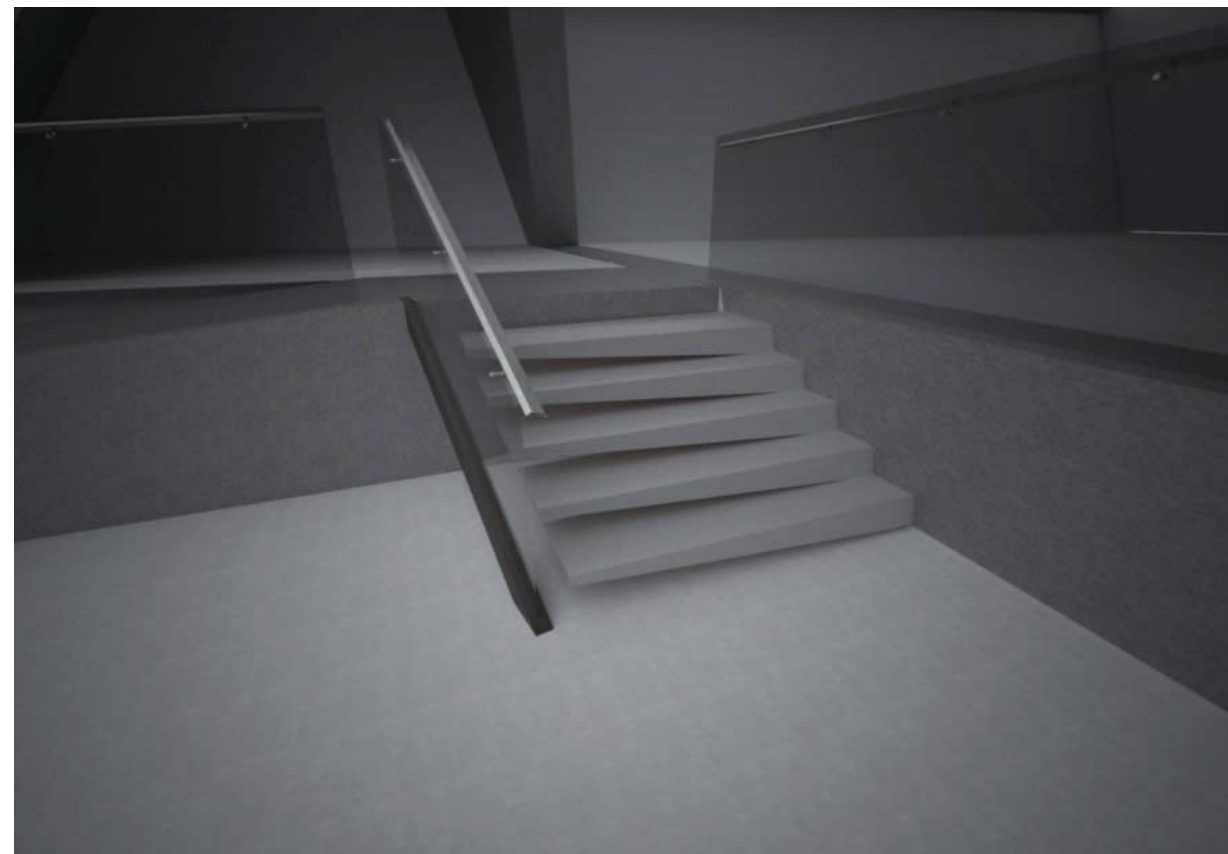
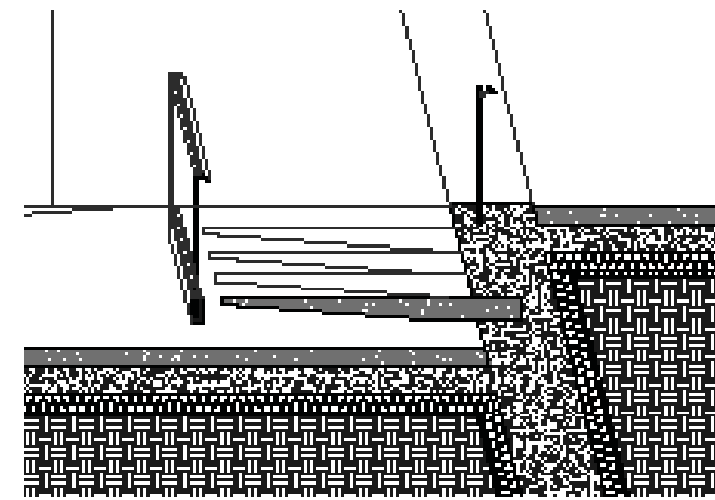
Elevator at Entrance to Library



Section through steps near wall



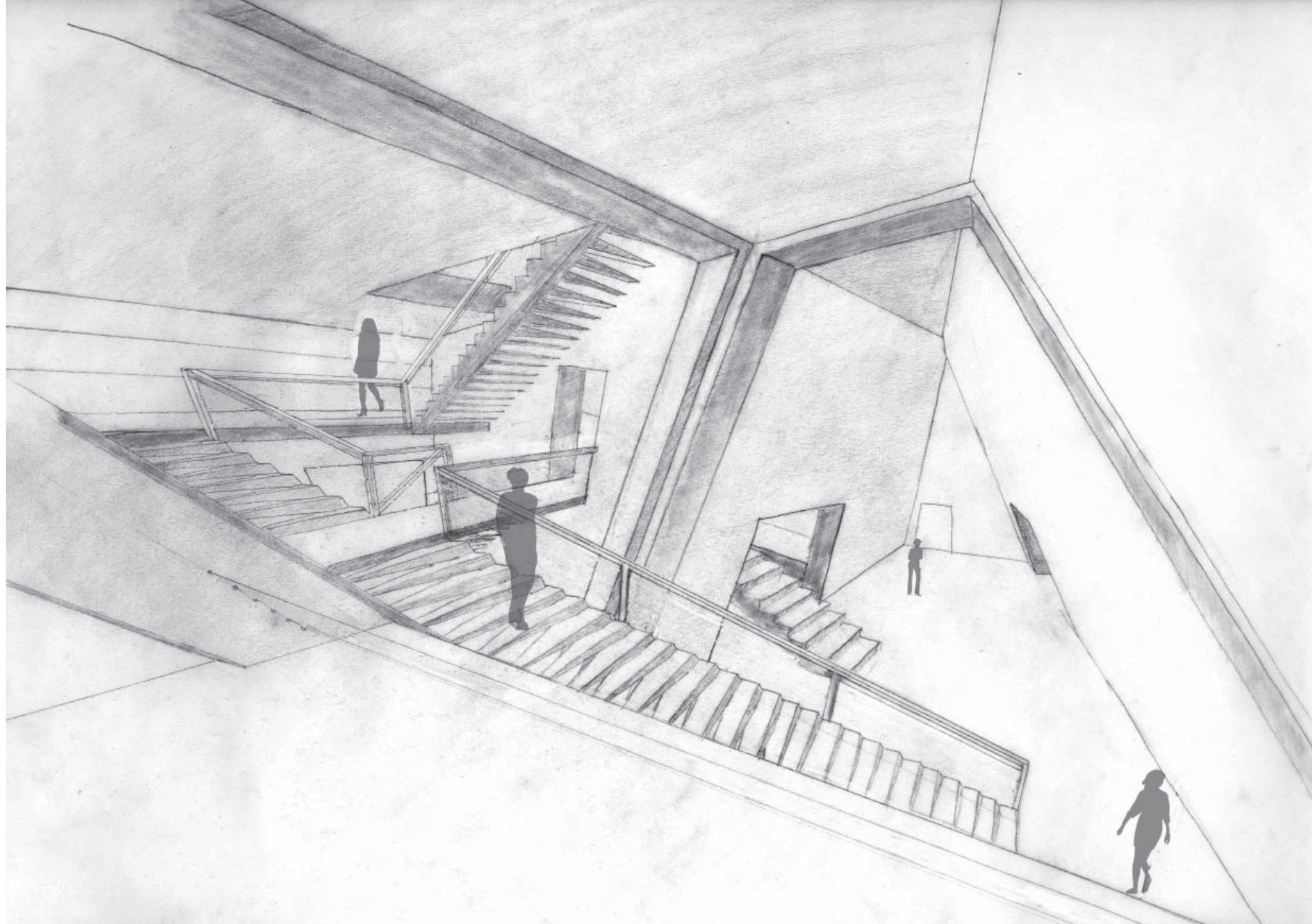
Section through steps near guardrail



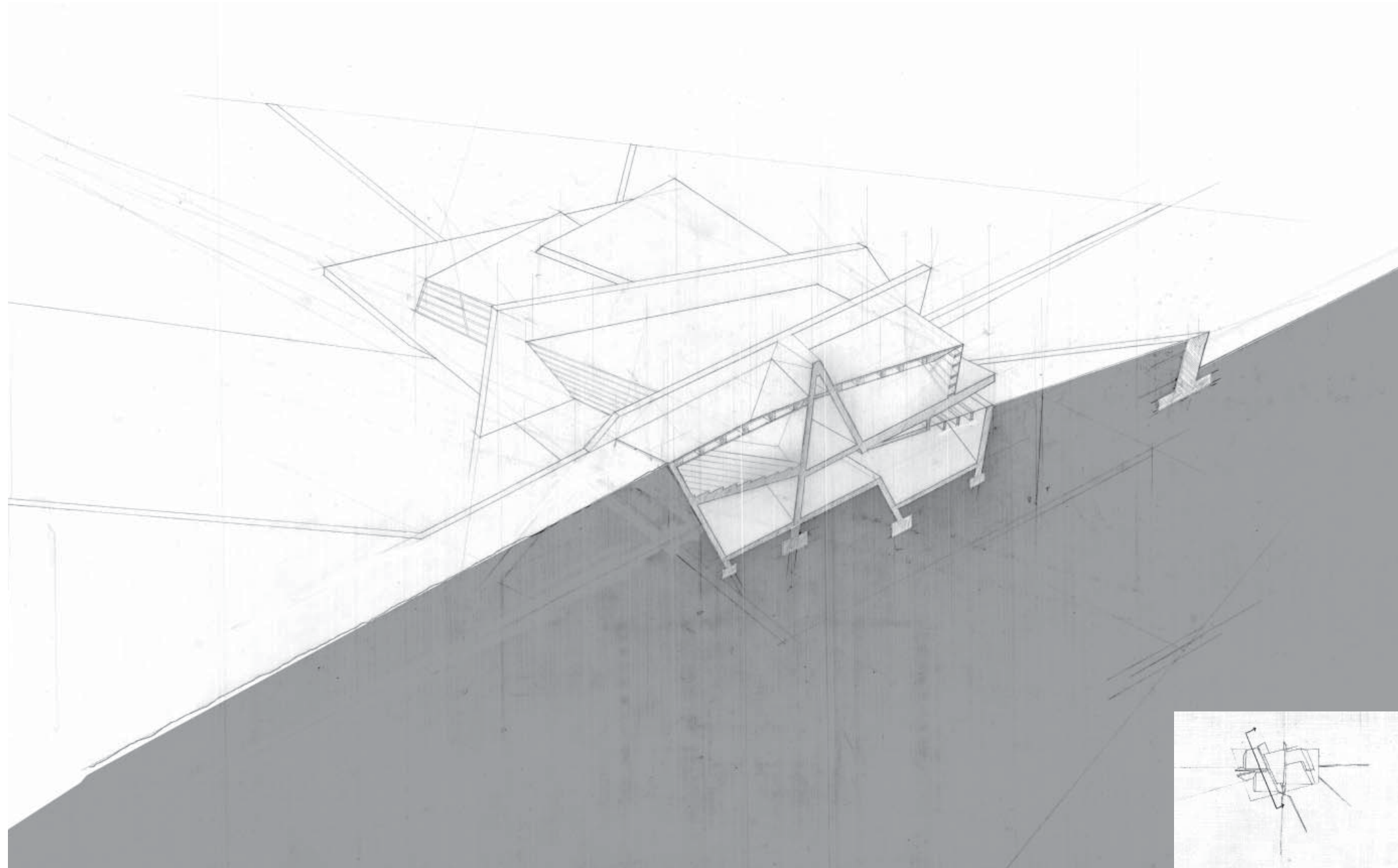
Lower Studio Steps

The stair design throughout the building consists of reinforced pre-cast tapered treads. The elevation of the riser narrows from one end that is cast into the wall towards the other end that is cantilevered into the room. The wide ends of the individual steps are placed through precise openings in the formwork of the walls, the concrete of which surrounds them, anchoring them in place. The steps rest directly on one another within the volume of the wall, offering compressive stability and a perception of plastic unity. Just past the ends of the slender cantilevered treads, a pane of structural glass is held in place by a steel stringer spanning between floors. The glass guardrail receives a point-supported stainless steel handrail at its top.



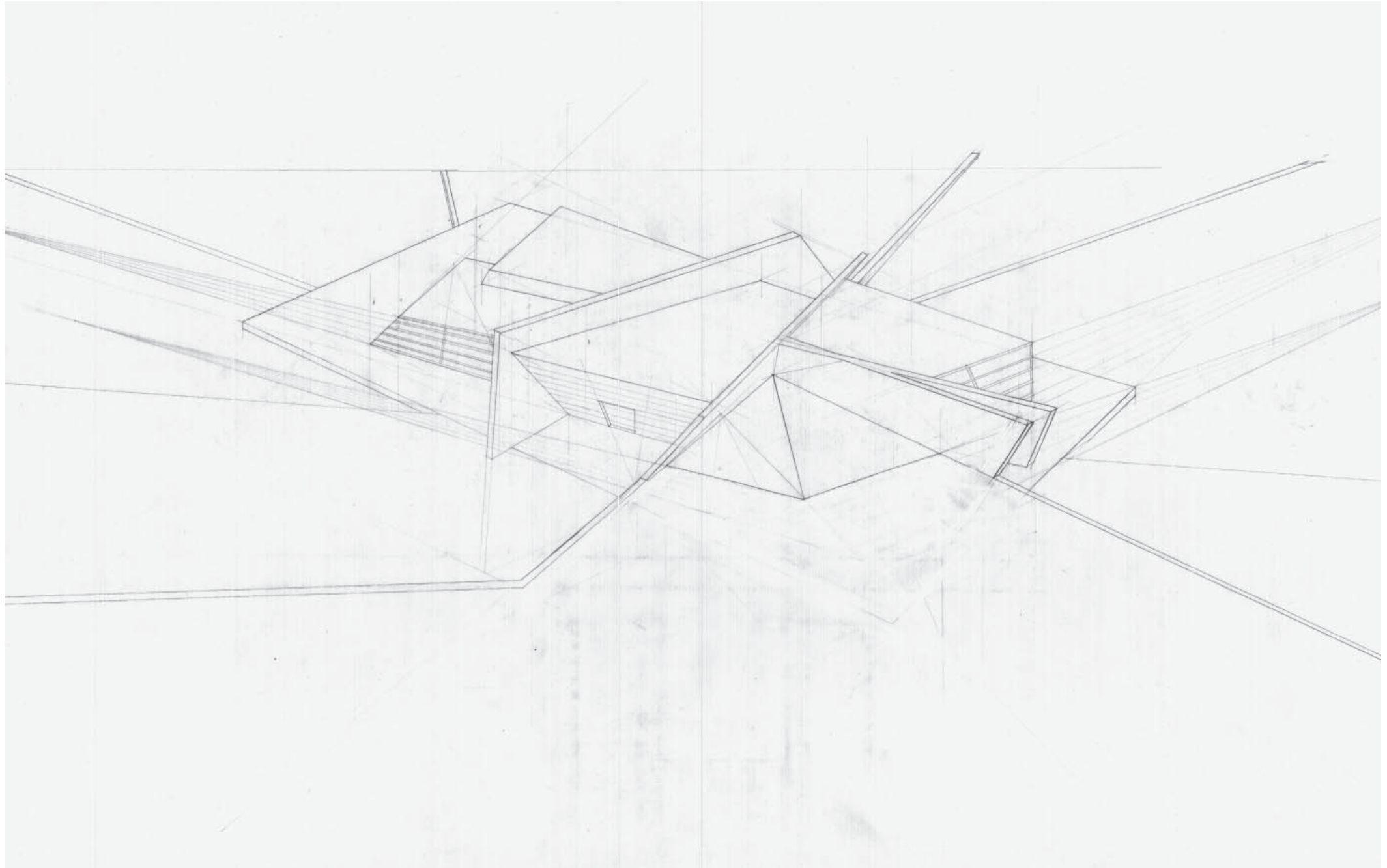


View from Mezzanine down into Main Entrance Hall

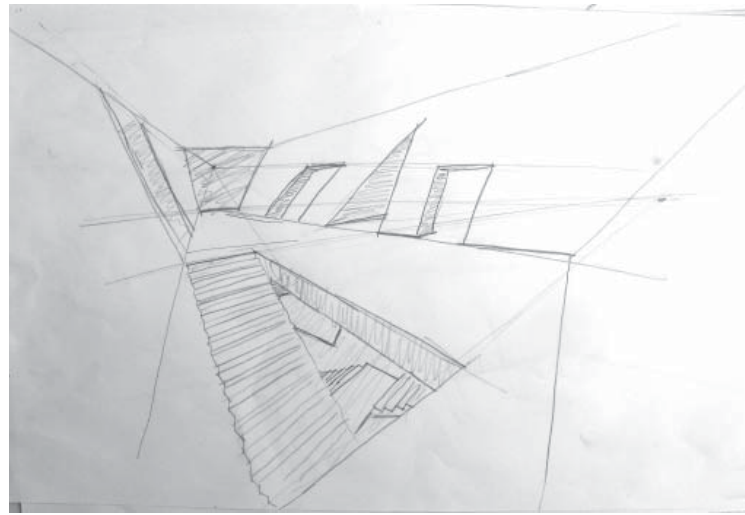


Axonometric Section from North





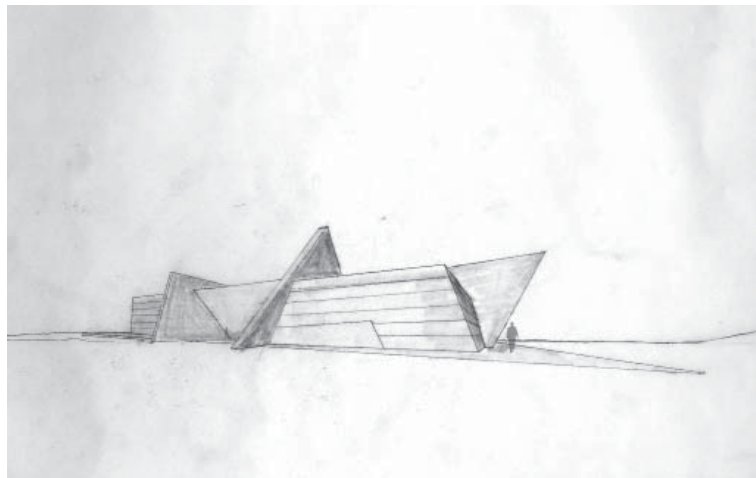
Axonometric from North



Upper Hall

There are three major enclosed spaces on the upper level, as well as two perpendicular internal halls that could be used to display student or guest work. The two exits on the South and East provide access to the terrace and the two exits on the North and West provide access to the uphill building yards.

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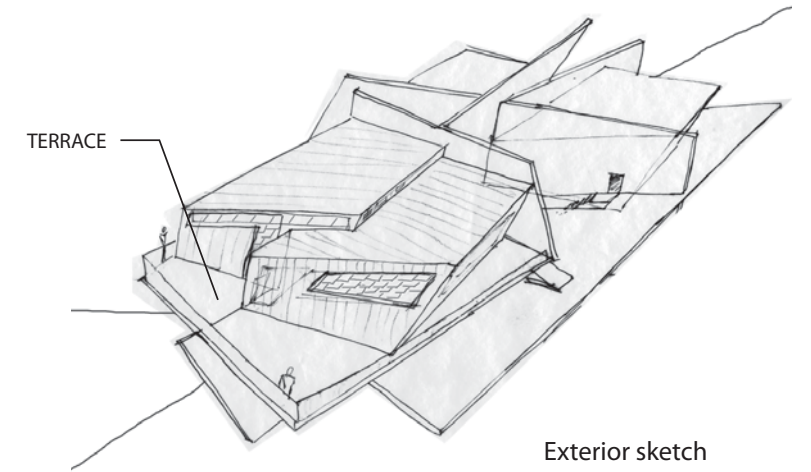


View of uphill side, pre-backfill

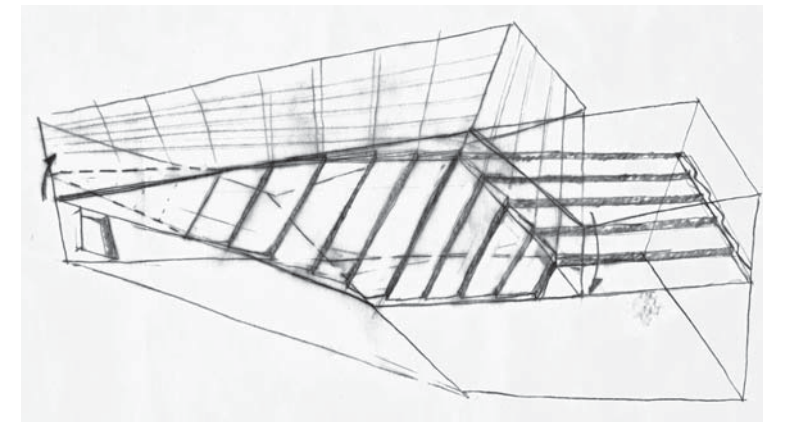
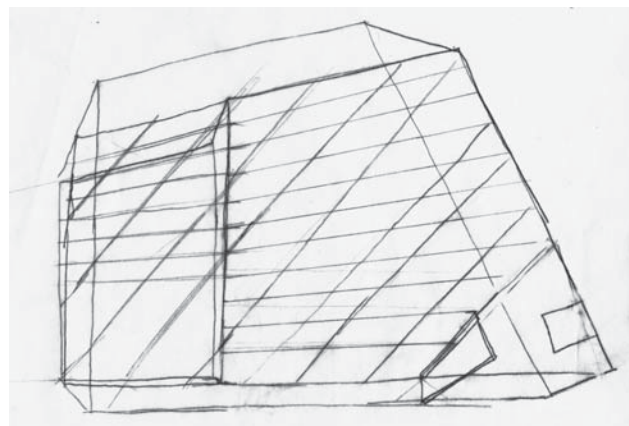
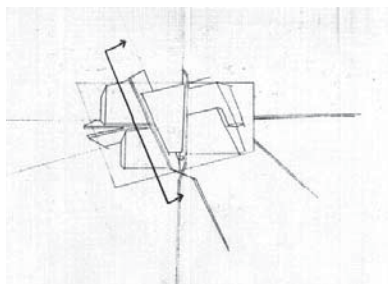


Upper Level Plan

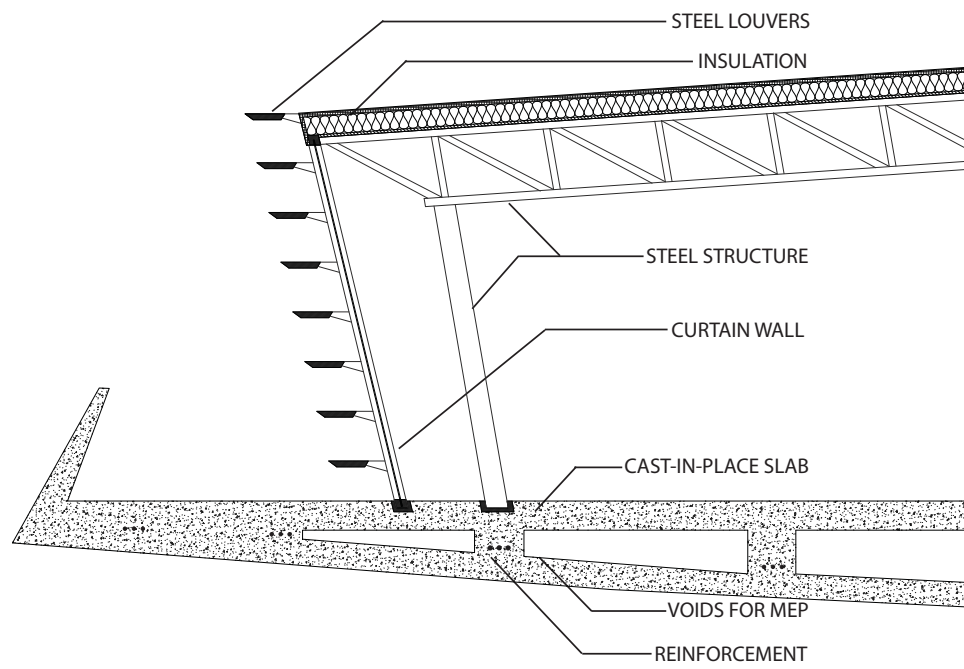




Exterior sketch

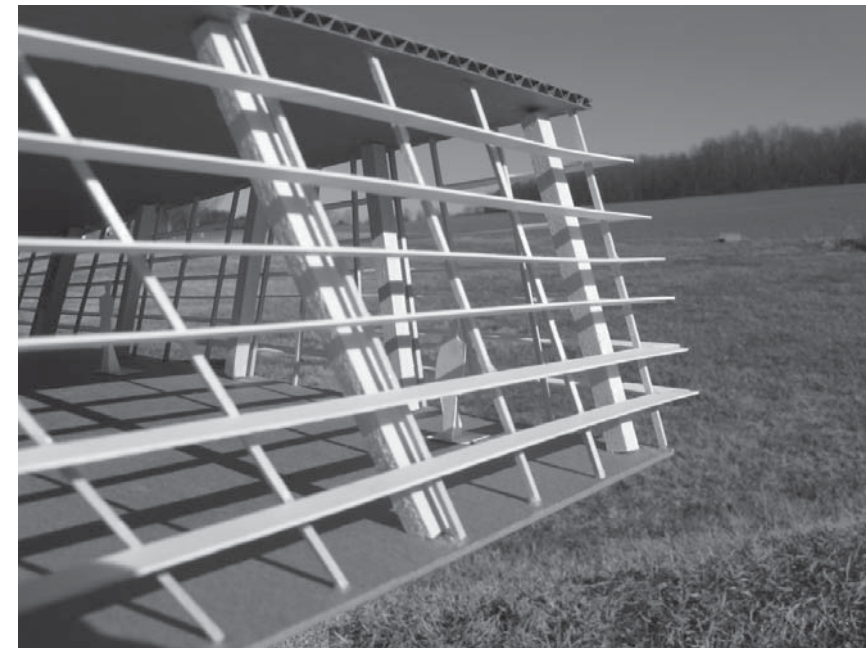
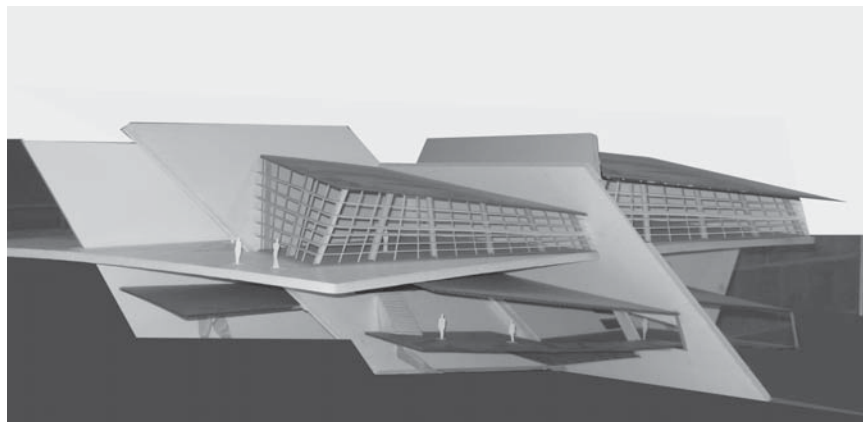


Lecture Room Studies



Upper Studio

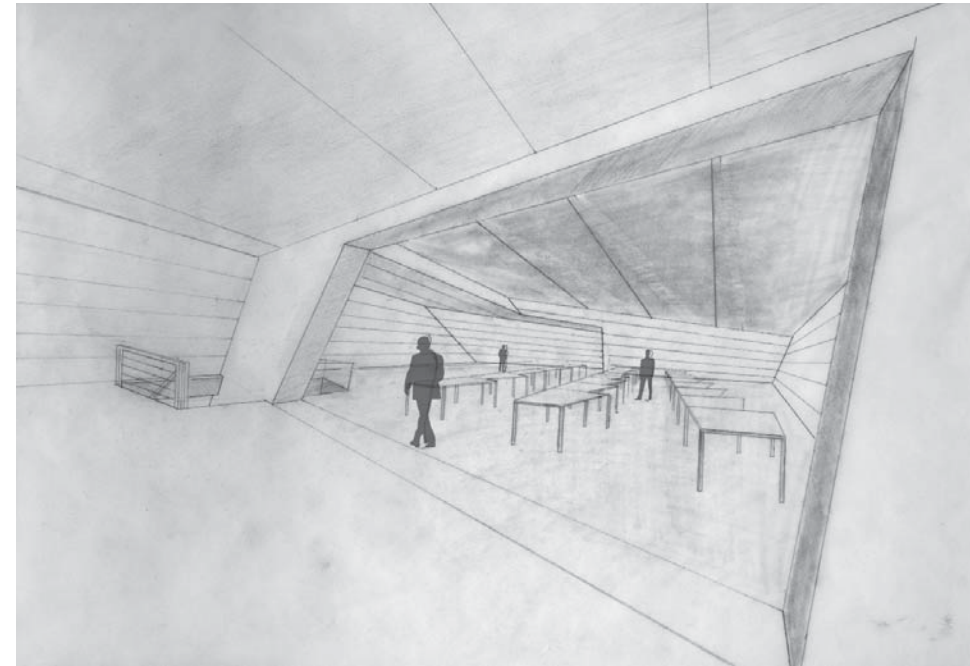
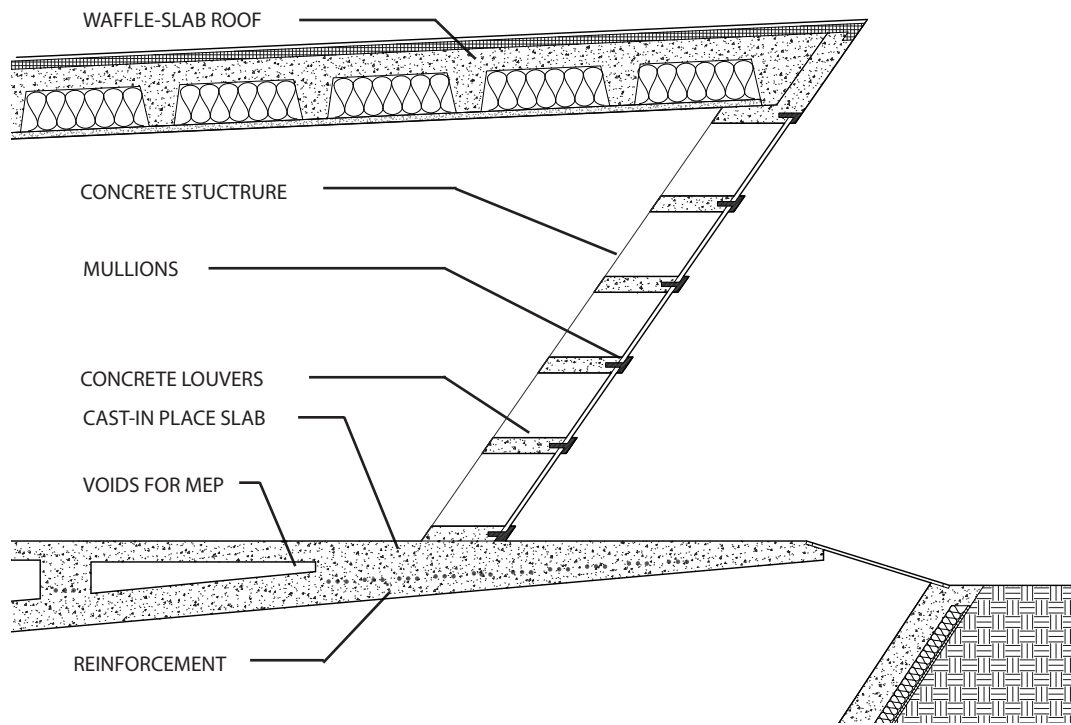
During the course of the design process, a progression of window wall systems was explored to enclose the various spaces on the building's upper floor. In this early version, columns hold up the steel truss supported roof. A glass curtain wall is set back from louvers which regulate sun exposure and also reinforce the effect of the perspectival distortion.





Upper Studio





Upper Studio with Desks

A further iteration of the window wall system design incorporates the structure, glazing, and louvers into a slimmer profile made of cast in place concrete. This version gives a more unified, monumental feel to the overall form, denying that it is made of many individual pieces.

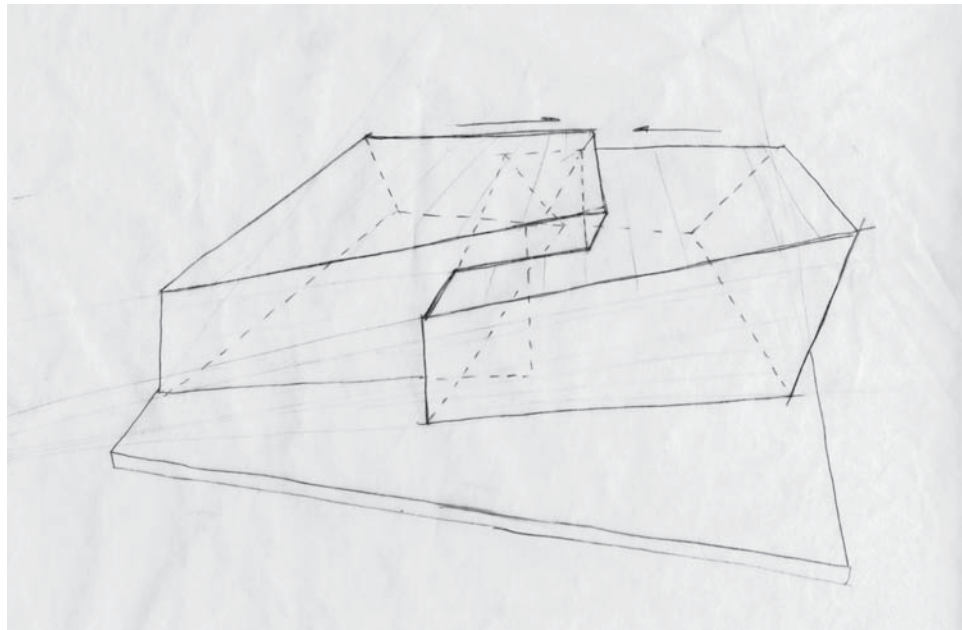
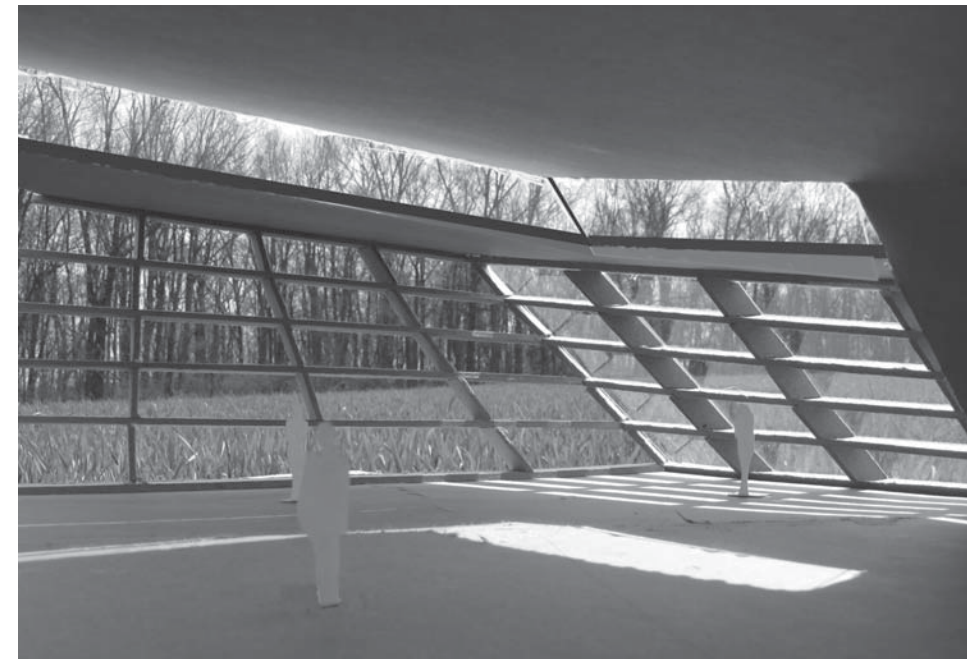


Diagram of Upper Studio showing spatial overlap of spatial modules

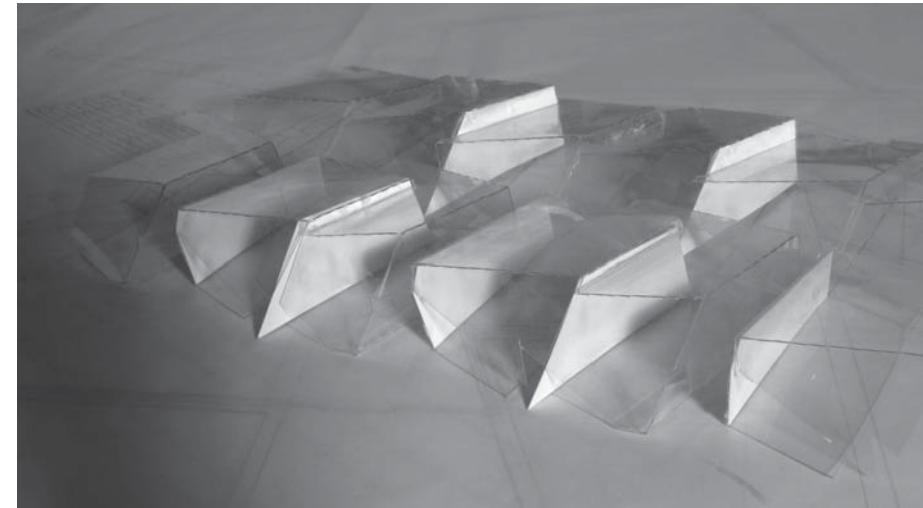
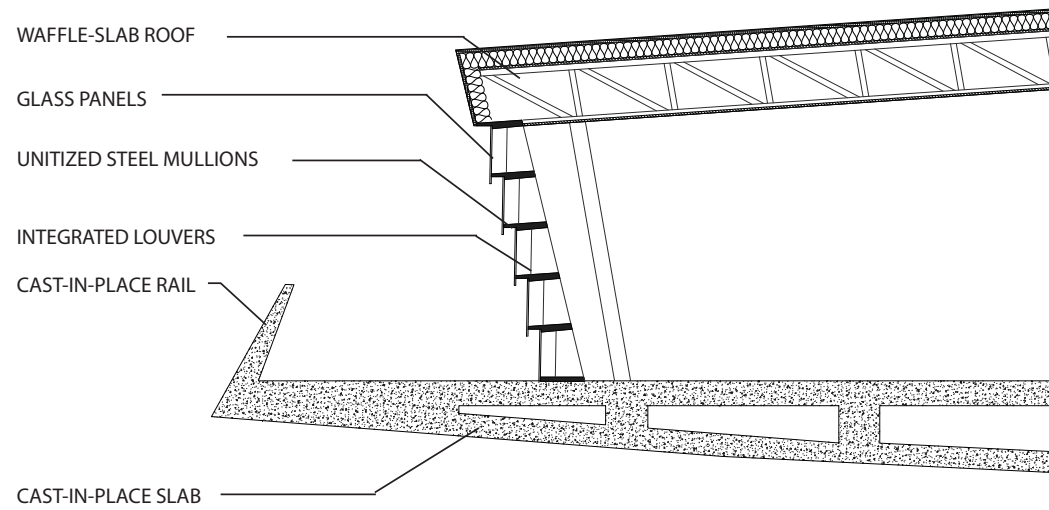


Upper Studio

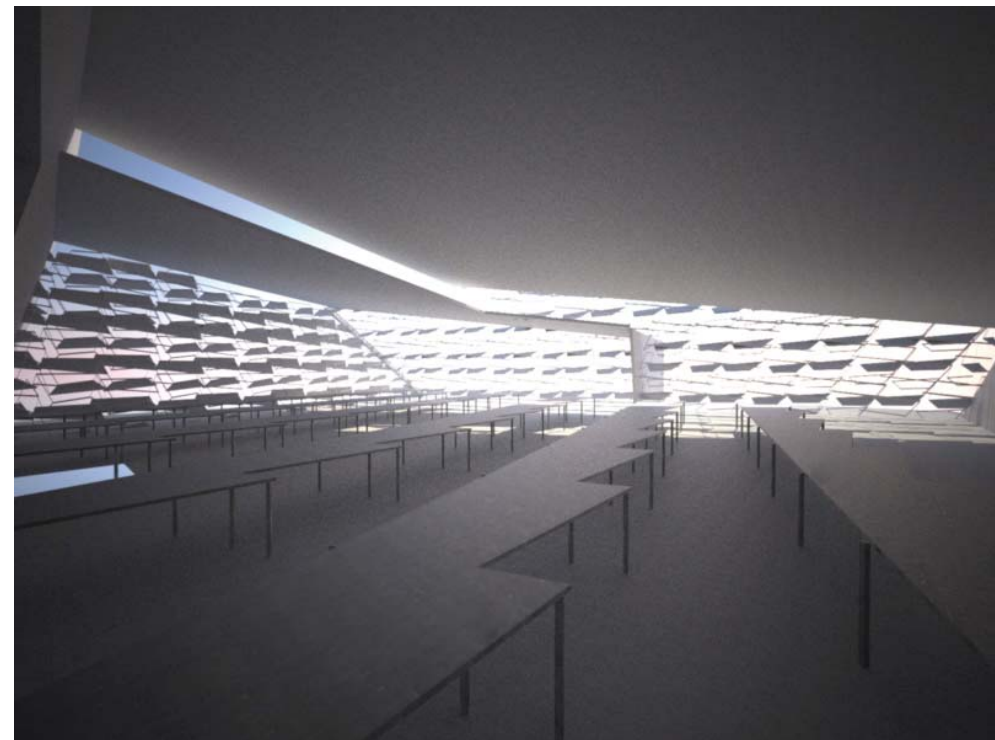




Upper Studio



Louver Studies



Upper Studio

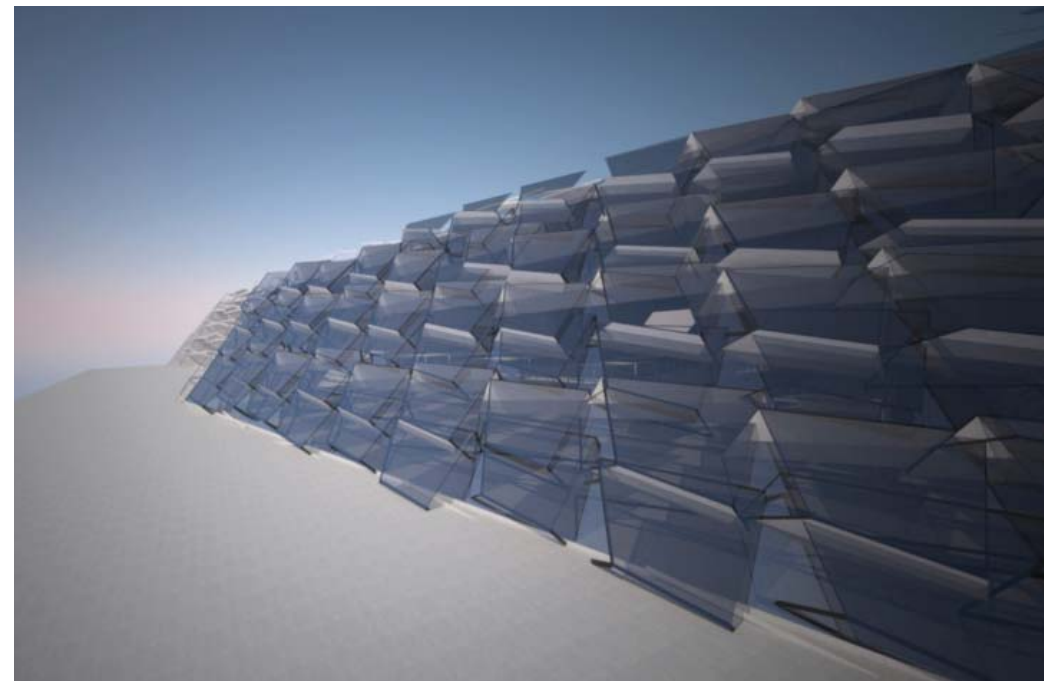
A final window wall system was developed which, at a smaller scale, replicates the geometric order of the building as a whole. With this design, inspired by the arrangement of overlapping mineral molecules, the organic structure of the crystalline is maintained on multiple levels of detail. An array of angled glass panels is held in place by a unitized curtain wall system constructed from a complex steel grid. The system also supports an internal series of opaque panels acting as shading elements. This solution is ultimately more appropriate to the overall project, but it was developed late in the design. The lengthy process needed to develop such an appropriate system highlights some of the limits of the proposition in general.

This thesis has been an exploration into the complex process of turning sculpture into architecture. It attempts to answer the question: How can a sculptural instrument of perspectival distortion be made inhabitable? Ordering the overall shape to present the viewer with specifically composed visual images is an exercise in geometric and empirical visualization. Executing the proposition in physical material at the intended scale is a problem truly proper to architecture. In order to house a functioning institution that benefits from the visual and intellectual effects of the unique space, the "sculpture" must include elements like stairs, handrails and window mullions—things that if not carefully considered, can potentially compromise the originally pure formal idea.

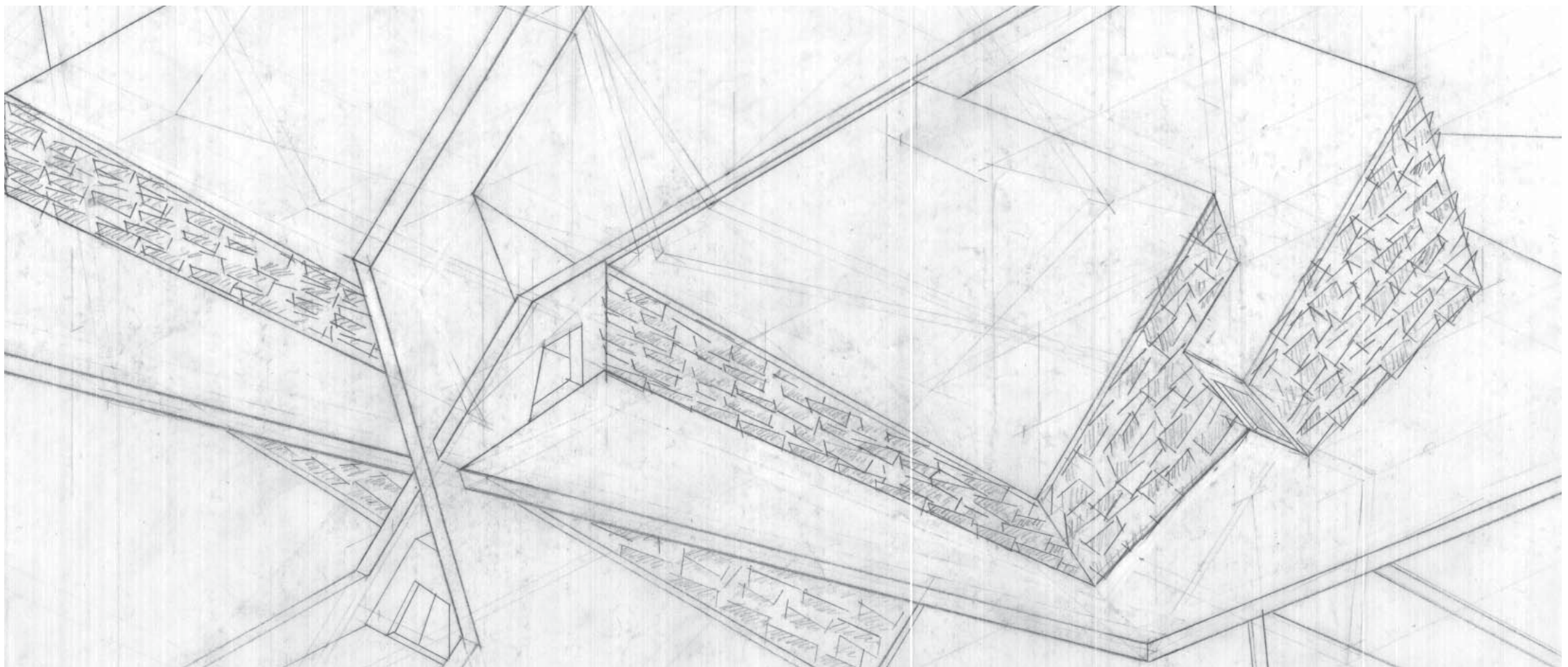




1099 New York Avenue, Washington, DC



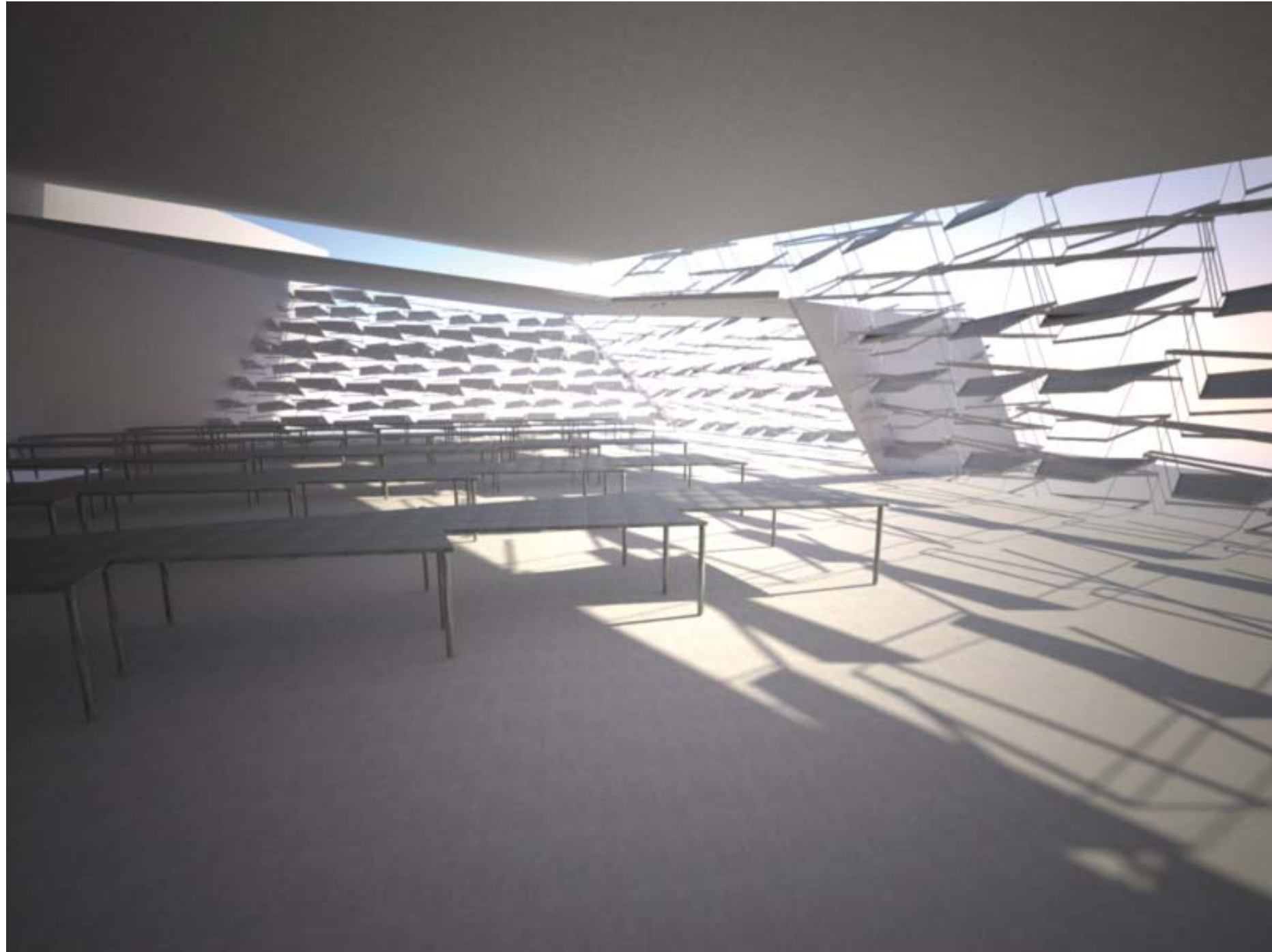
Upper level terrace





Itself technologically derived and constructed, this architecture academy for 100 students fits into the framework of the modernist architectural movement. But like a wayward atom in an otherwise rigidly determined crystalline matrix, the building's form inserts itself into this stanchion at a point intended to commence a generative rift of new possibility. The goal for the institution is to foster an environment of exploration and progressive innovation through exchange and collaboration. This charge would fall squarely on the faculty of course, but hopefully the building itself would act as a catalyst for the search. Through its programmatic organization as well as its perspective-warping angular form, the building is designed to encourage or at least accommodate a participatory, dialectic way of studying and making architecture. Open studio spaces and the proximity and availability of the faculty studios are intended to foster ease of communication and collaborative interchange within the academy. Exchange of knowledge across multiple levels and points of view would occur both intellectually and spatially. The specific outcome of such a dialectically educational environment cannot be accurately predicted, and therein lays the vibrant potential of the proposal. The rigid predictability of enlightenment rationalism has outlived its modality and we need a new model in order to move forward. The goal of the contemporary architecture academy should not be to establish the primacy of one mode of operation but to invite a plurality of approaches to the table.





Upper Studio

