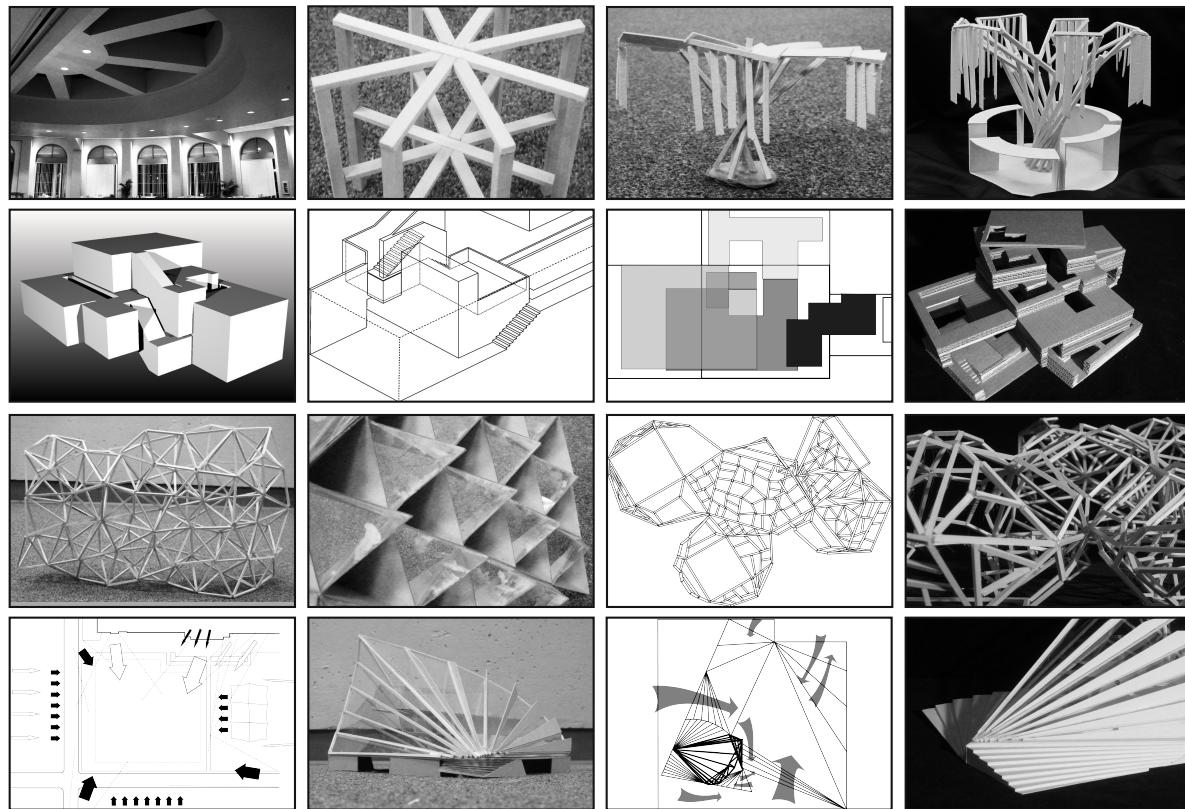


ARCH 102b



SPRING 2010

CONTENTS

Student Kiosk: Foundspace Makes New	2
Pool House: Spatial Solid Manipulation	10
Surface: System, Material, Effect	26
Lifeguard Station: Surface Structure	40
Butterfly Habitat: Synthesis	52

STUDENT KIOSK



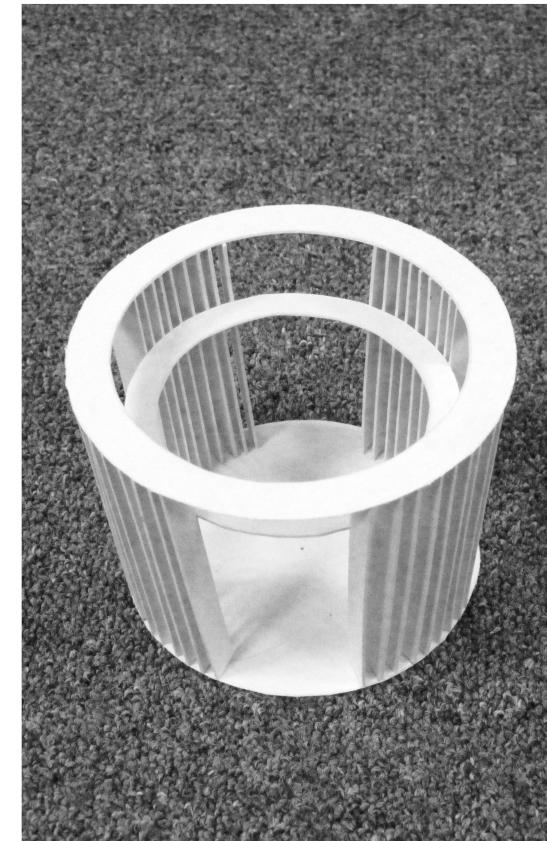
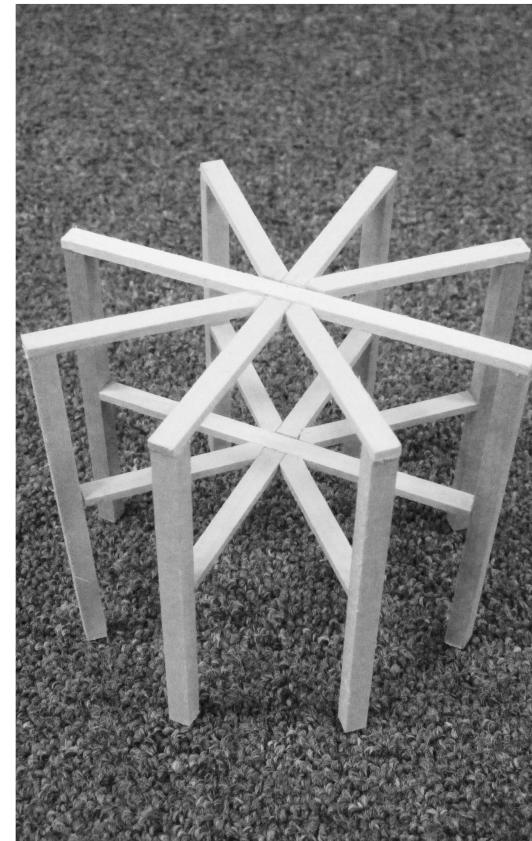
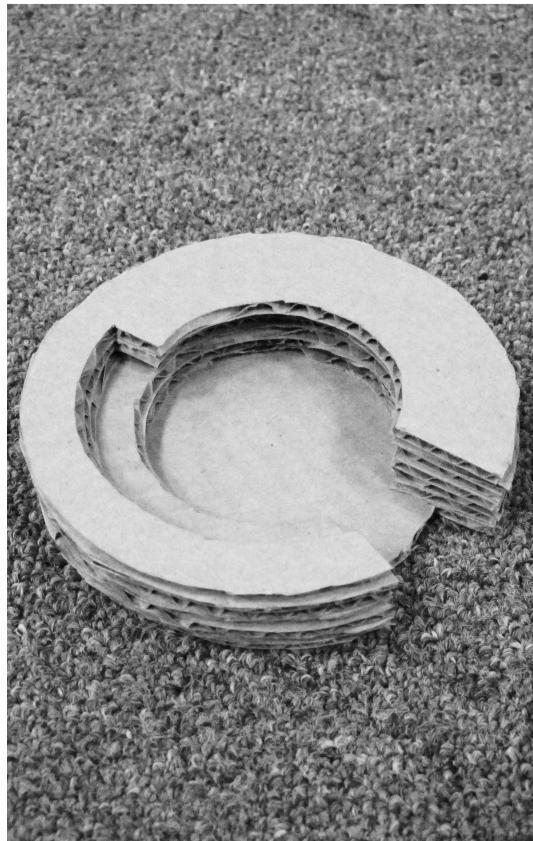
FOUNDSPACE MAKES NEW

STUDENT KIOSK



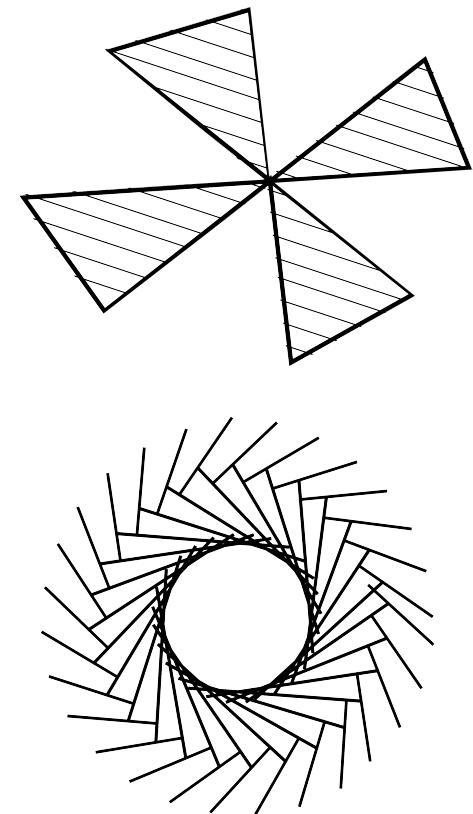
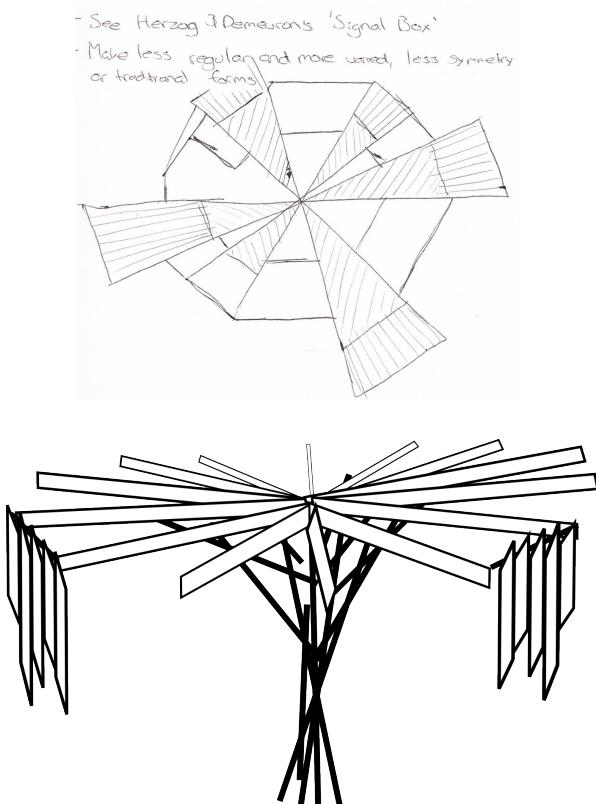
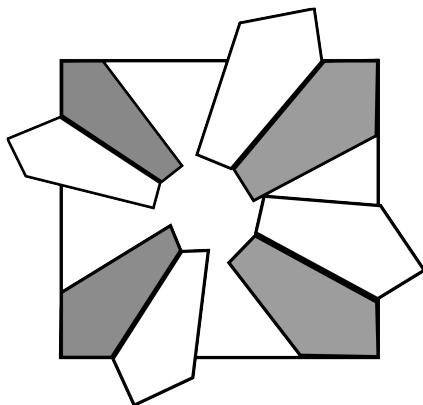
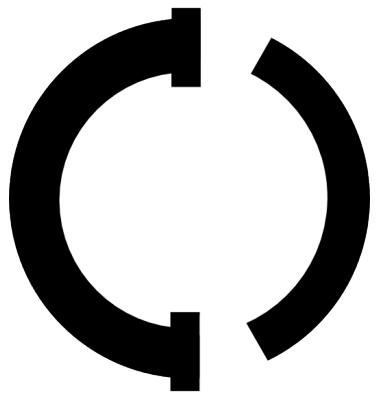
The objective of this project was to observe and record the all of the characteristics of a unique, found space, and then to create a kiosk for Watt courtyard based on the discovered spatial, surface, tectonic, and organizational qualities of the foundspace. After carefully documenting the Parkside dining facility through photography, a series study models were produced to exemplify the concentric nature of the building interior. This concentricity was then combined with the vertical, repeating surface elements of the restaurant's blinds to create a series of studies exploring how these characteristics can be translated into the design of a student kiosk. The final kiosk's concentric layout, tectonic structure, and slat-like appendages all echo the qualities of the original foundspace, all while drawing comparison between the natural and manmade in architecture through the kiosk's tree-like form.

Left: Photo documentation of foundspace.

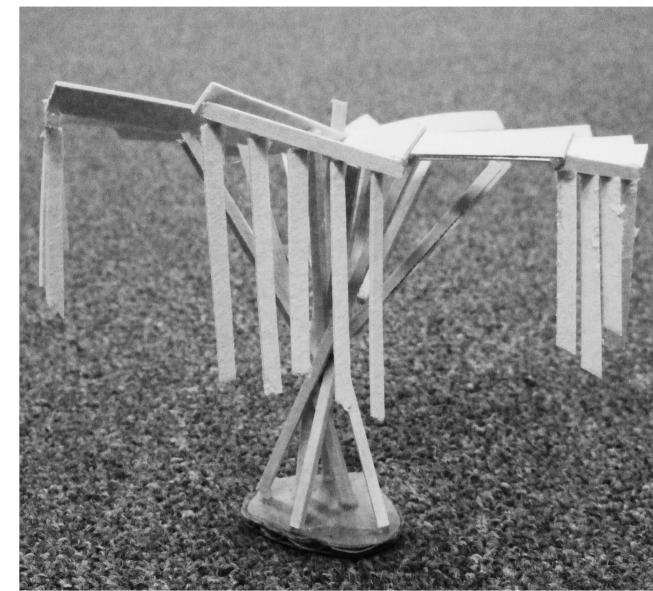
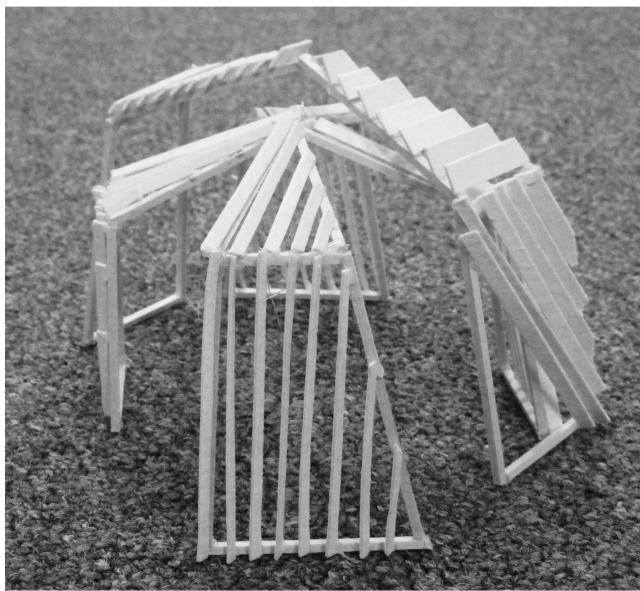
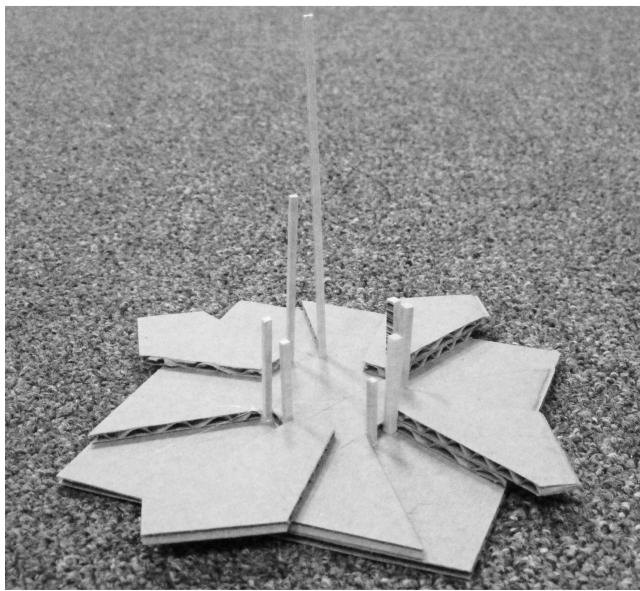


Above: Models for solid/void, tectonic, and surface systems.

Right page: Diagrammatic studies for partis.



STUDENT KIOSK

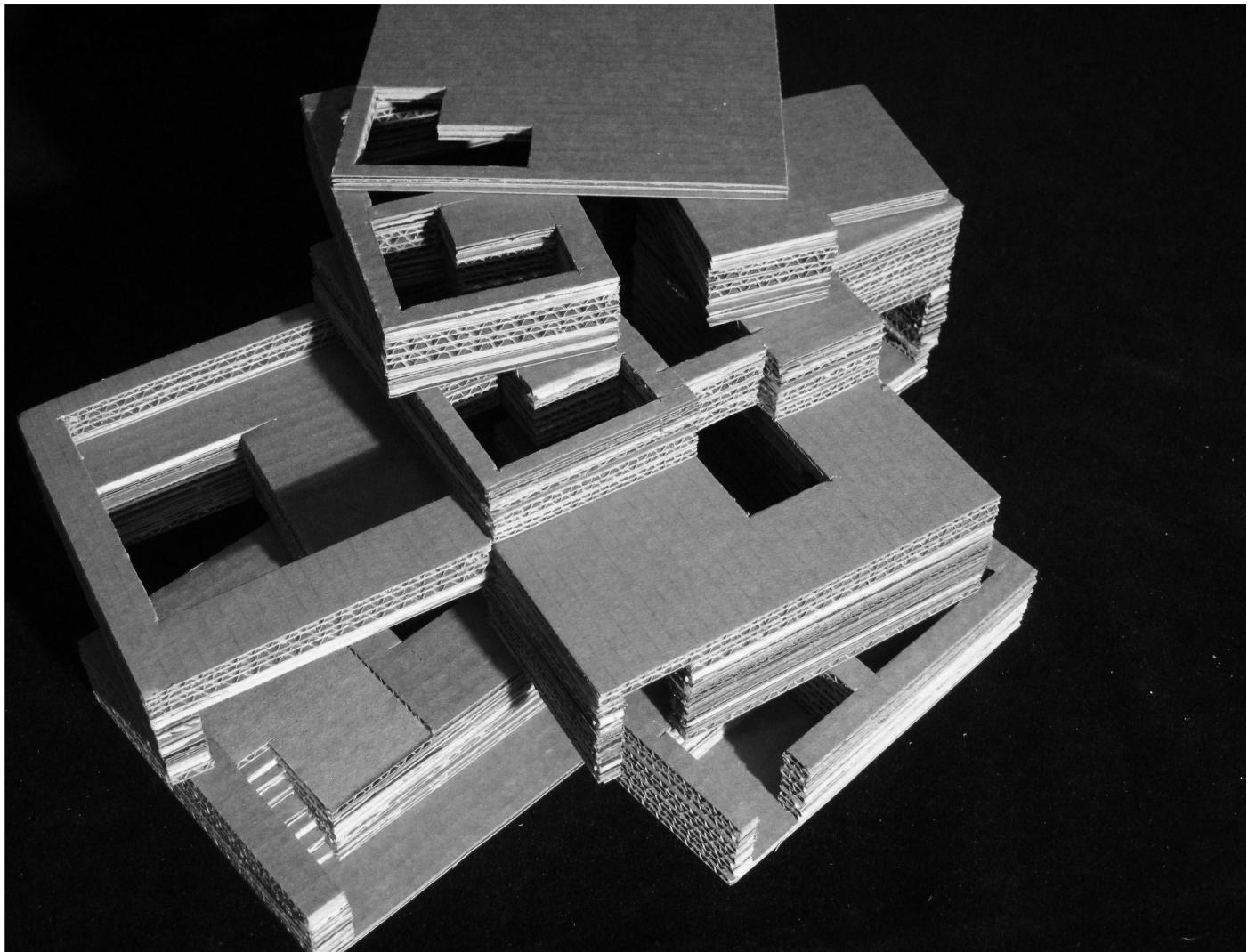


Left: Kiosk parti models.

Right page: Final kiosk model.



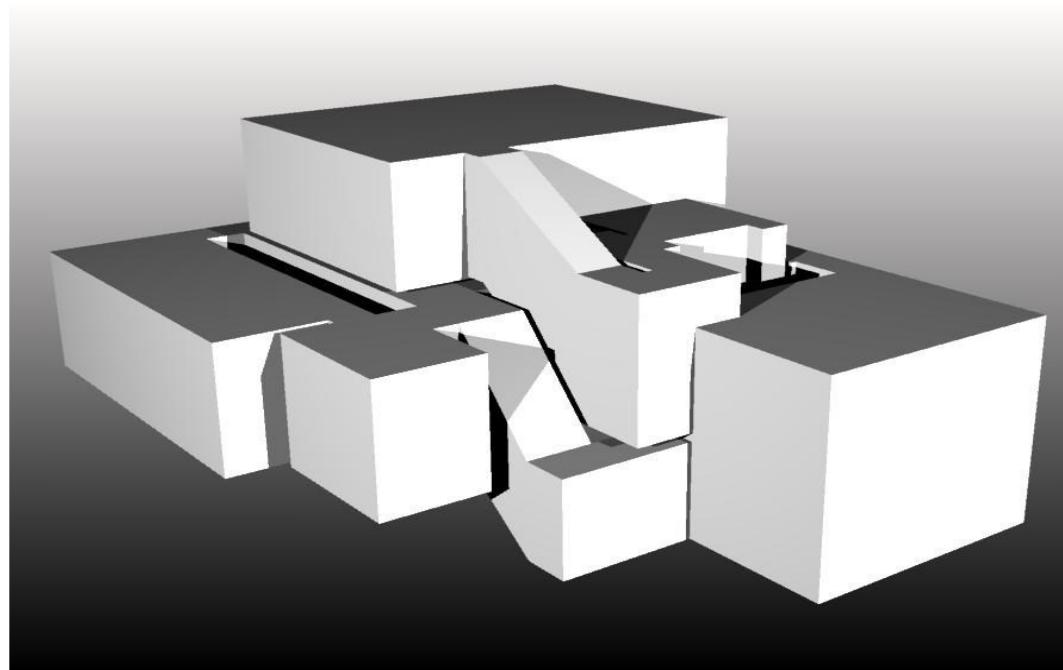
POOL HOUSE

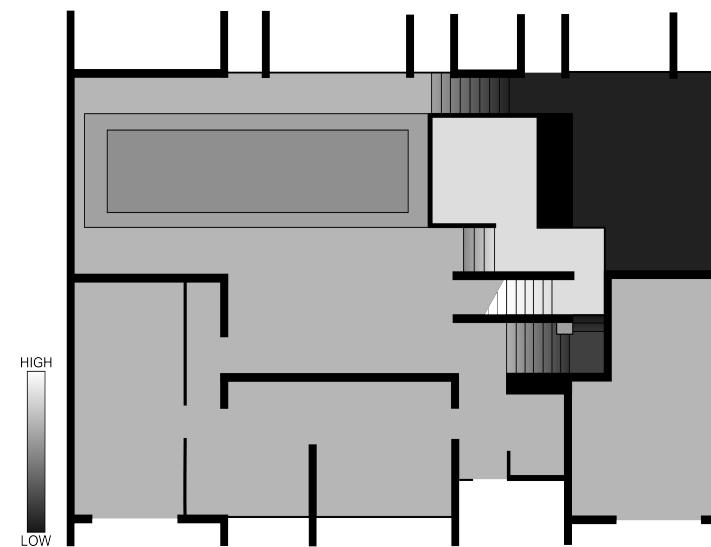
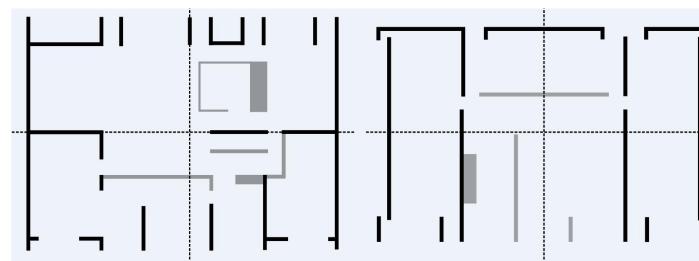
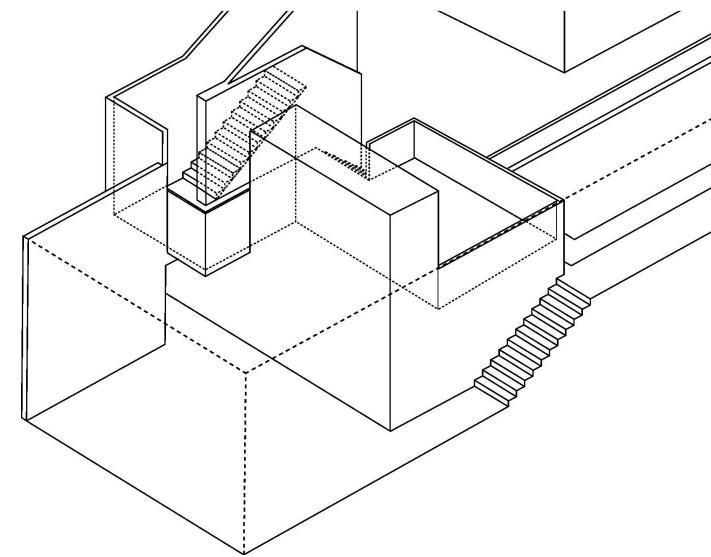
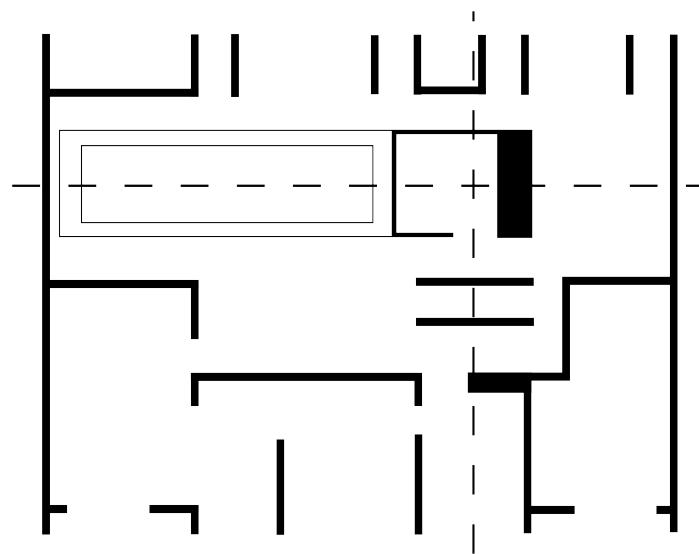


SPATIAL SOLID MANIPULATION

This design problem involved the careful study of a precedent, the Milam House by Paul Rudolph. After diagramming the multi-leveled and interlocking main spaces of the house in detail, they were cast into a 3D solid using computer modeling. Through an iterative process of material subtraction, voids were created in the solid, following the rules of interlocking set forth by the original precedent. As the system was further developed, programmatic spaces were created out of the voids to fulfill the requirements of a pool house. Careful siting of the solid mass in relation to the pool, the 'L'-shaped voids and their interlocking structure within the spatial solid, and the application of a careful program layout work together to create a completely new series of functional spaces based on the original precedent's spatial organization.

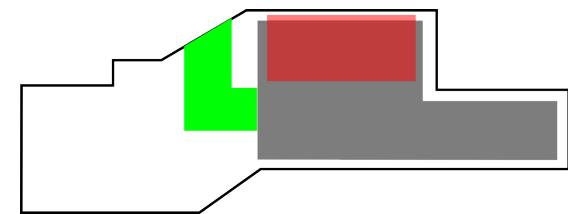
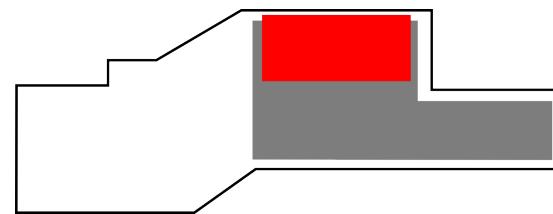
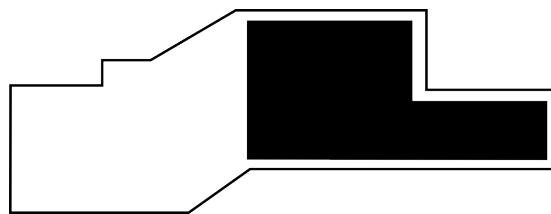
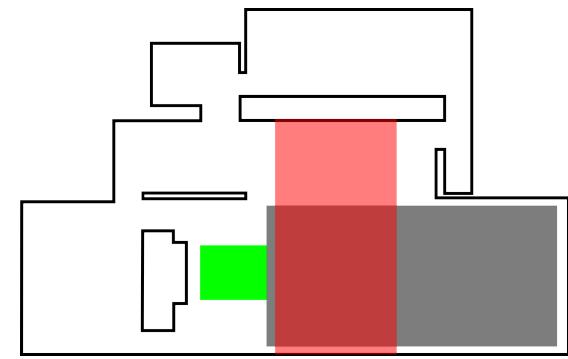
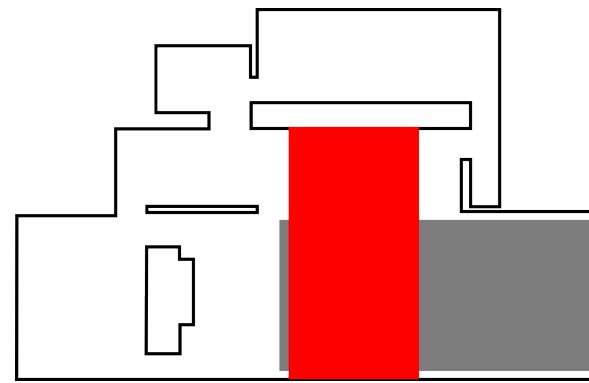
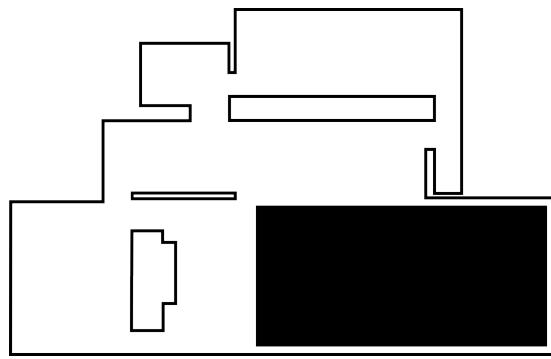
Right page: Milam House precedent and solid casting of interior space.

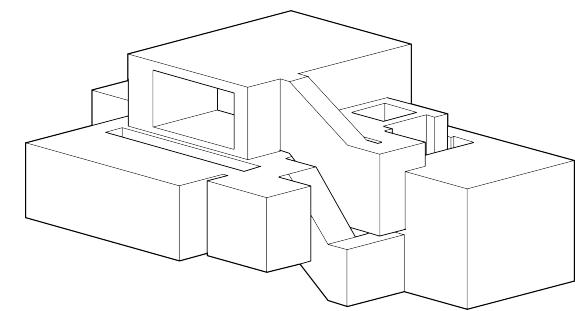
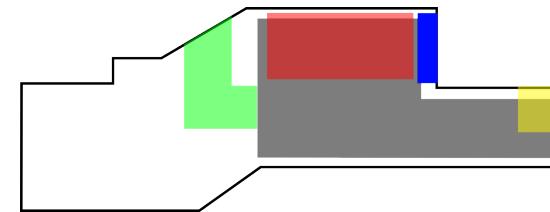
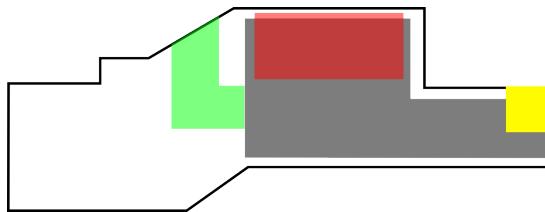
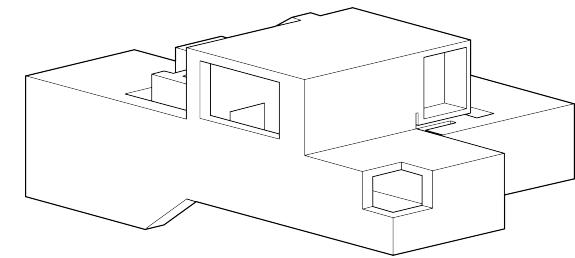
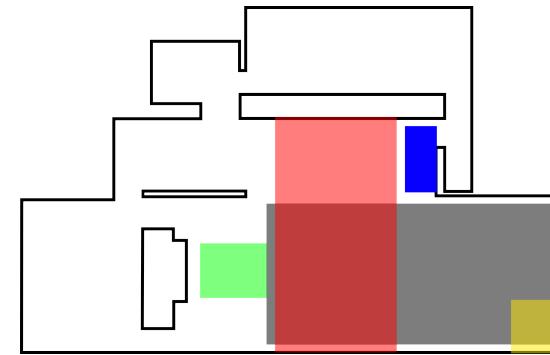
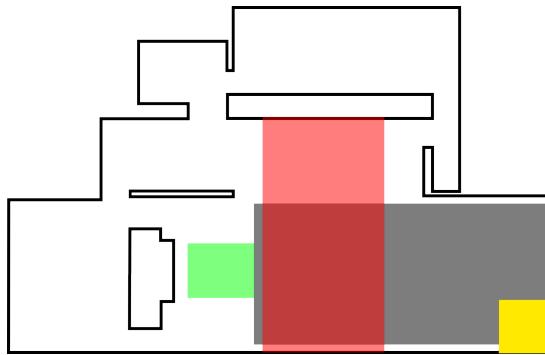




Above: Diagrammatic study of precedent.

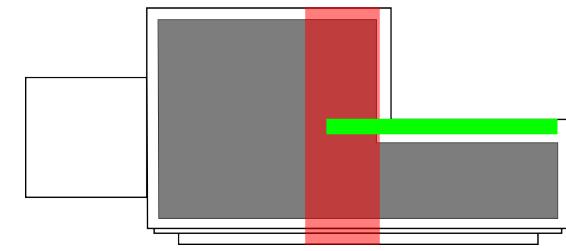
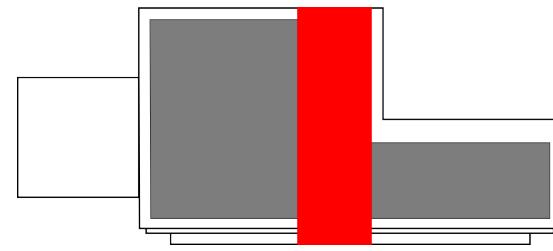
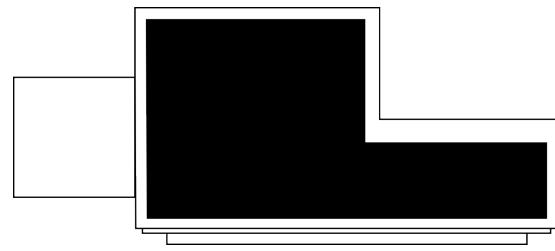
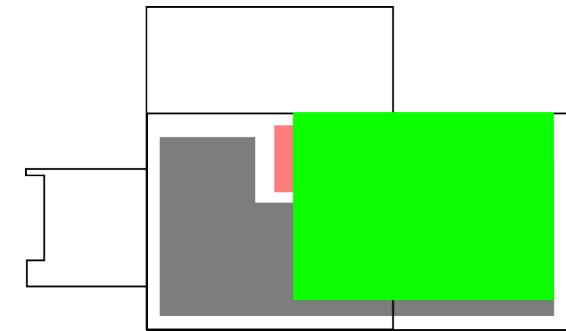
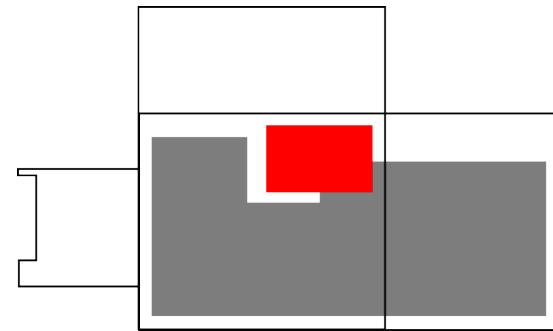
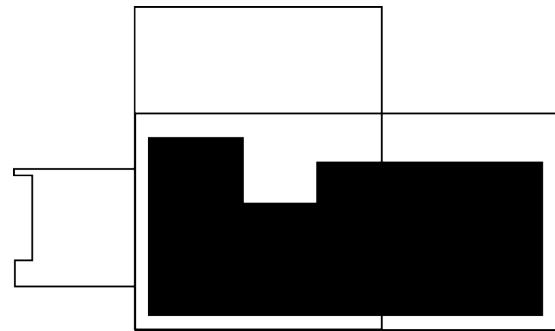
Right page: Preliminary void operation diagram set.

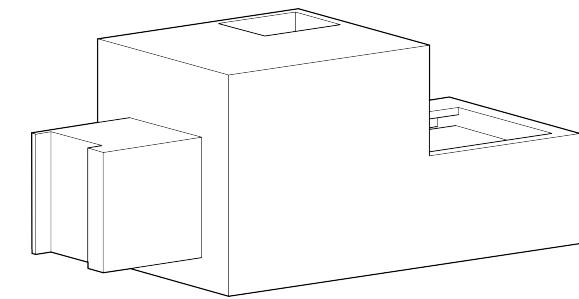
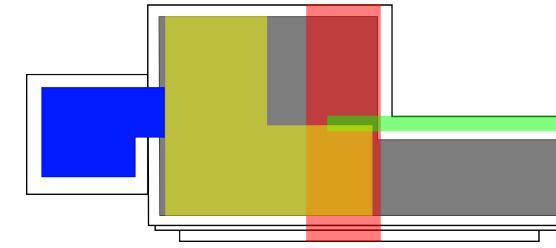
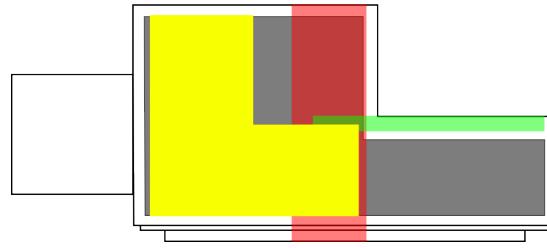
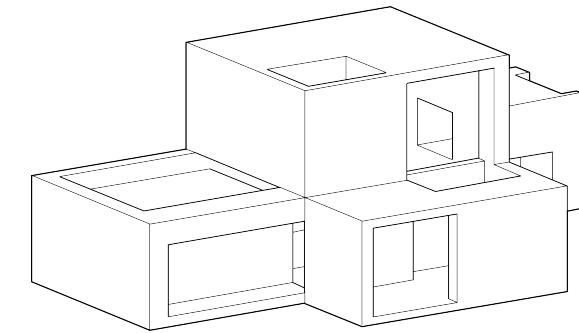
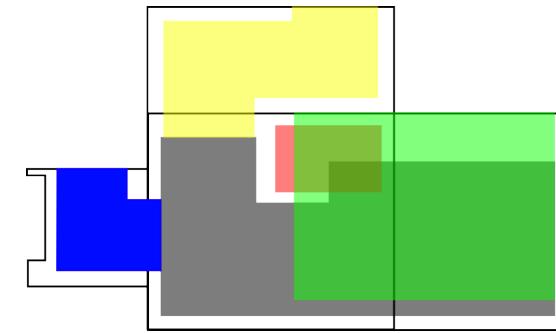
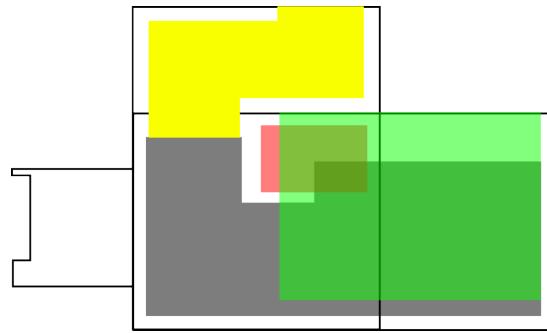




Above: Preliminary void operation diagram set (cont.)

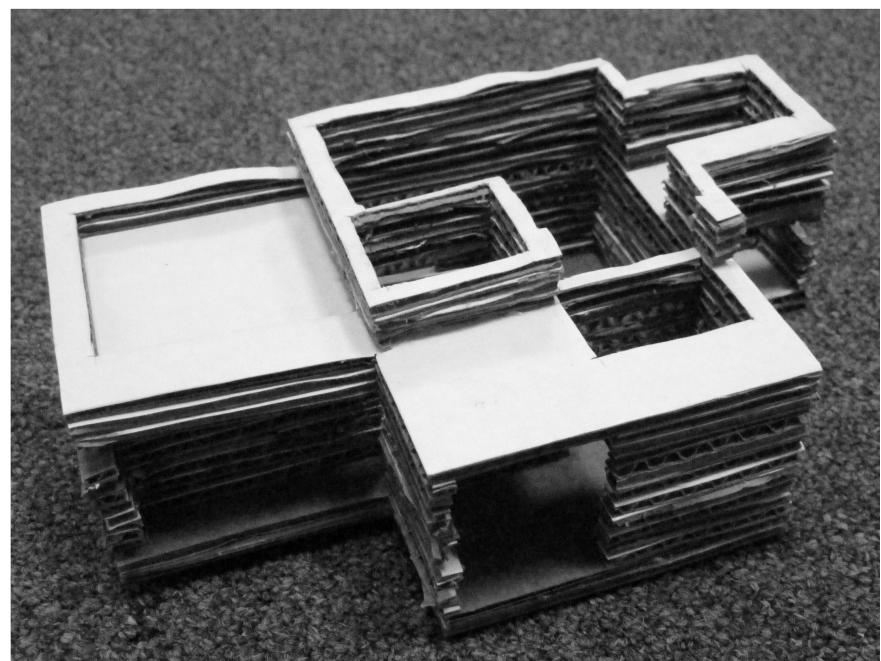
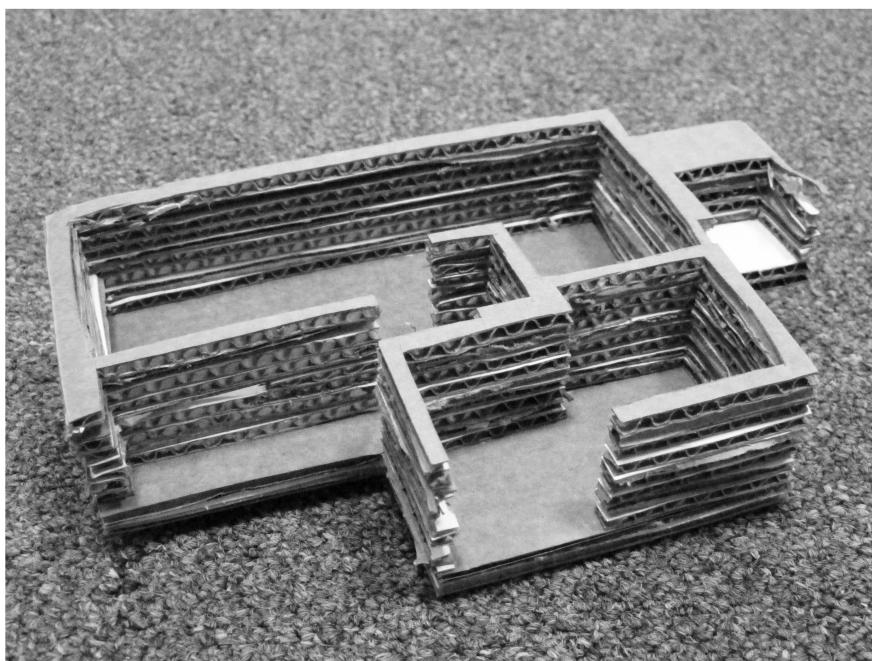
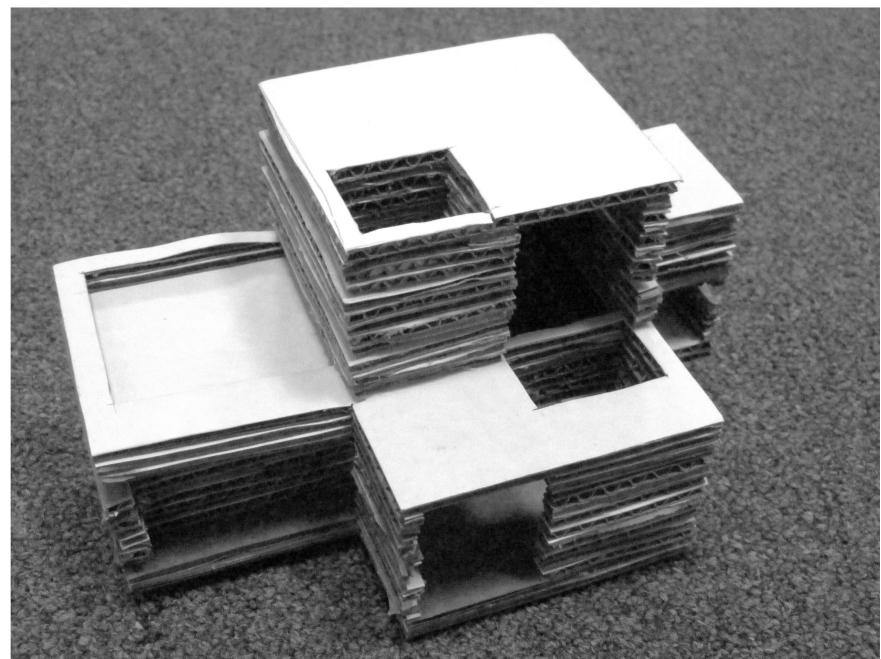
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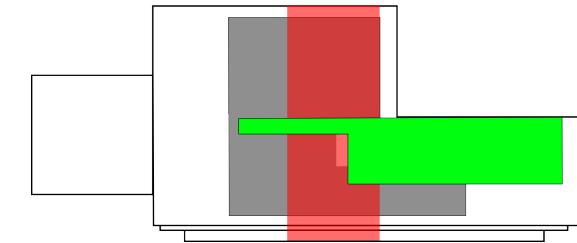
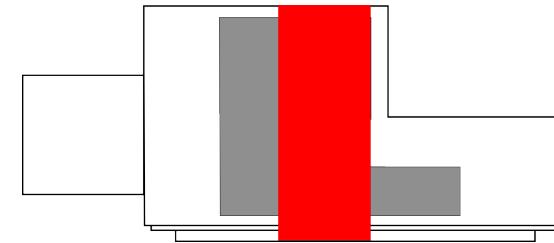
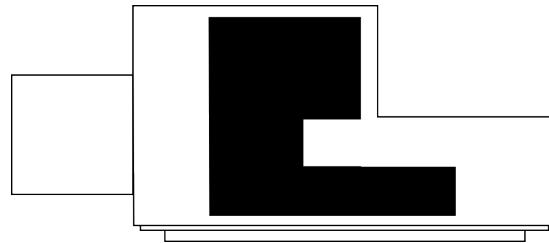
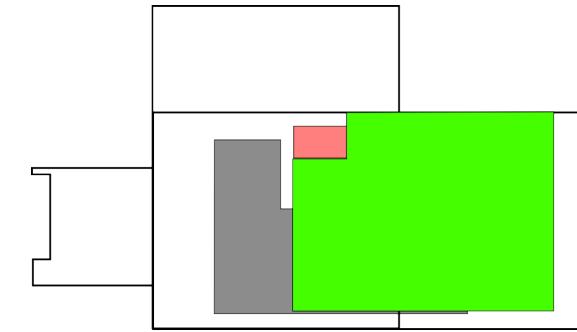
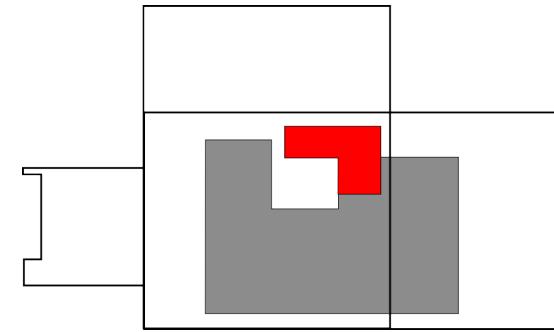
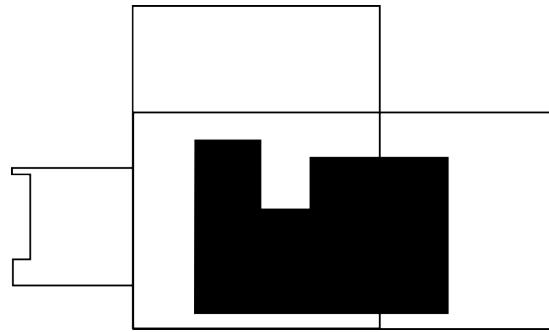




Above: Revised void operation diagram set (cont.)

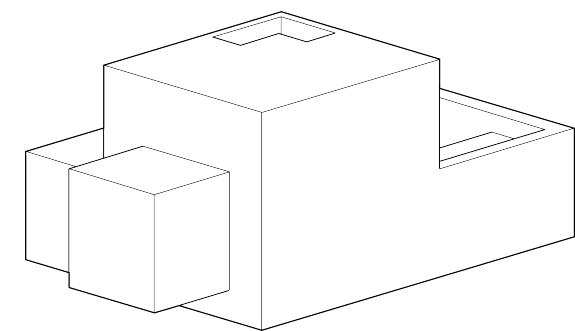
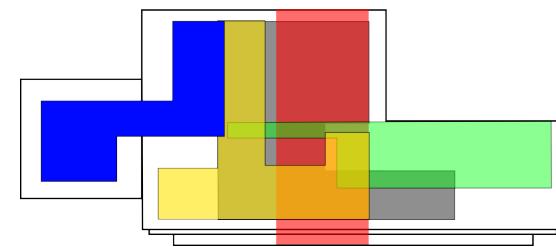
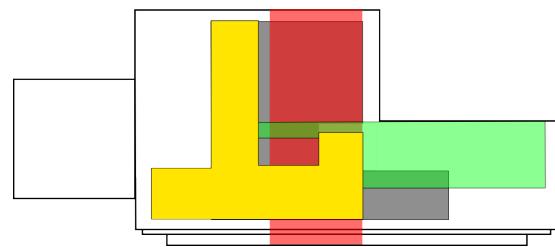
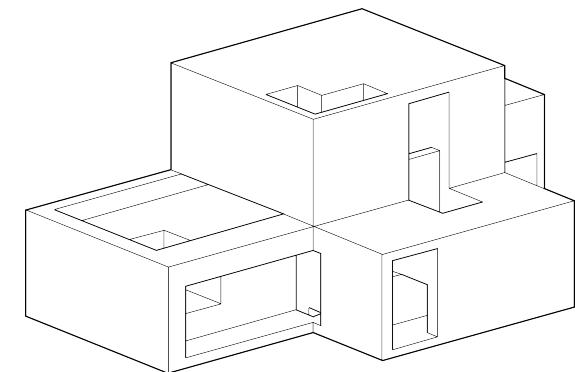
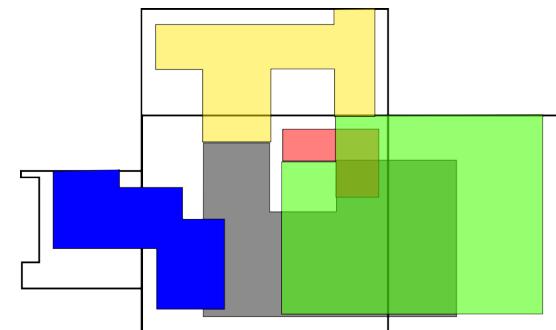
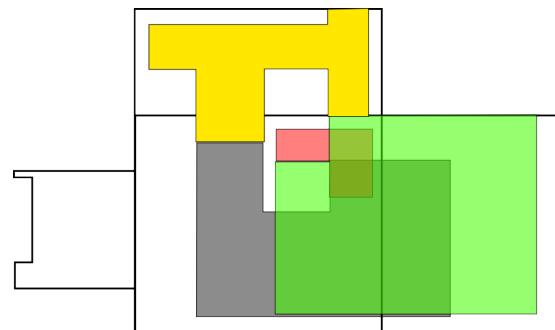
Right page: Revised void operation solid/void model with sections.

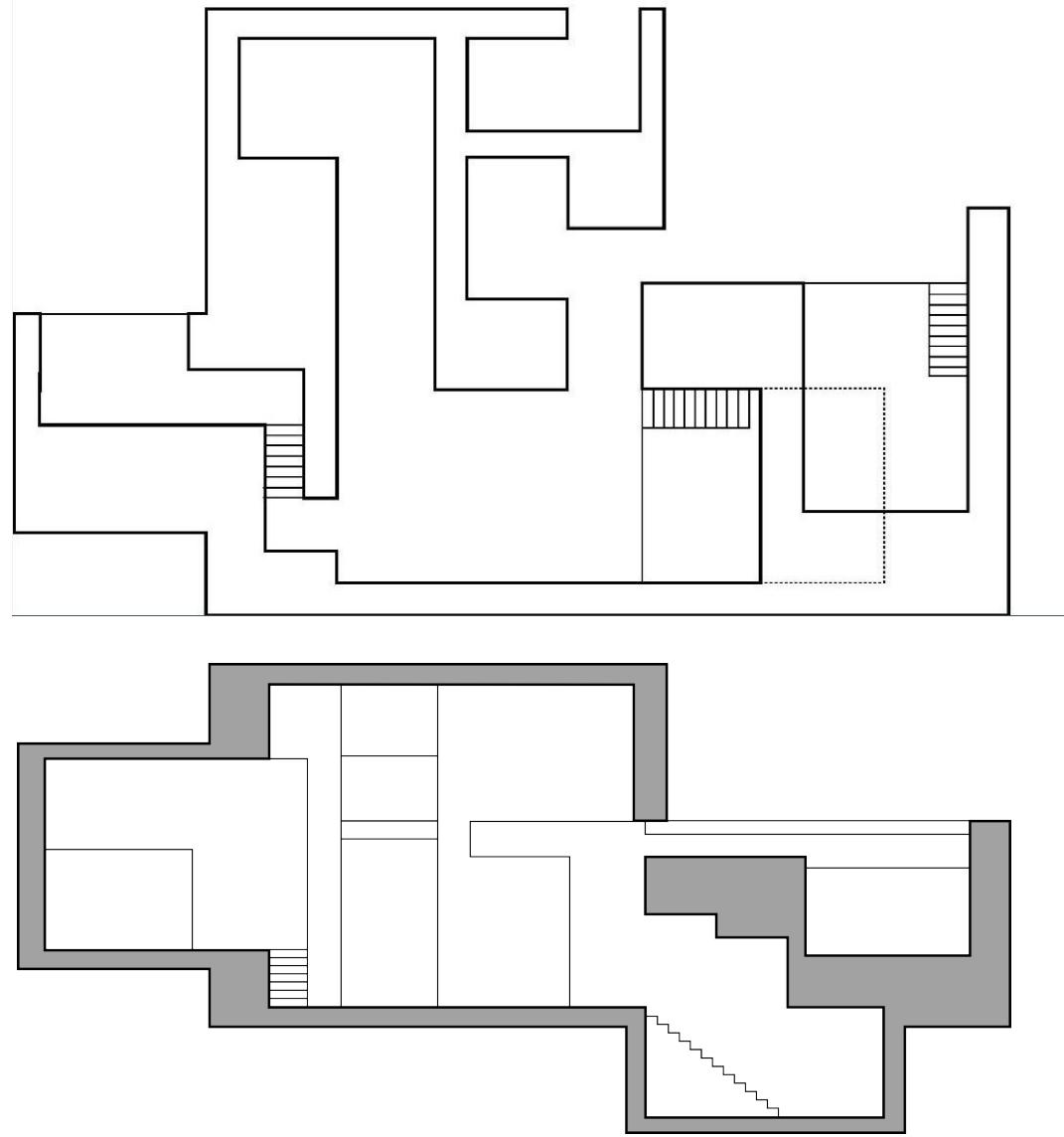




Final void operation diagram set.

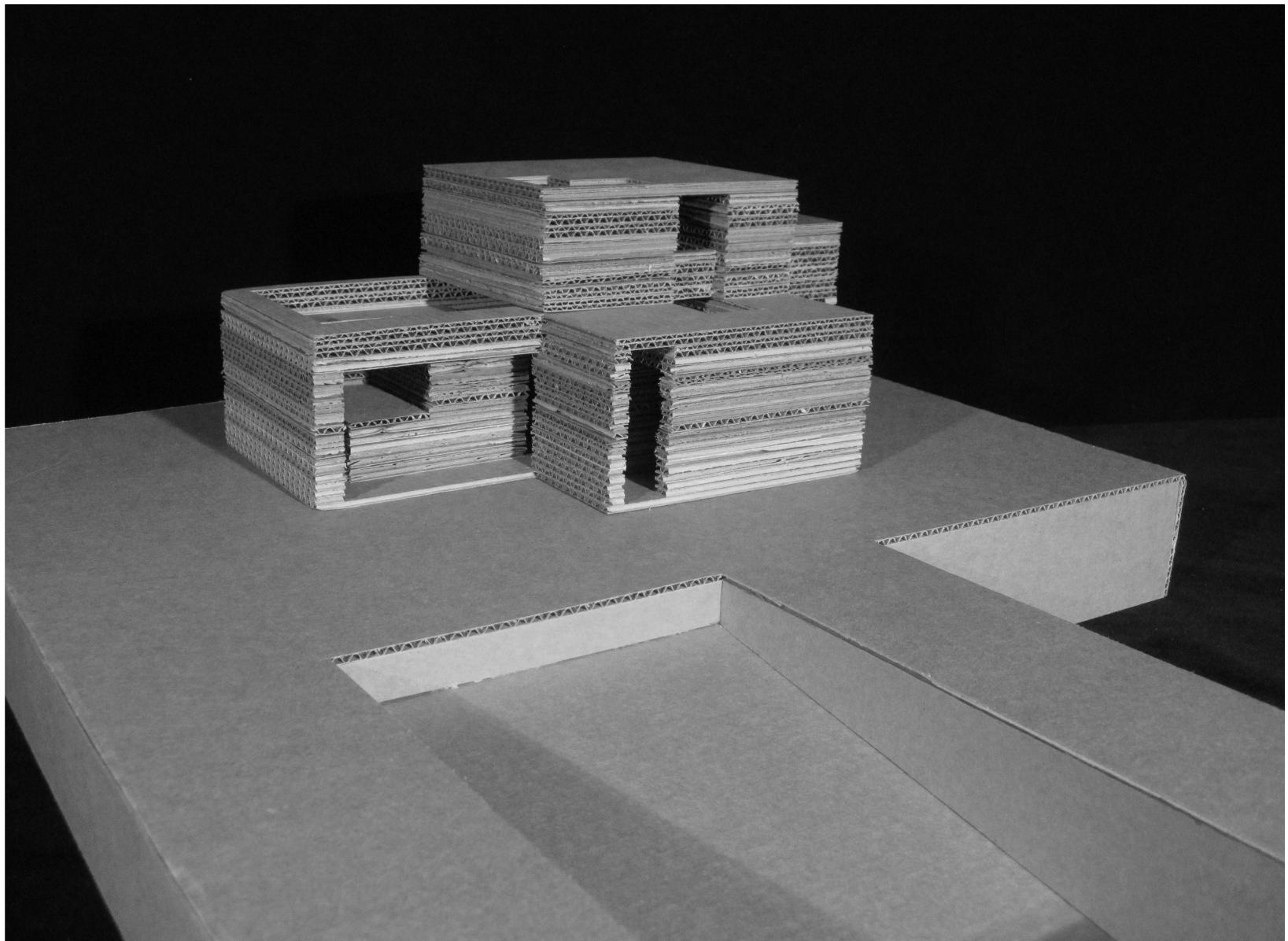
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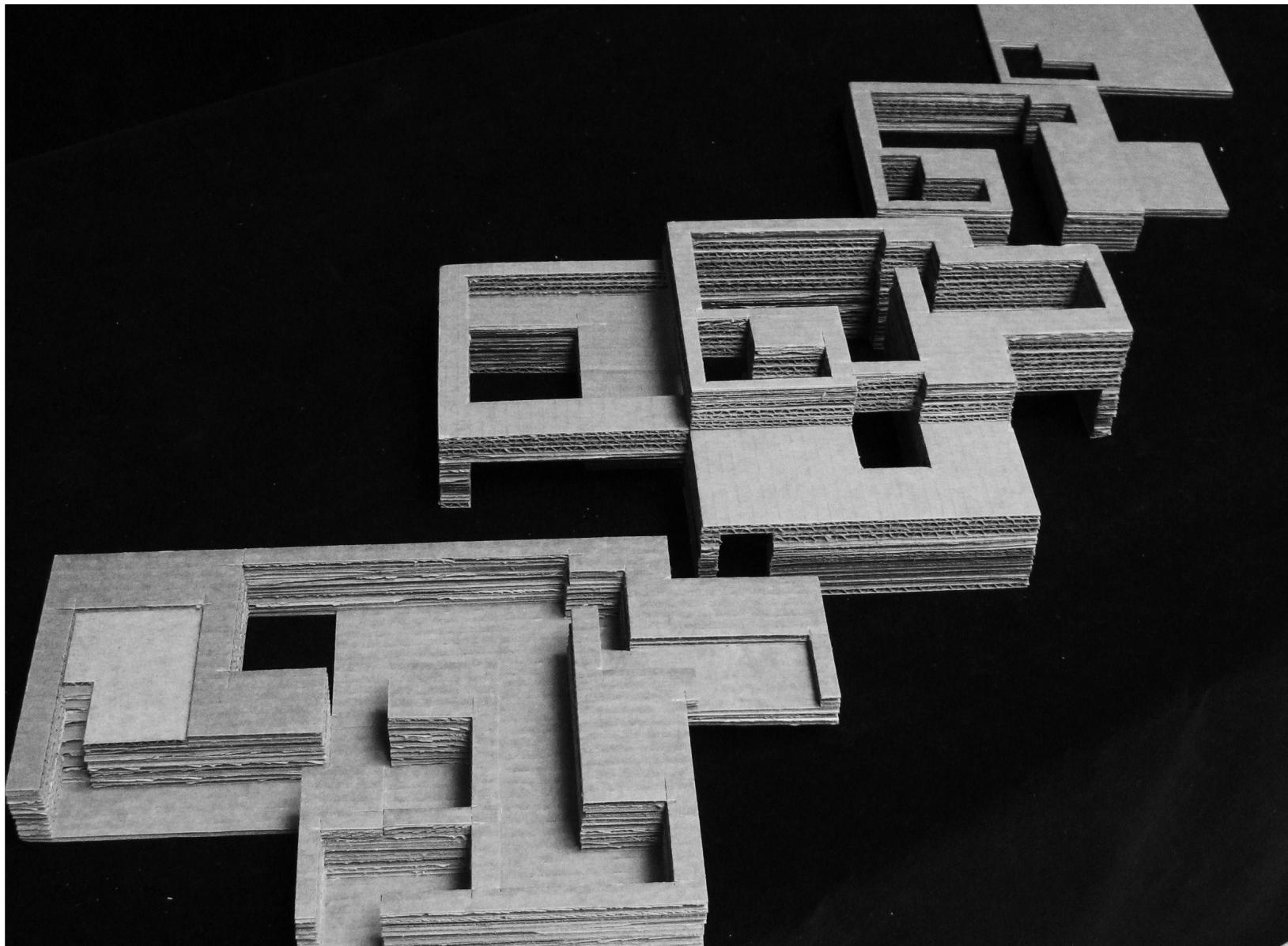


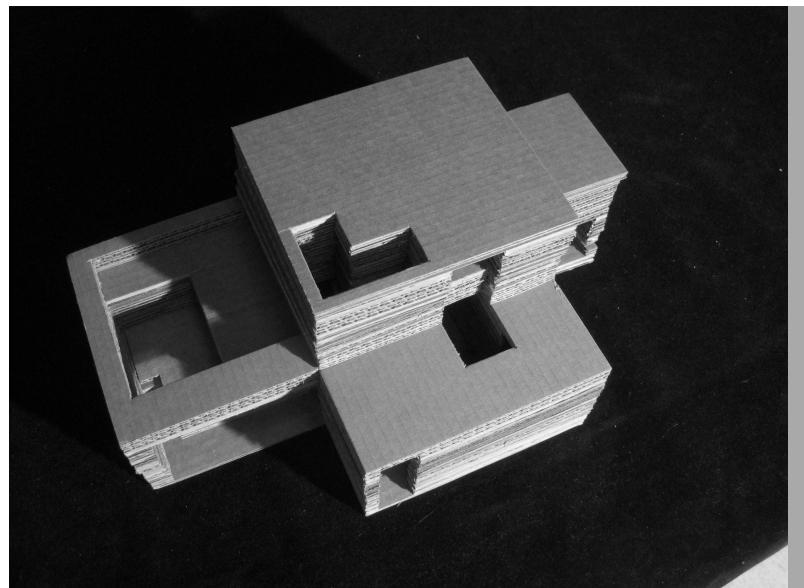
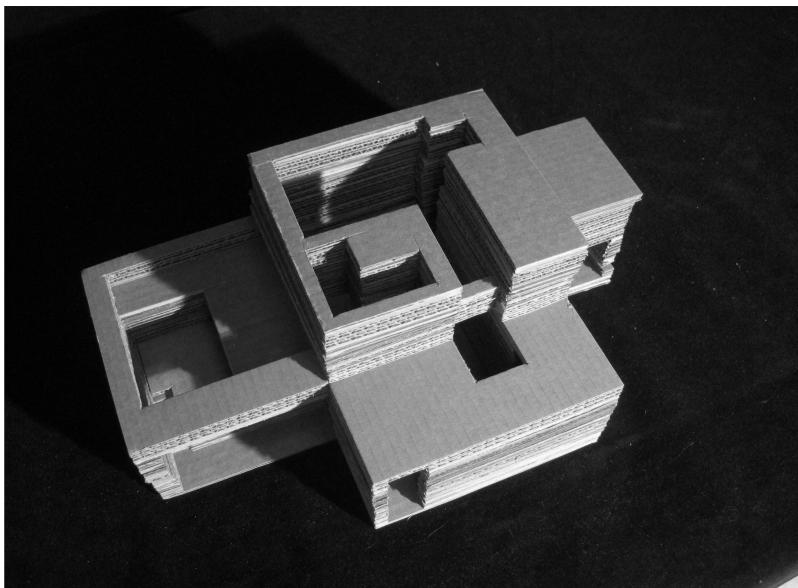
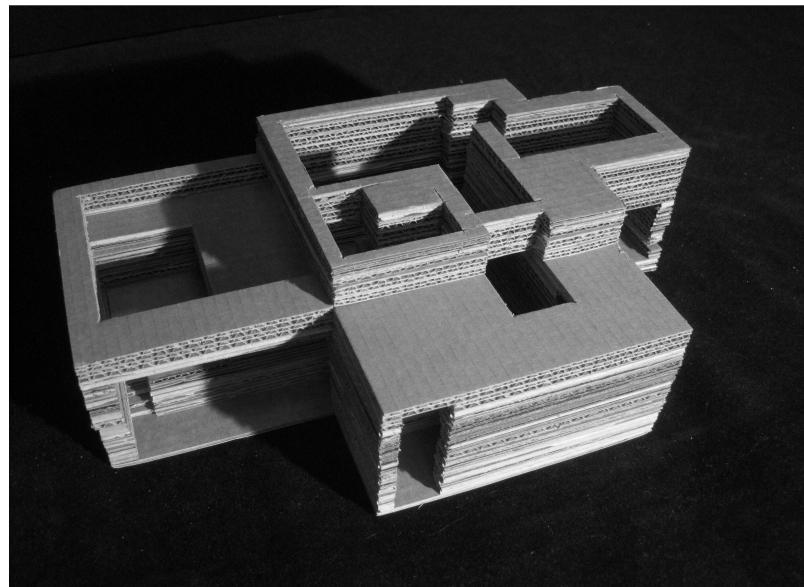
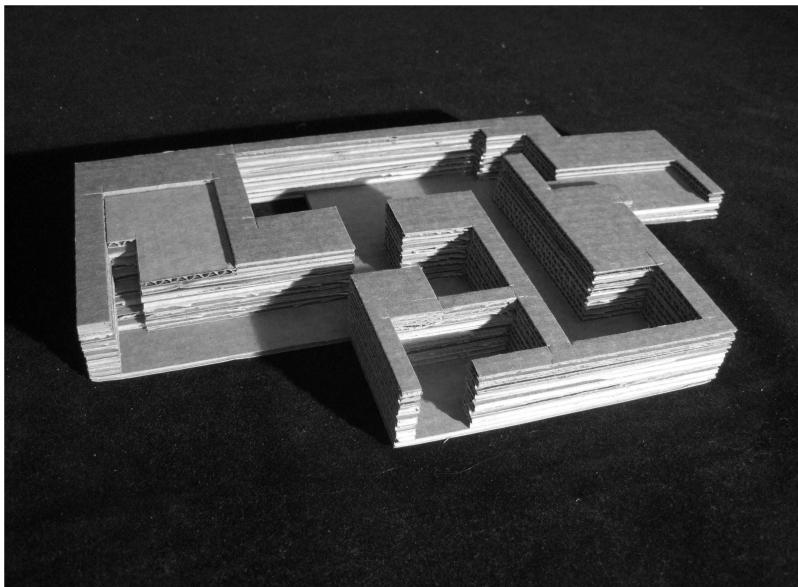


Above: Final spatial solid plan and section.

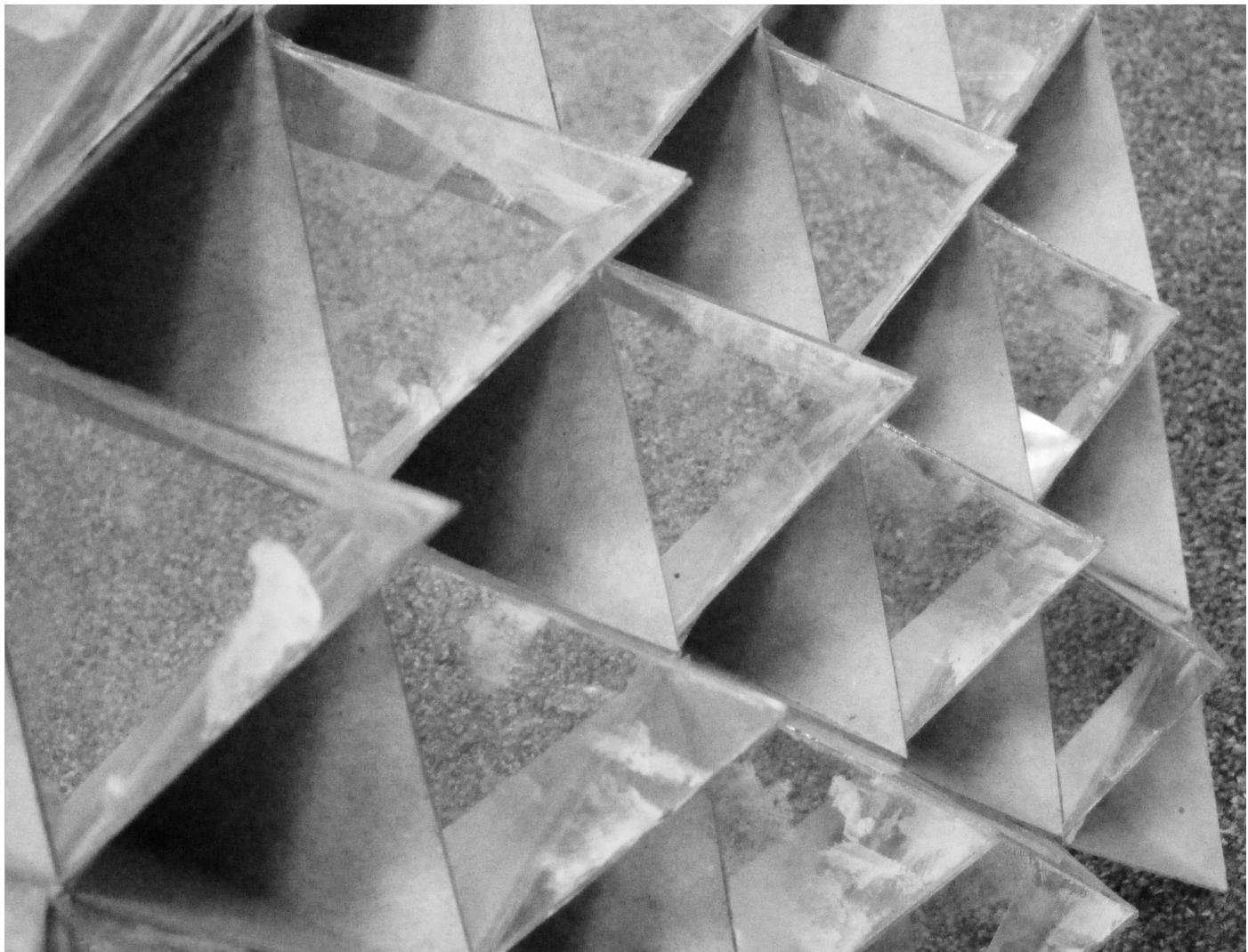
Right page: Final model on site.







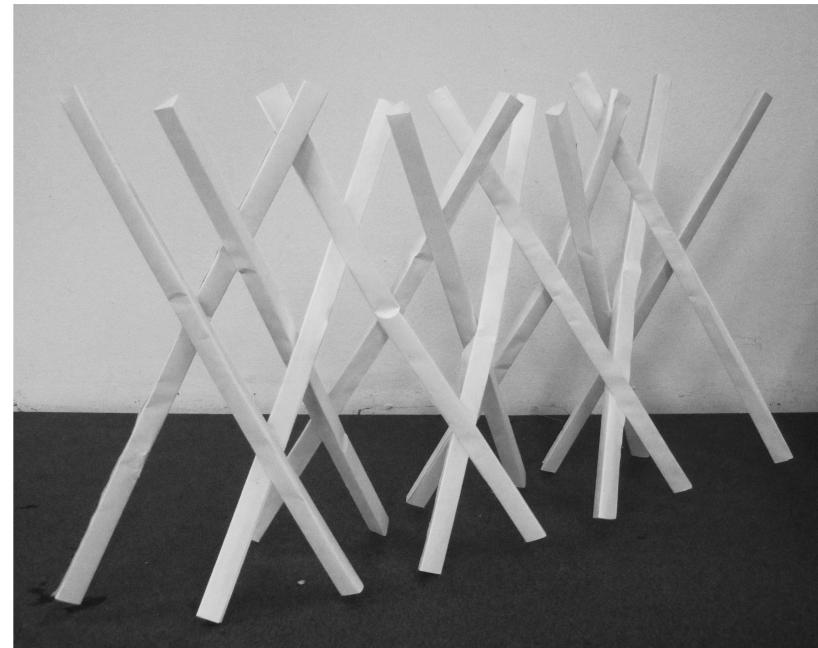
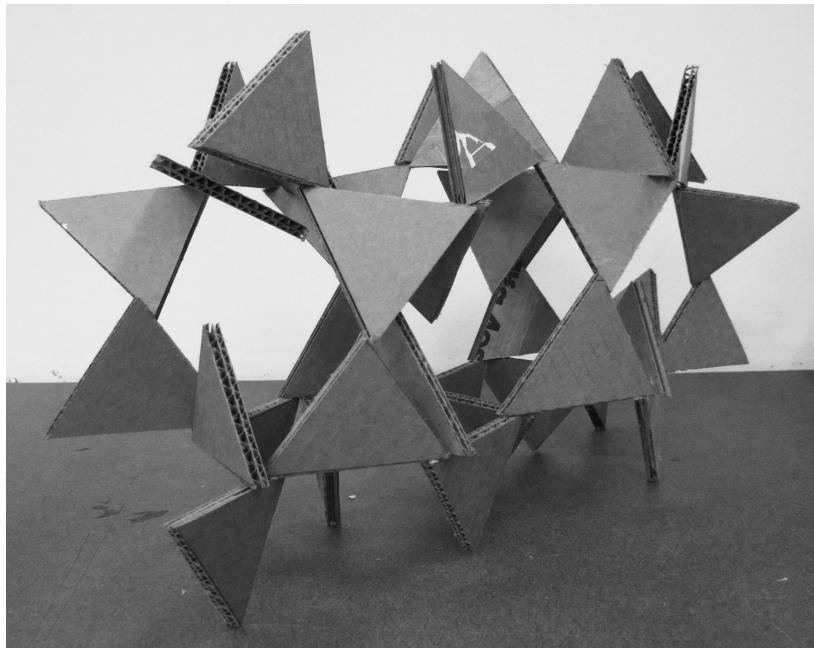
SURFACE

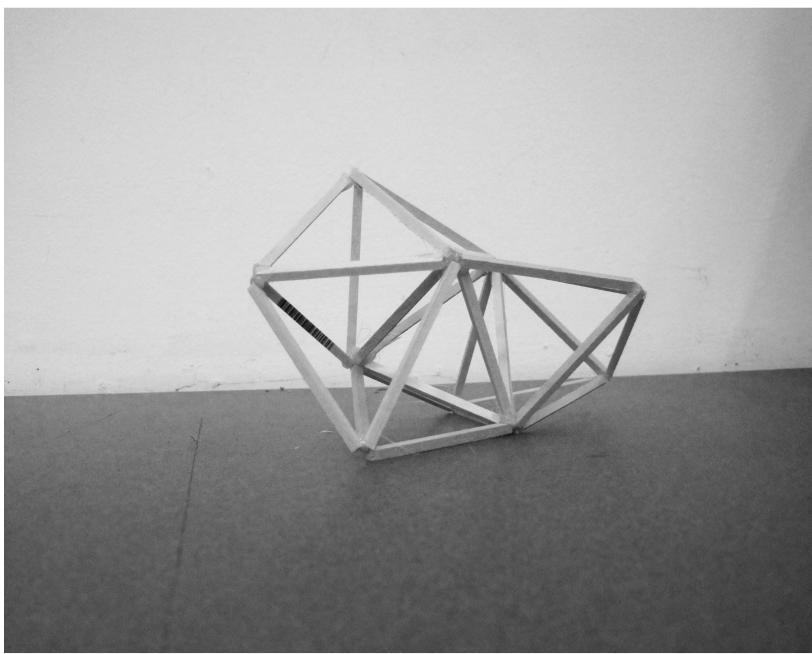
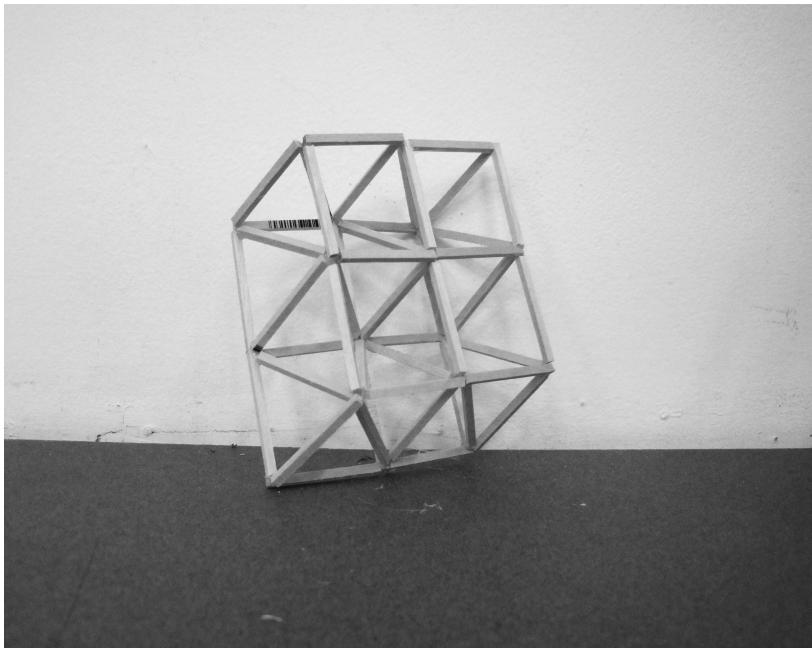


SYSTEM, MATERIAL, EFFECT

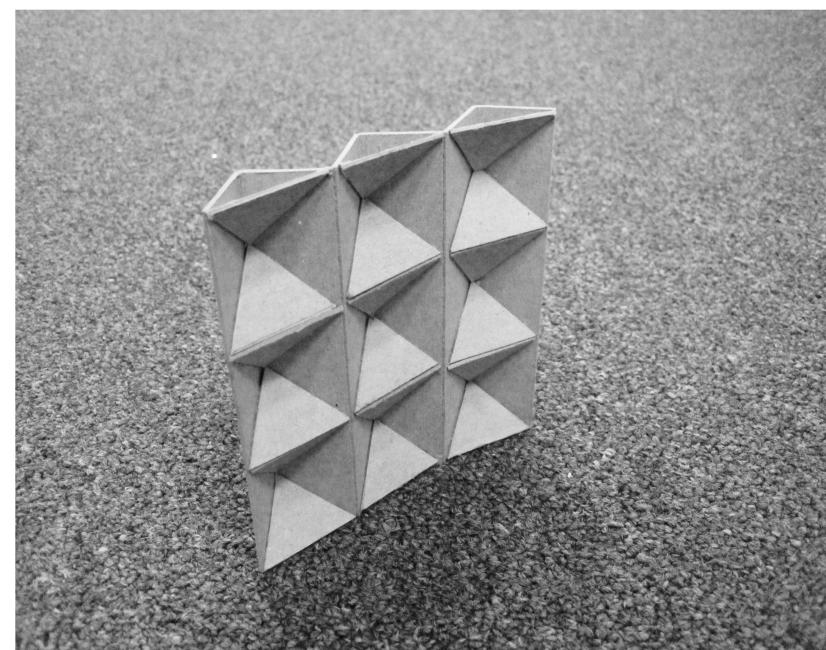
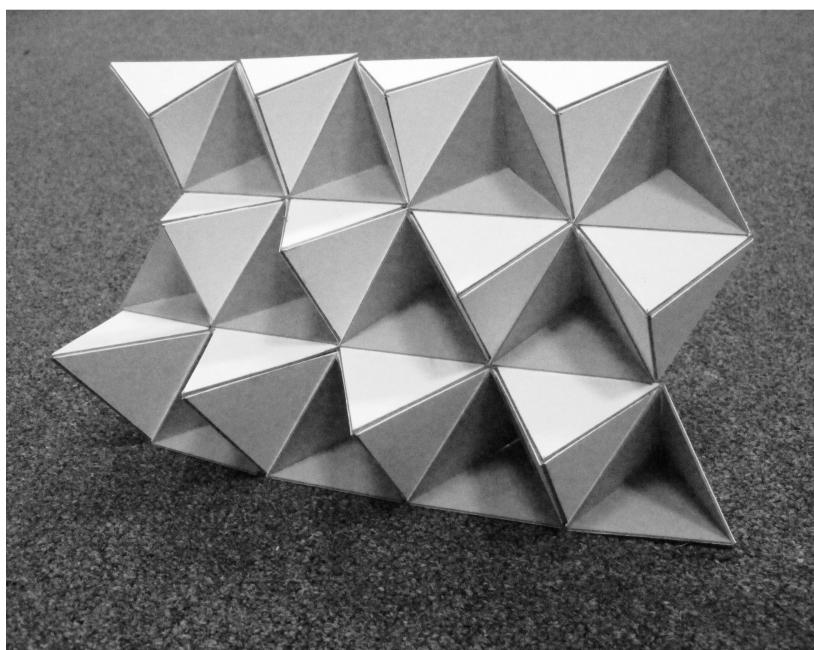
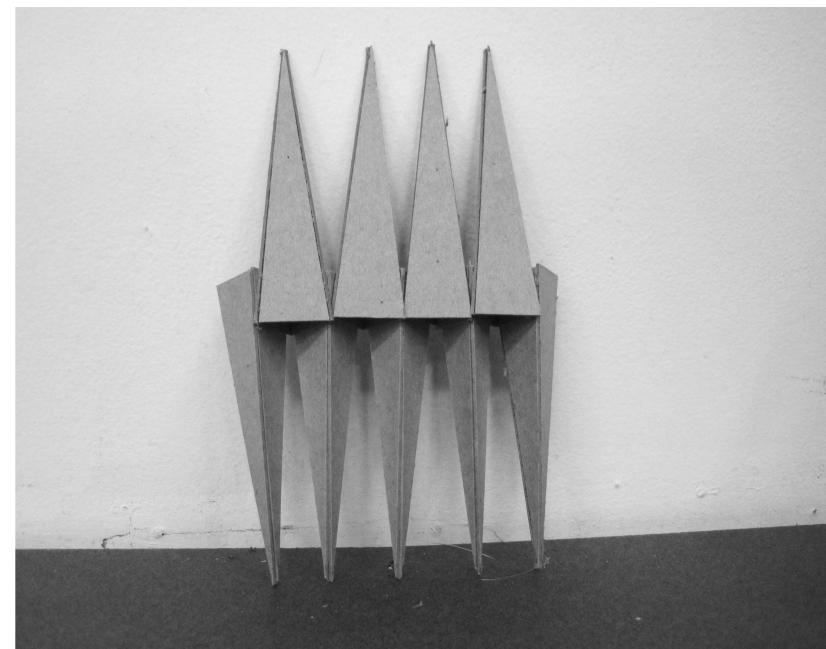
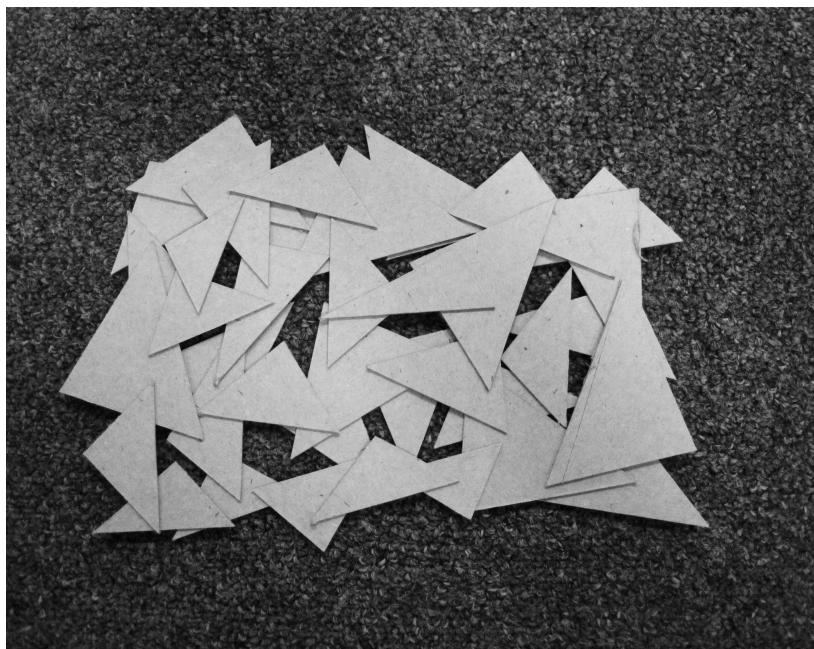
The purpose of this exercise was to explore the spatial, structural, and organizational implications of surface. Through different manipulations and construction techniques, different types of surfaces were constructed using different materials in different combinations. For each surface, a unique system or methodology was applied, based on the structure of the triangle. This triangular system proved to be extremely versatile and well suited to creating self-supporting, spanning, coherent systems. Refinement of these surface systems resulted in their ability to create distinct multi-dimensional fabrics with complex underlying systemic logic.

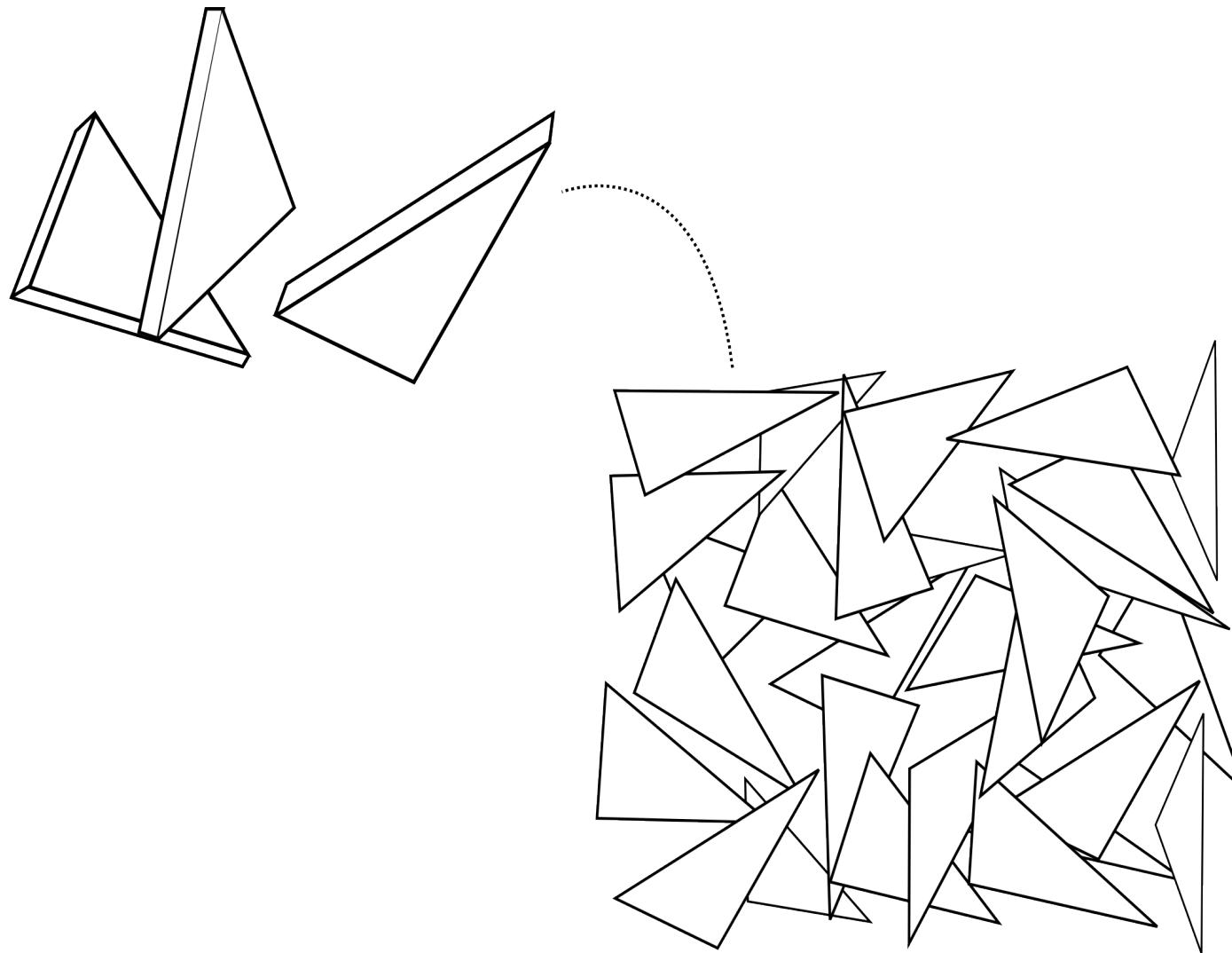
Right page: Preliminary parti models.





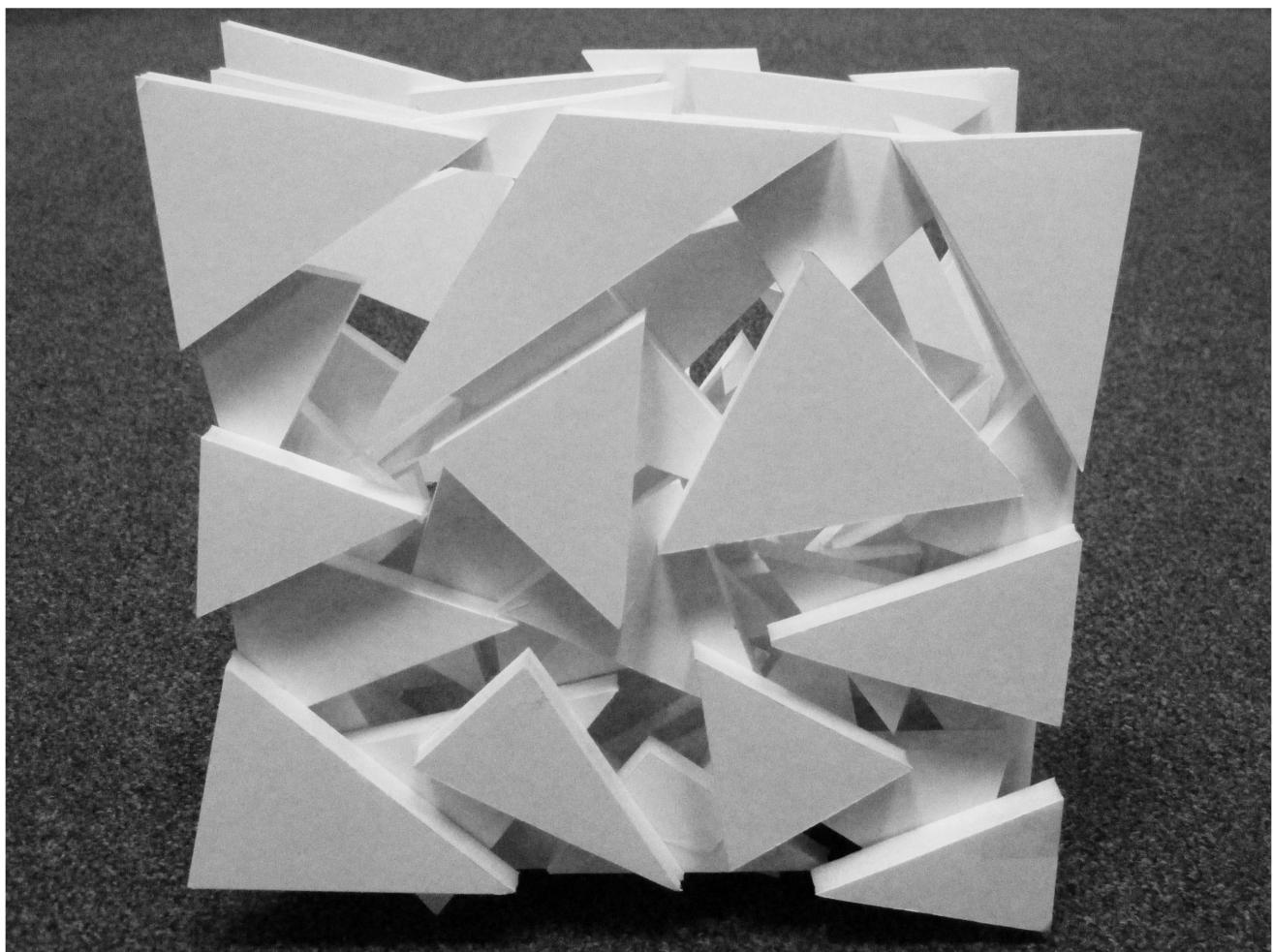
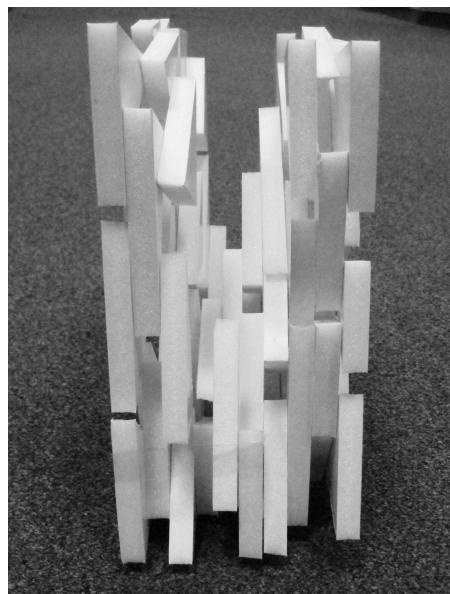
Revised parti models.

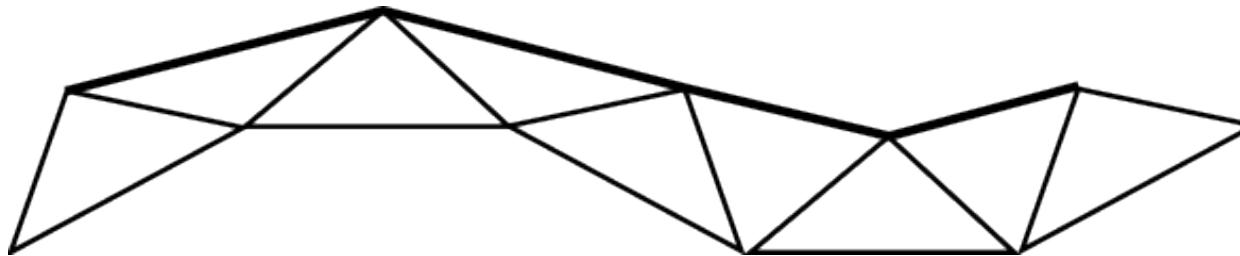
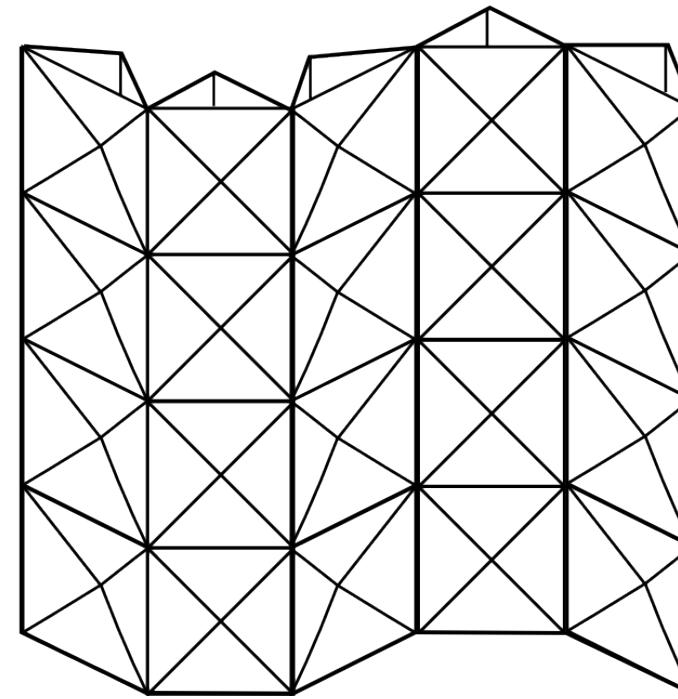
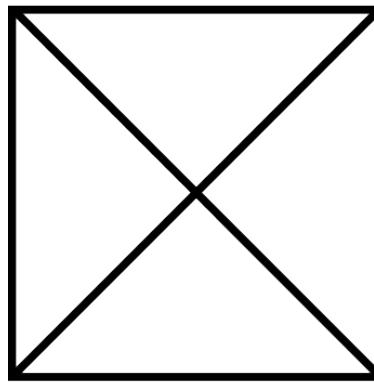
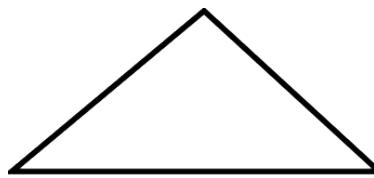




Above: Diagram of final "Triangular Felt" surface.

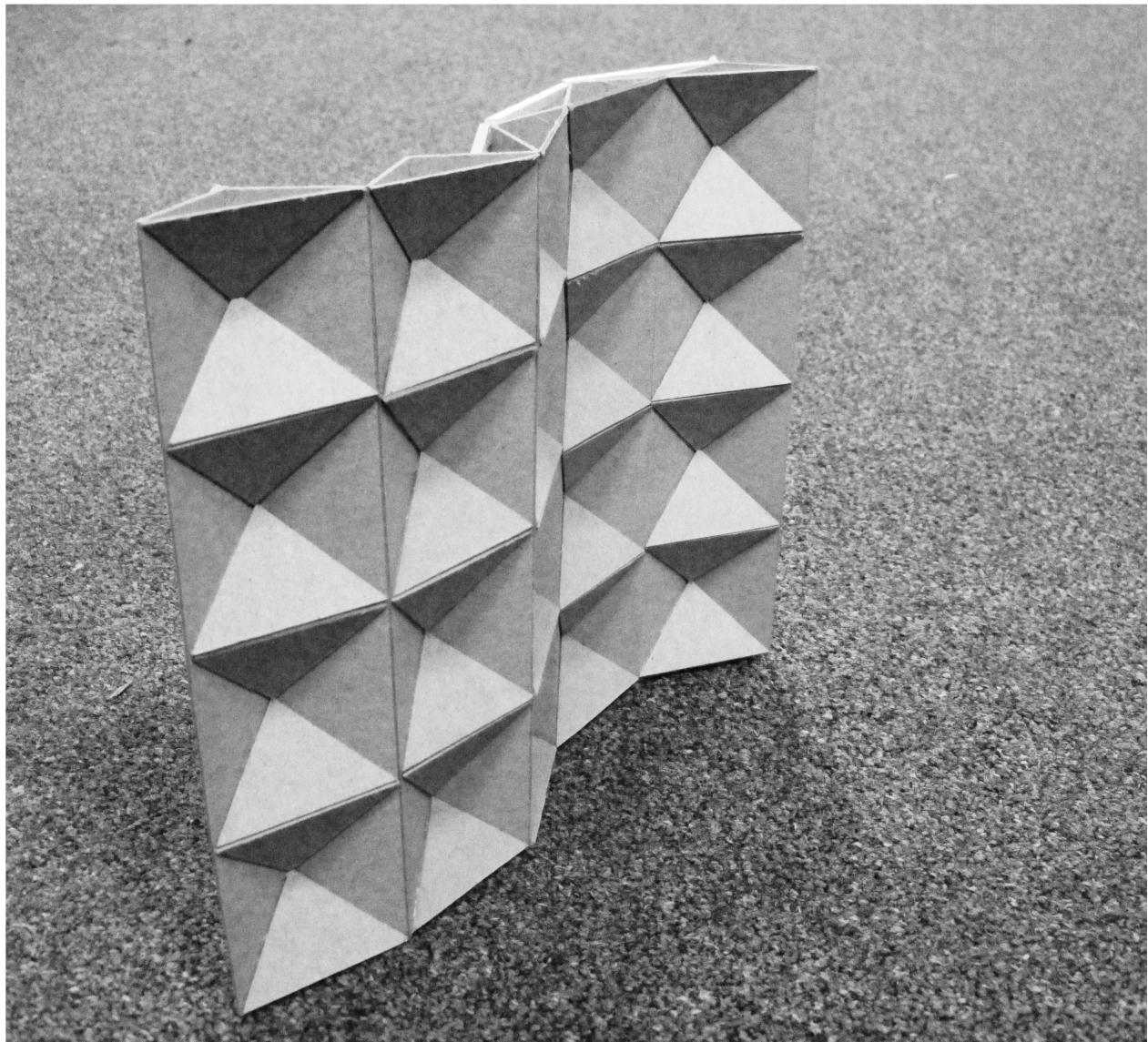
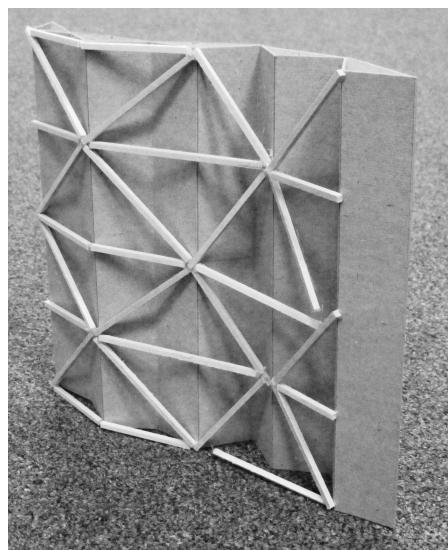
Right page: Final "Triangular Felt" surface model.

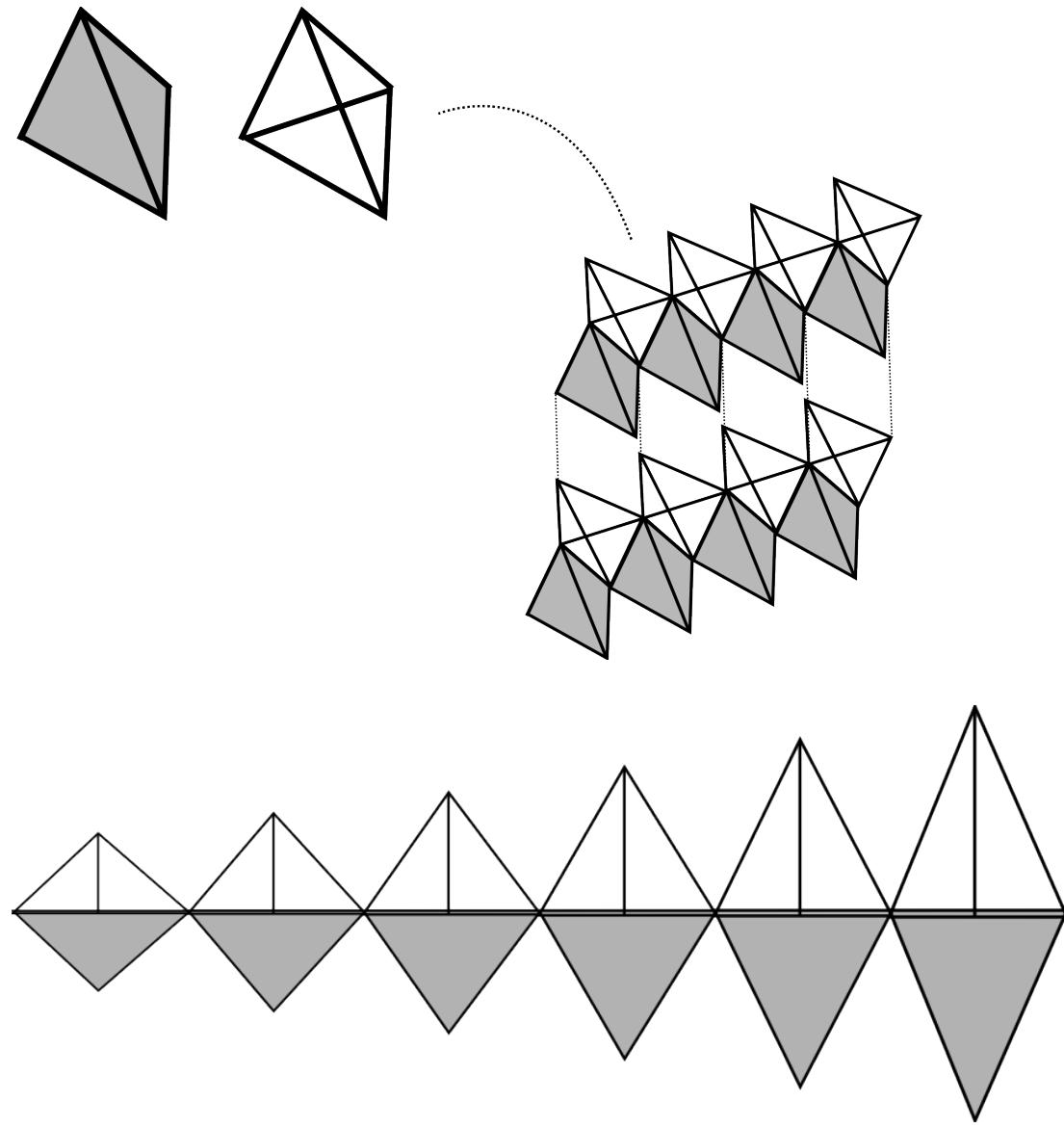




Above: Diagram and plan of final "Pyramidal Indentation" surface.

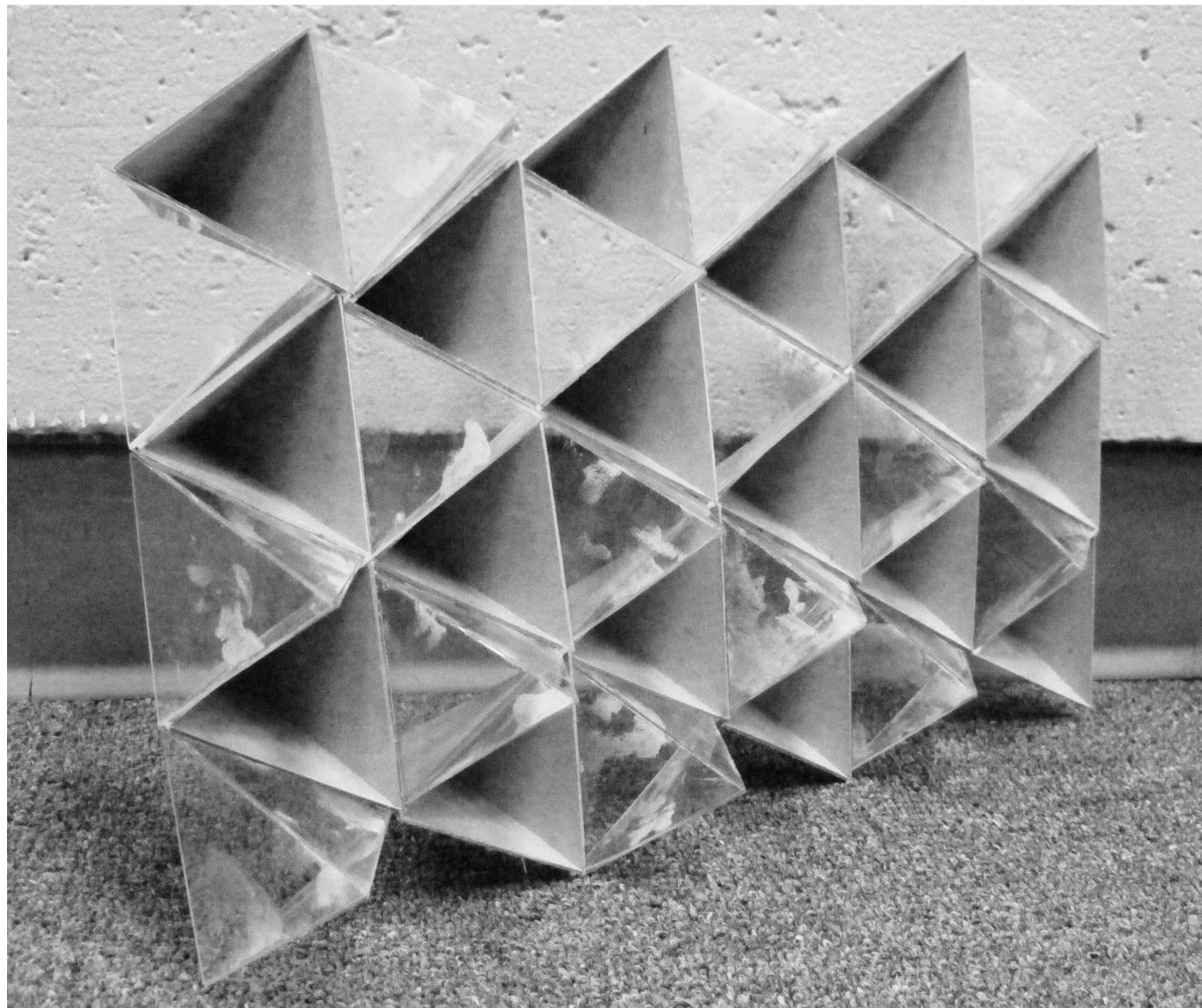
Right page: Final "Pyramidal Indentation" surface model.

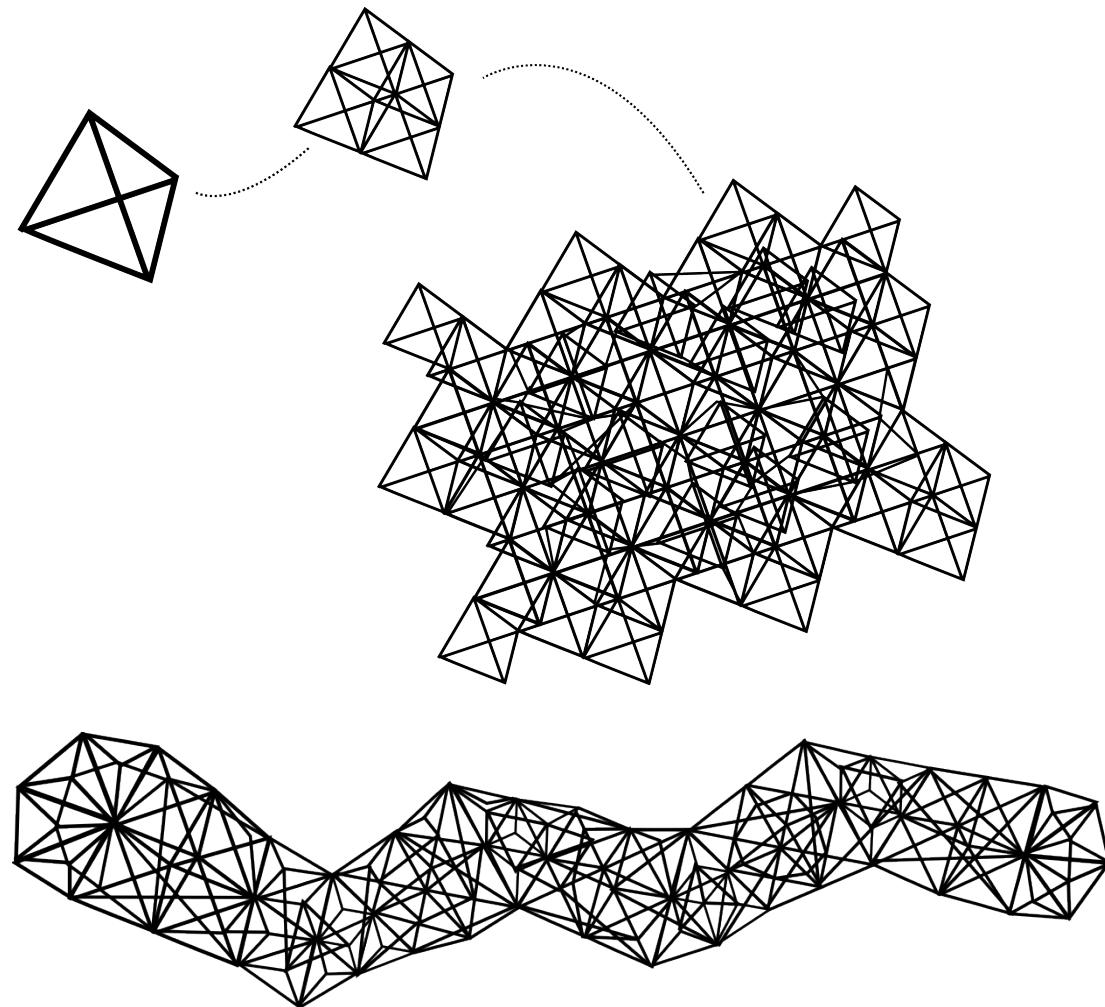




Above: Diagram and plan of final "Prismatic Transparency" surface.

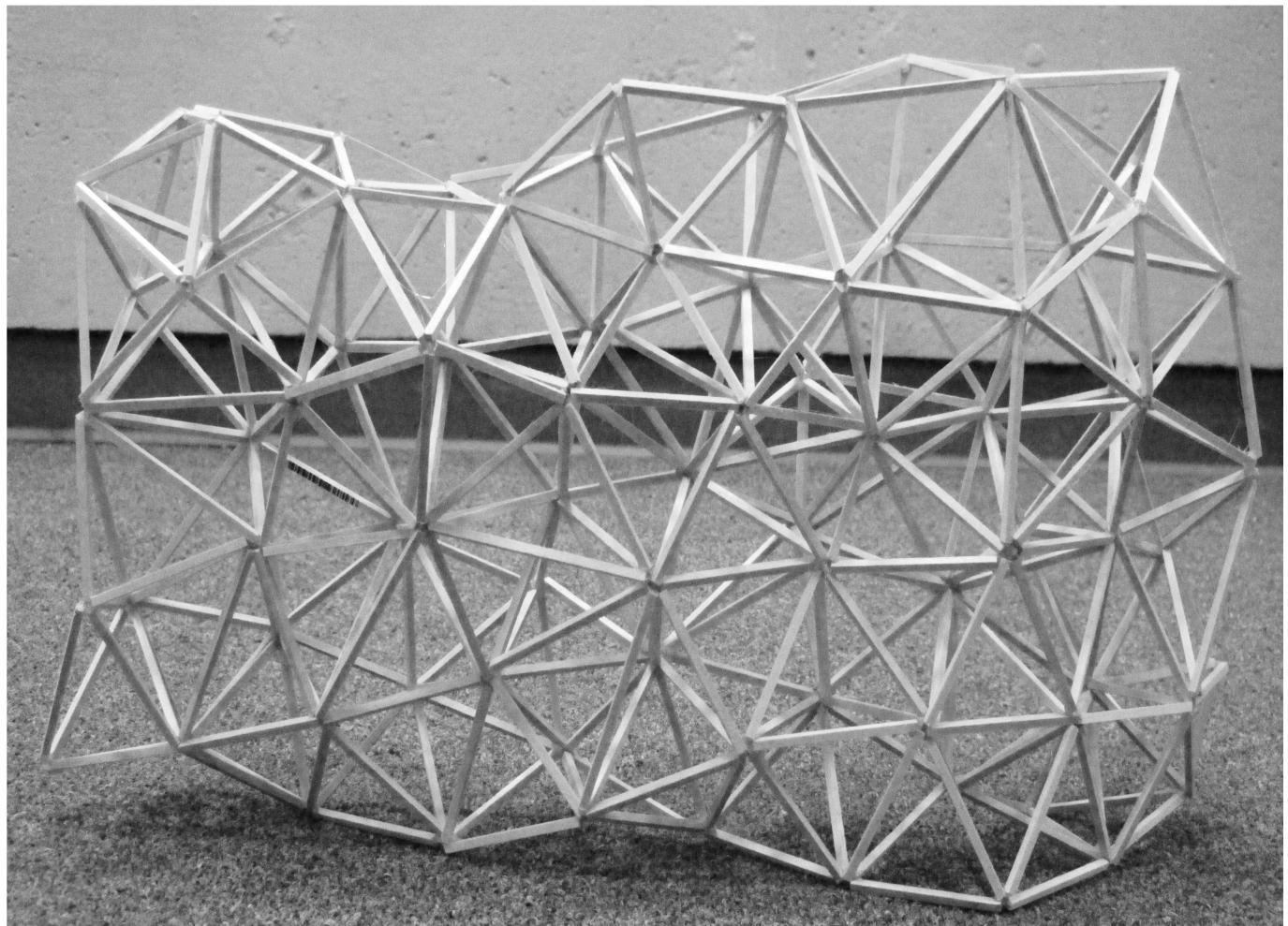
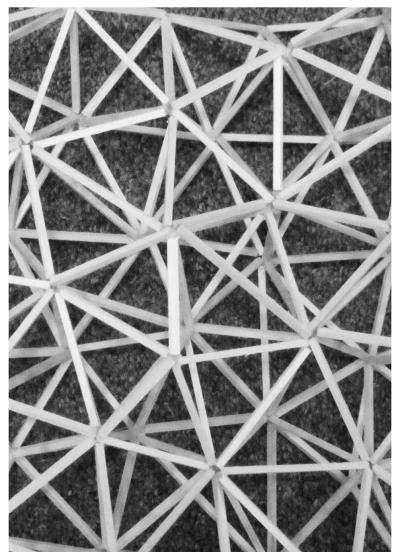
Right page: Final "Prismatic Transparency" surface model.



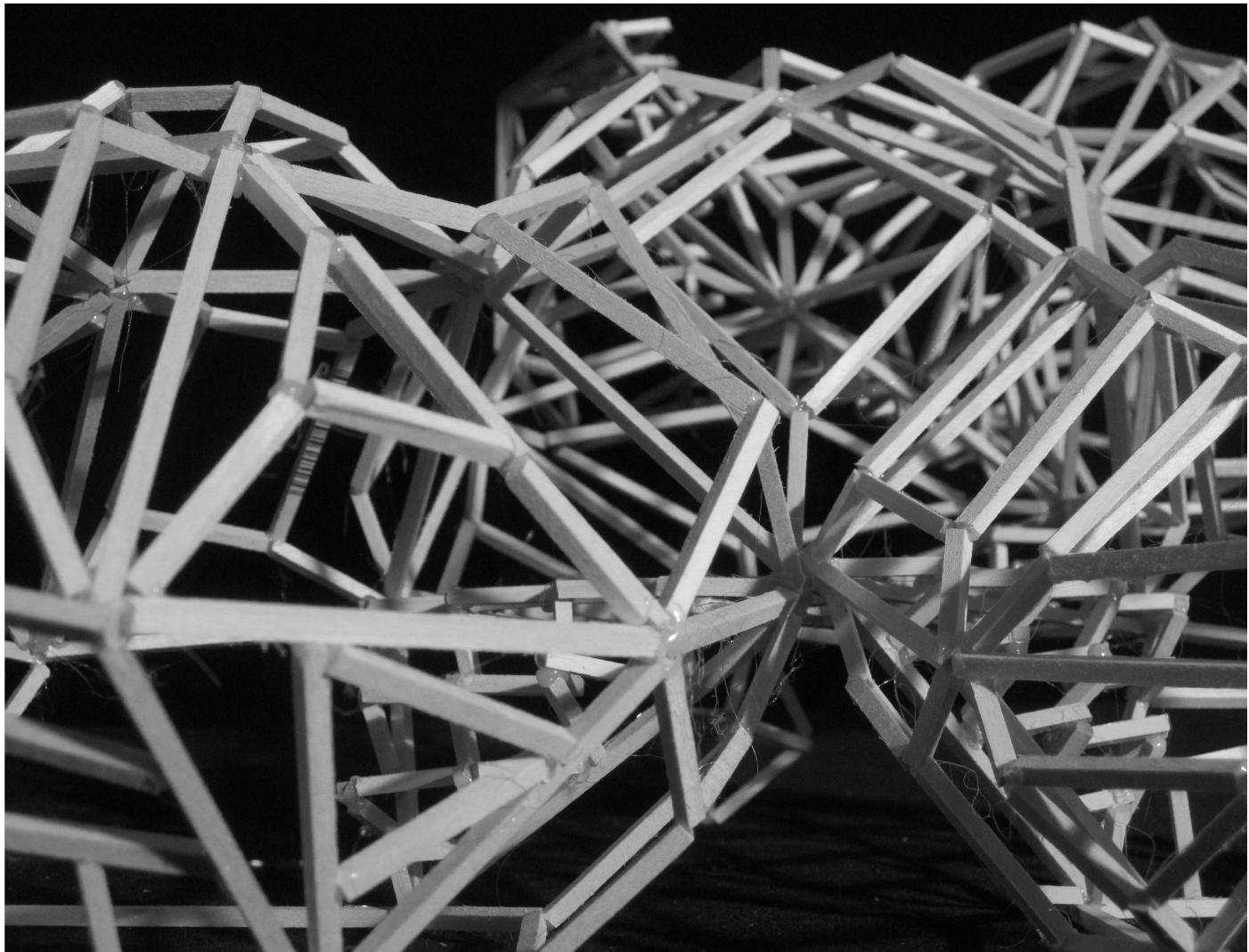


Above: Diagram and plan of final "Tectonic Prism" surface.

Right page: Final "Tectonic Prism" surface model.



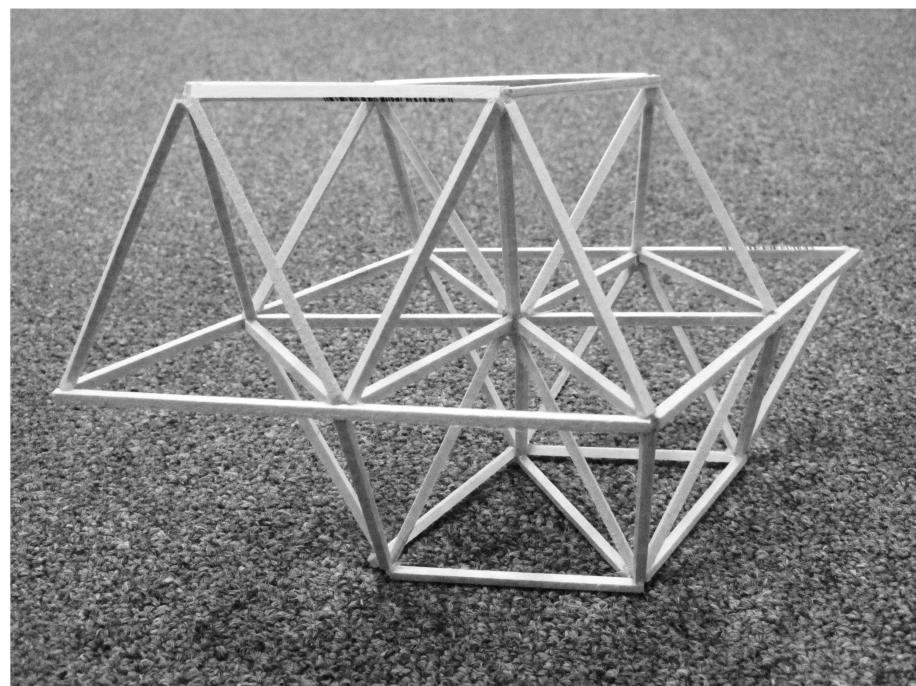
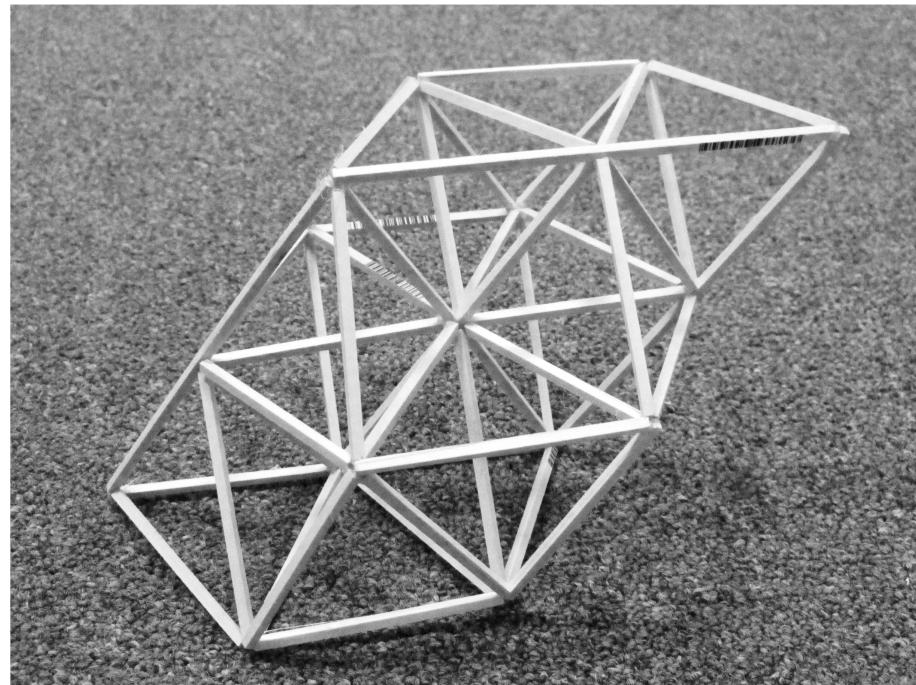
LIFEGUARD STATION

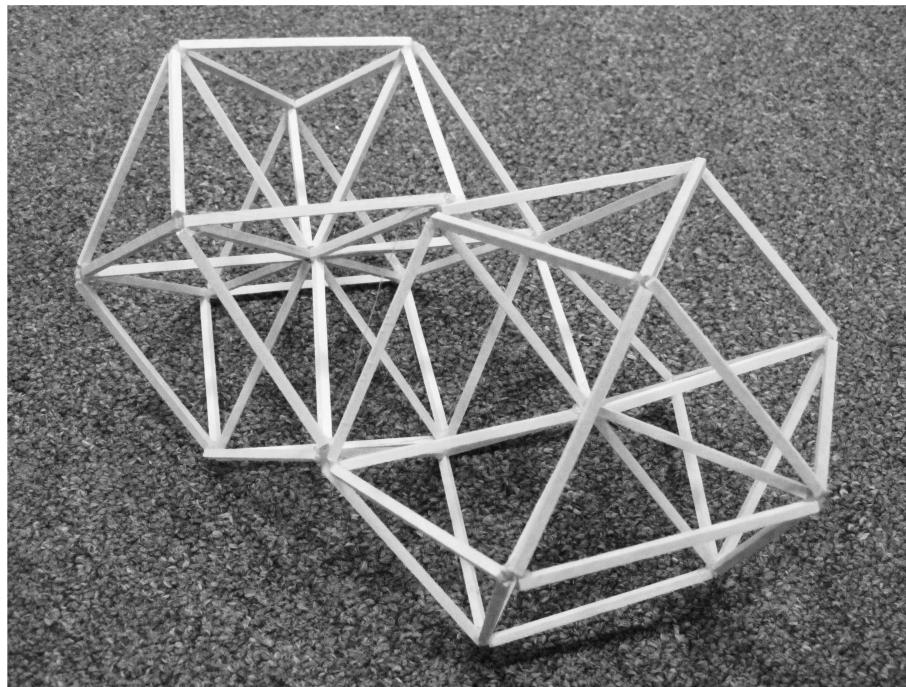


SURFACE STRUCTURE

The challenge of this project was developing a completely tectonic system capable of effectively communicating programmatic differences through varying levels of density. The prismatic transparency surface of the previous project was translated into a tectonic structure, which was then developed into a more structured geometric skeleton of intermeshed, modified icosahedrons. The geometric structure of the modified icosahedrons allowed for organic mutation and flexibility while still maintaining a coherent structure that could be 'grown' in any direction. The lifeguard station's programmatic elements took shape from the cellular, modular nature of the tectonic system, and the final structure features a tectonic system that is both organic and irregular, yet also structured and carefully organized.

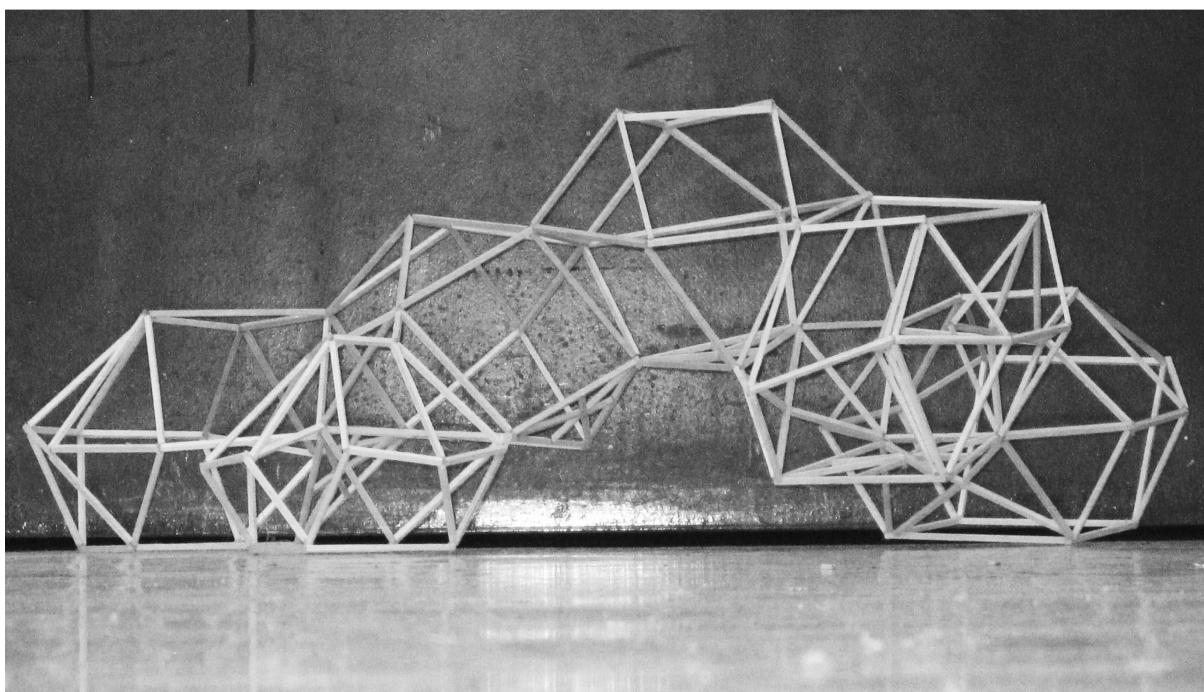
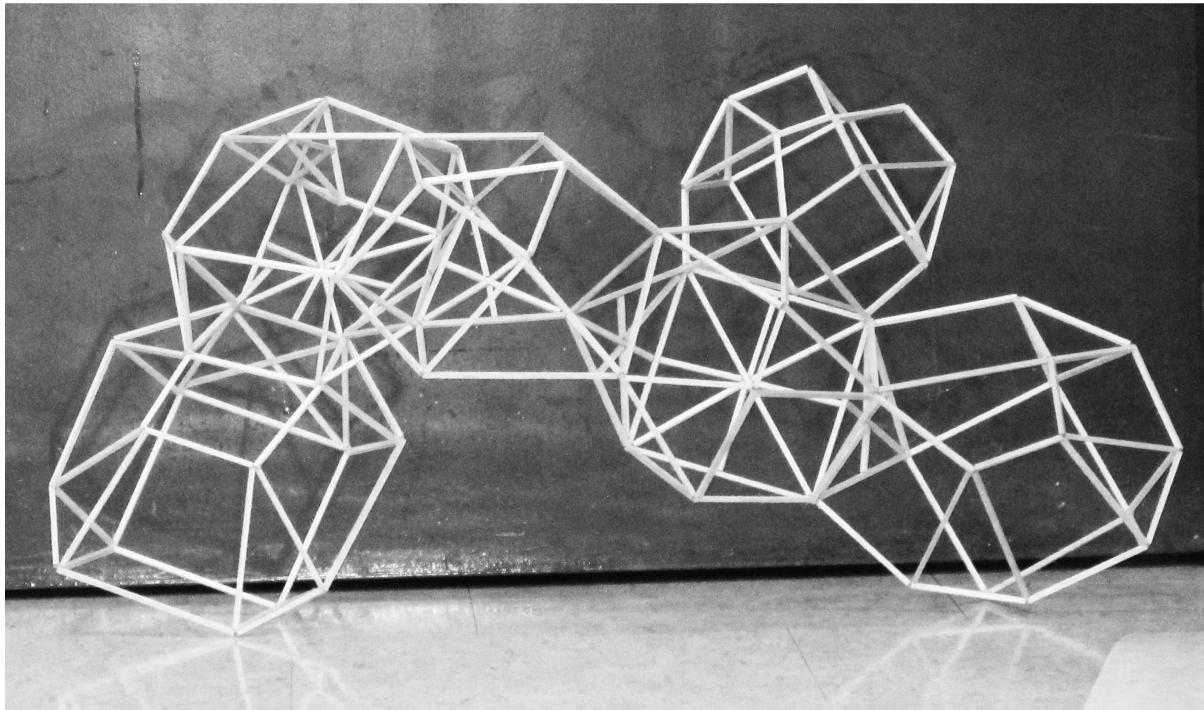
Right page: Modified icosahedron modules generated from original surface.

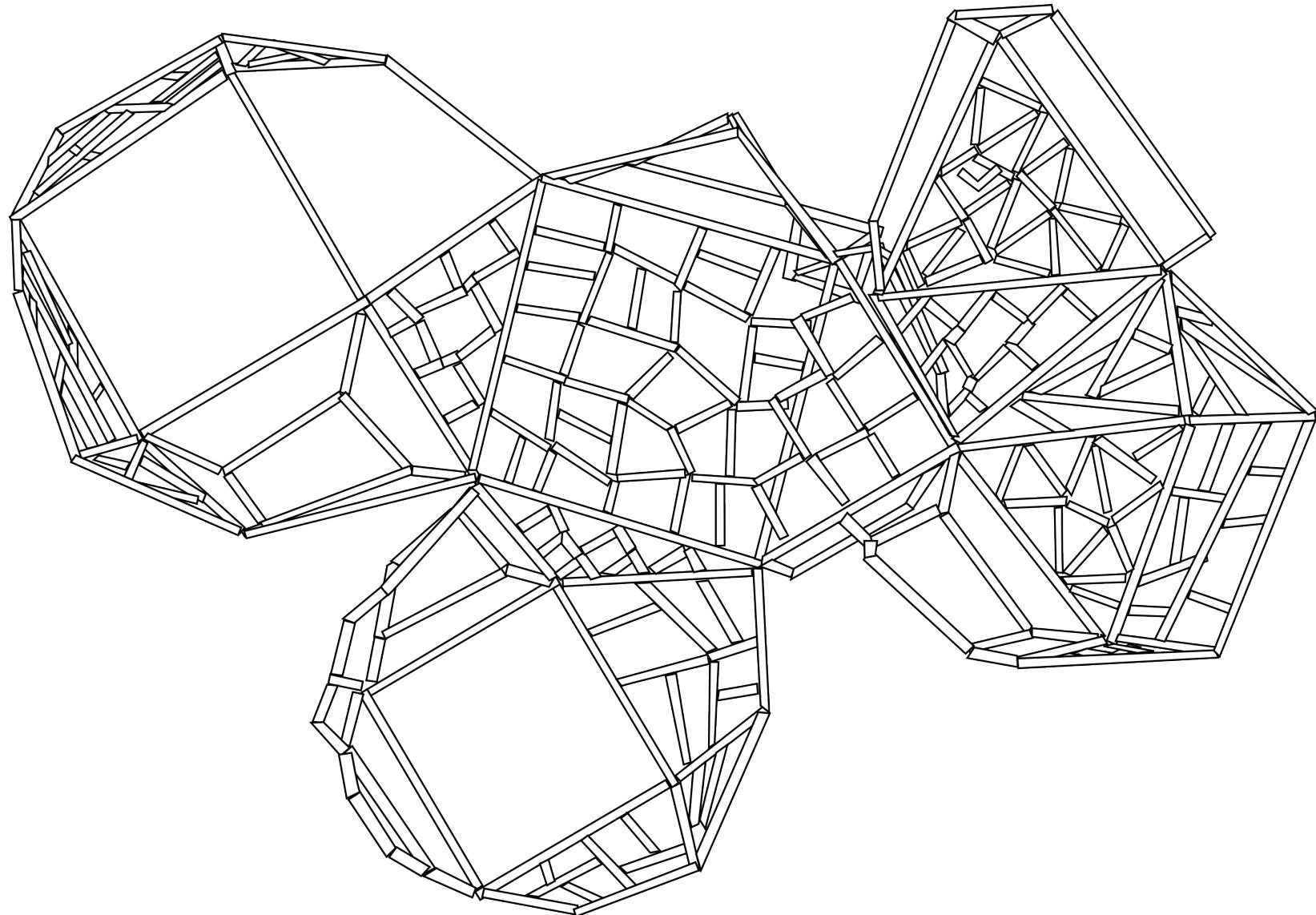




Above: Cellular pair created with two modified icosahedrons.

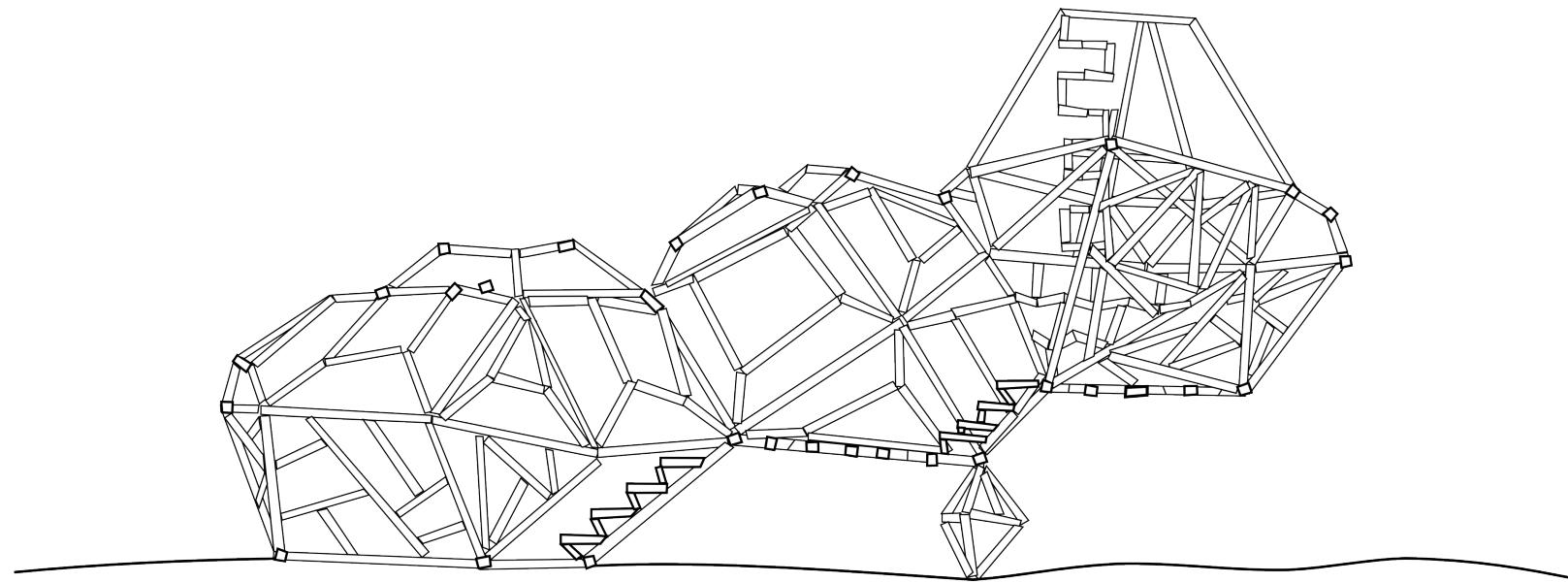
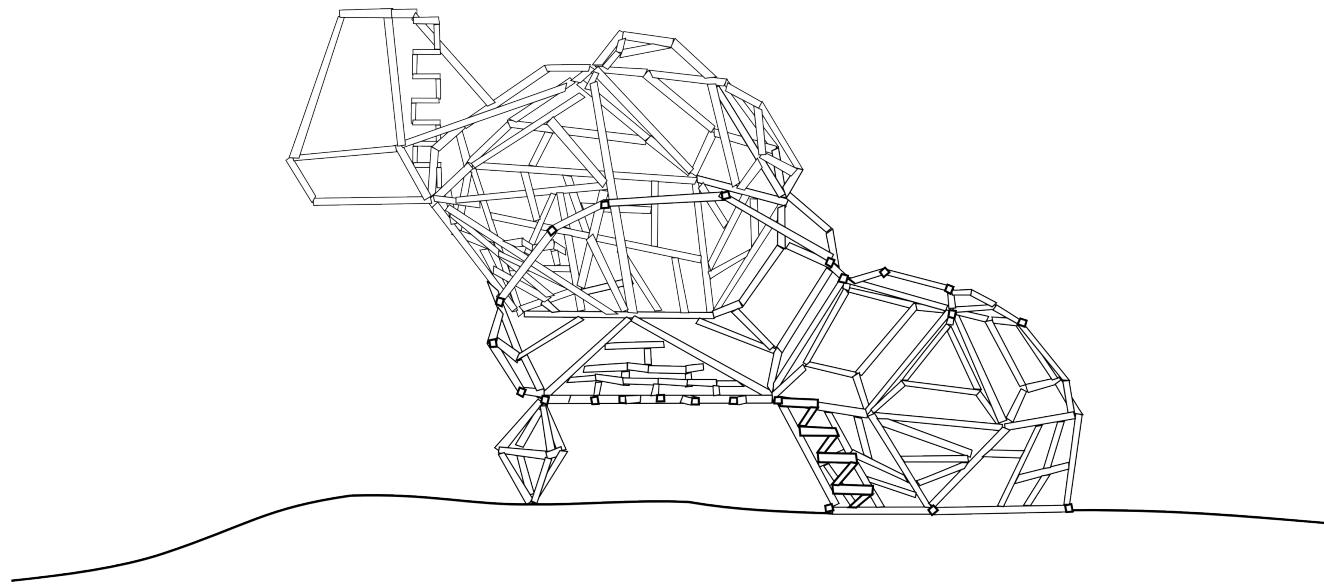
Right page: Lifeguard station parti model.



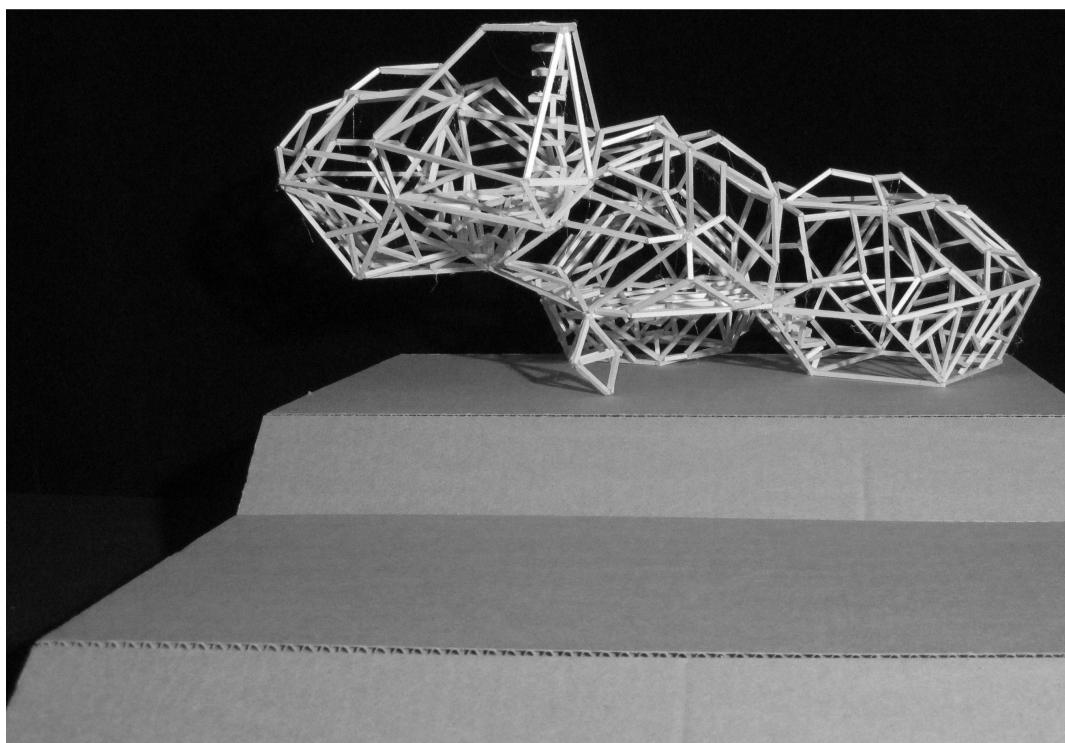
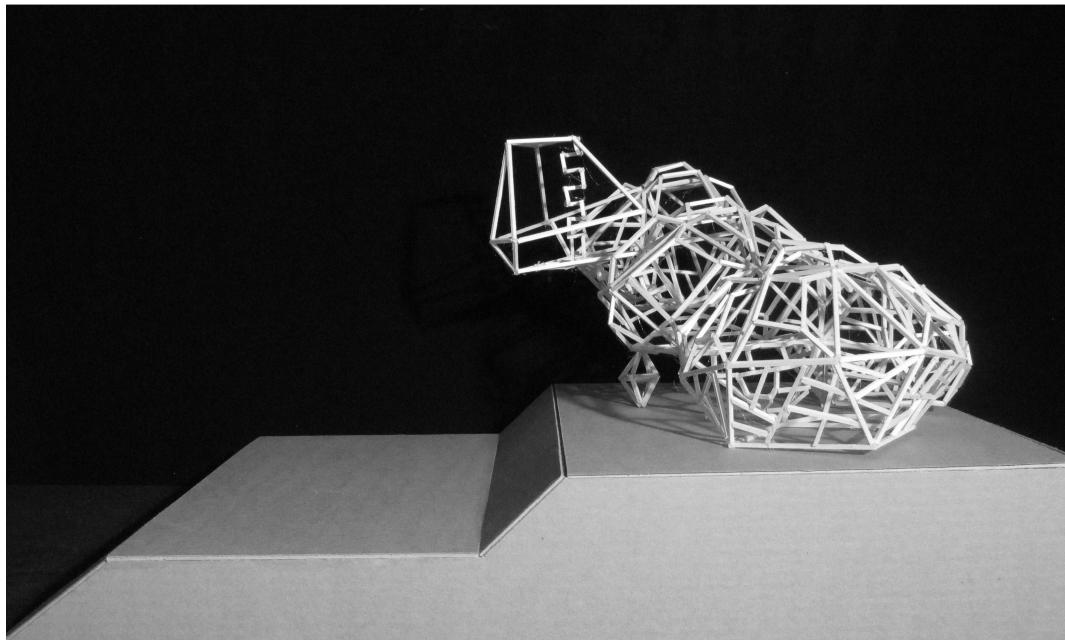


Above: Plan of final structure.

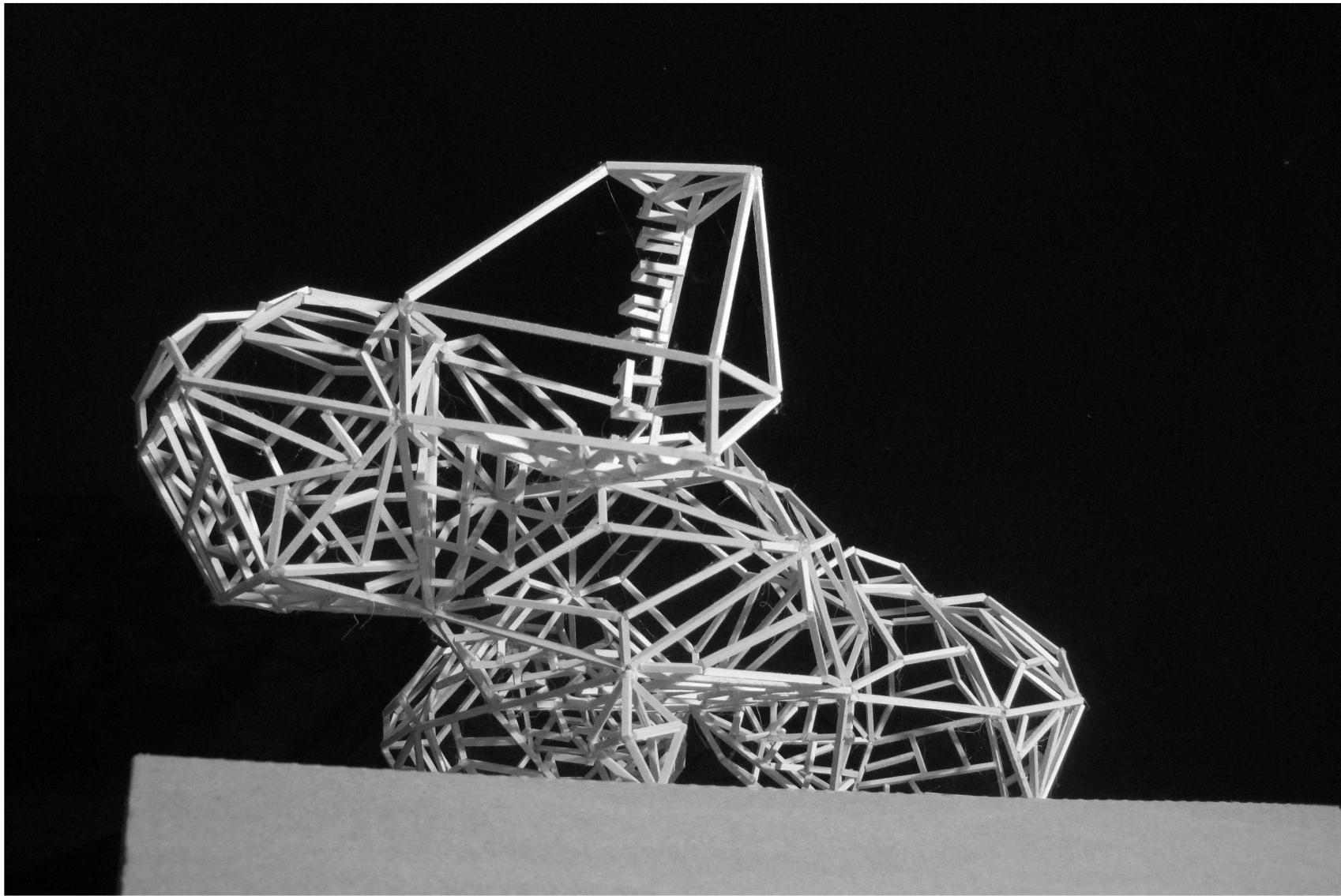
Right page: Latitudinal and longitudinal sections.

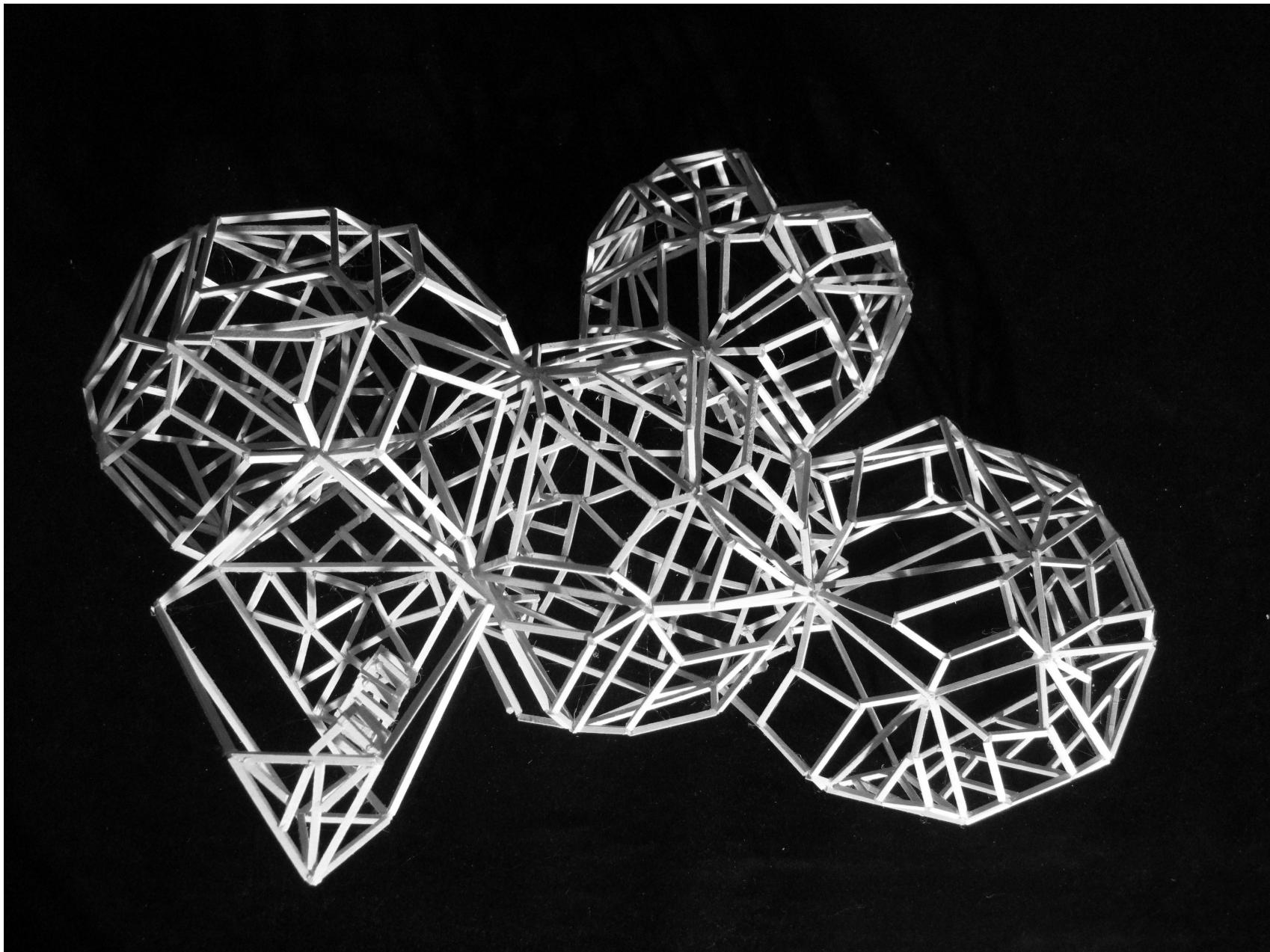


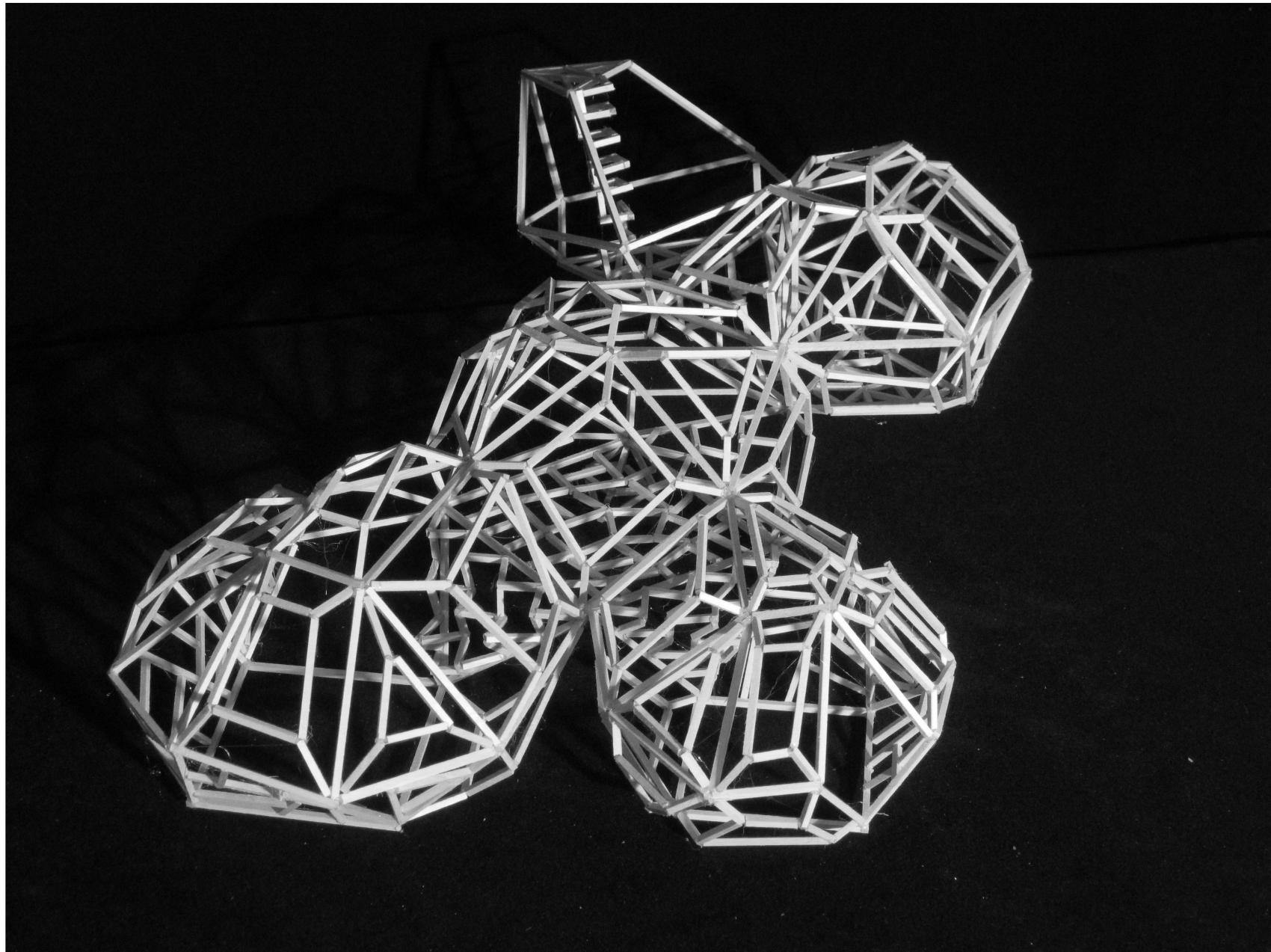
LIFEGUARD STATION



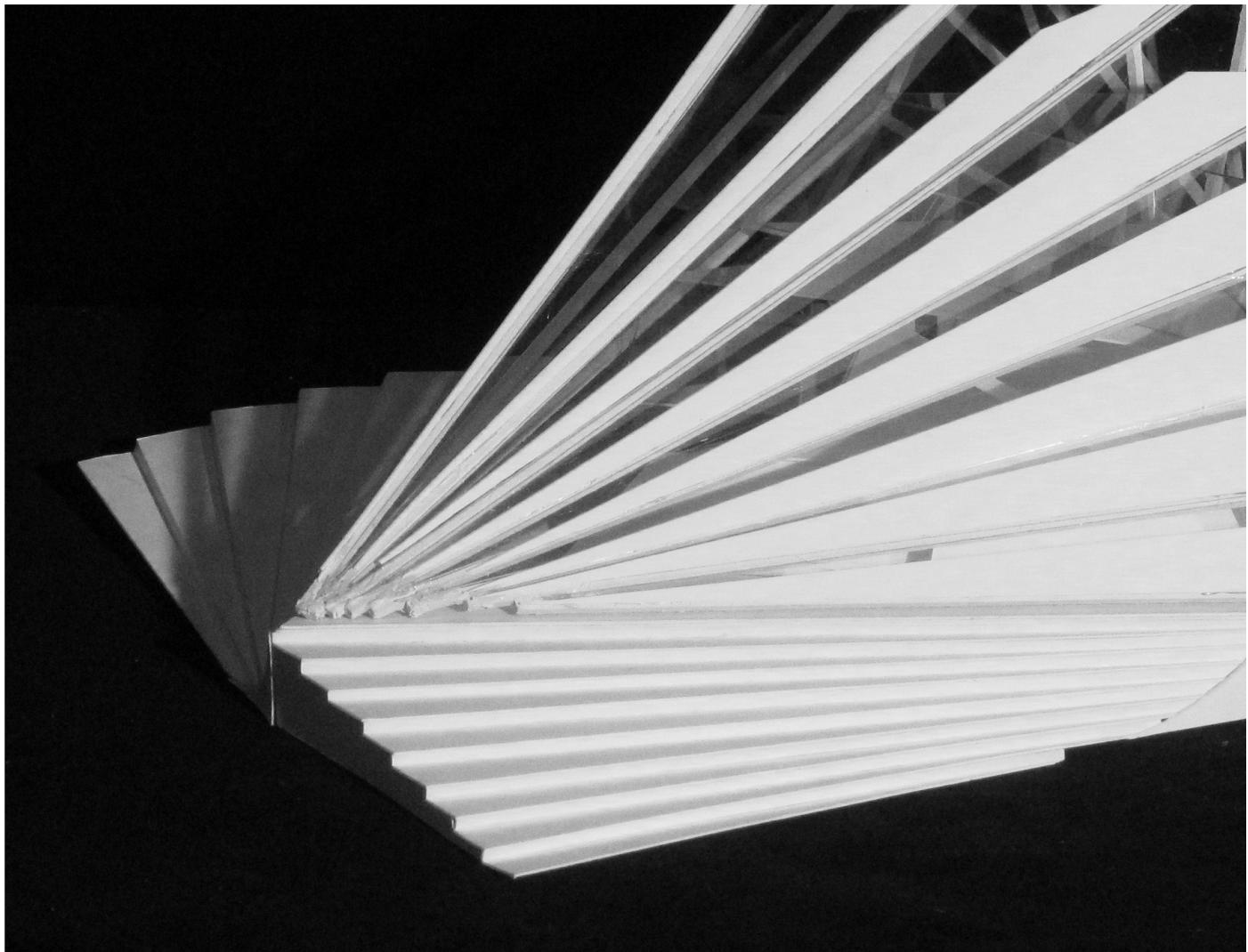
Final model on base.







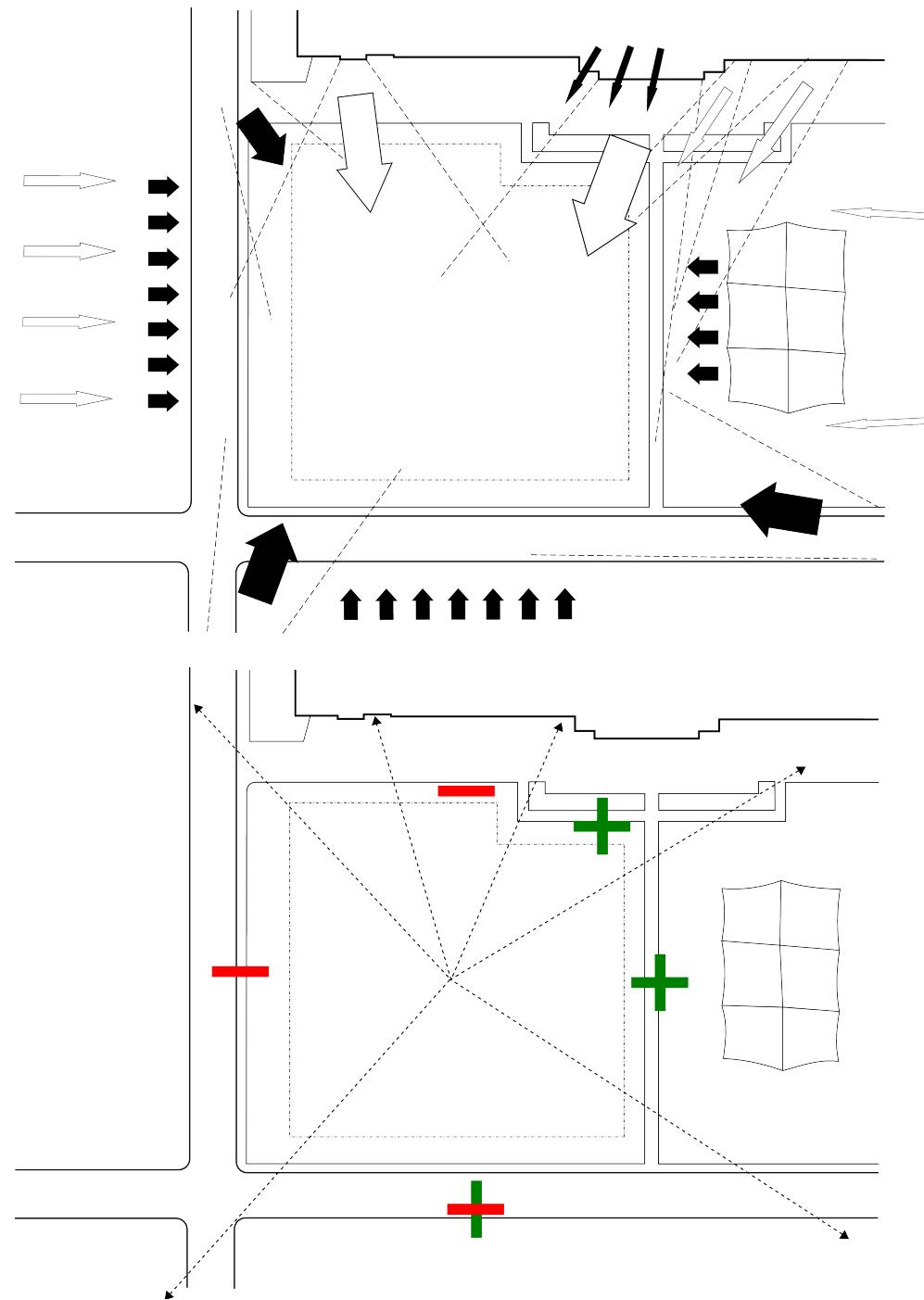
BUTTERFLY HABITAT

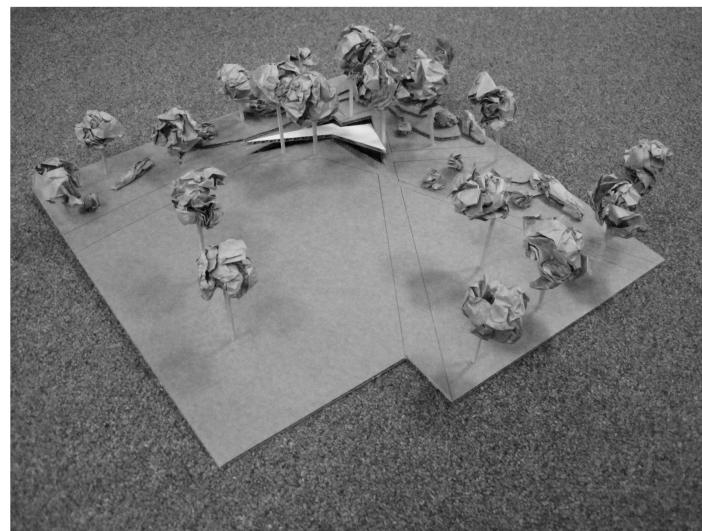
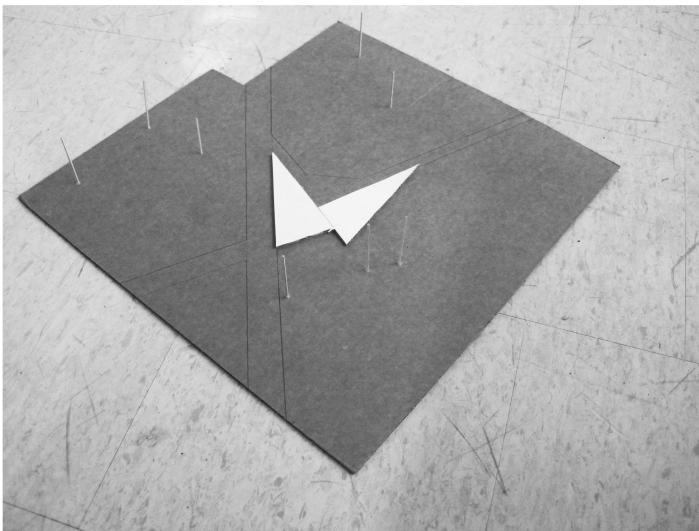


SYNTHESIS

The longest and most comprehensive project of the semester, designing a butterfly habitat adjacent to the Natural History Museum began with a detailed analysis of an actual site. After visiting and carefully documenting the site with photos and diagrams, the site concept developed out of the main building being placed in the southwest corner of the site, and opening outward to the rest of the site, directing views and circulation into the rest of the site, toward the history museum and neighboring grassy field, and away from the surrounding streets and parking lots. This radiant pattern was further developed into a terraced landscaping system that carefully directs circulation through the site based on observed traffic patterns, and a tectonic structure with which the habitat itself is constructed. The final structure emerges from the ground and radiates outward into the site, creating a symbolic motif of birth and flight, and a seamless coalescence between site and structure.

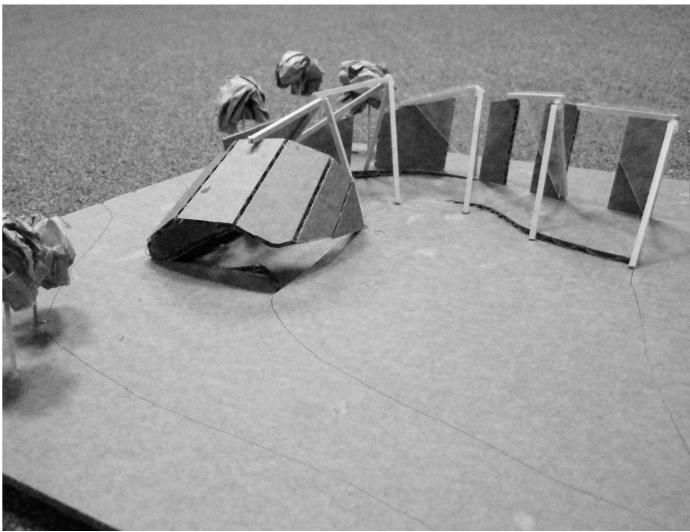
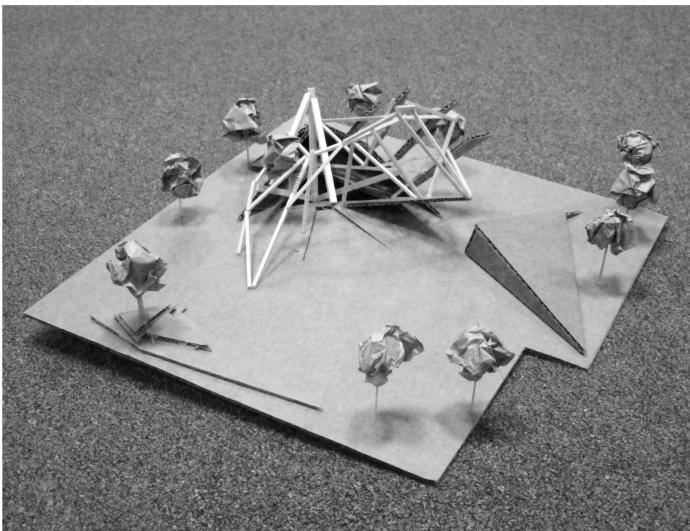
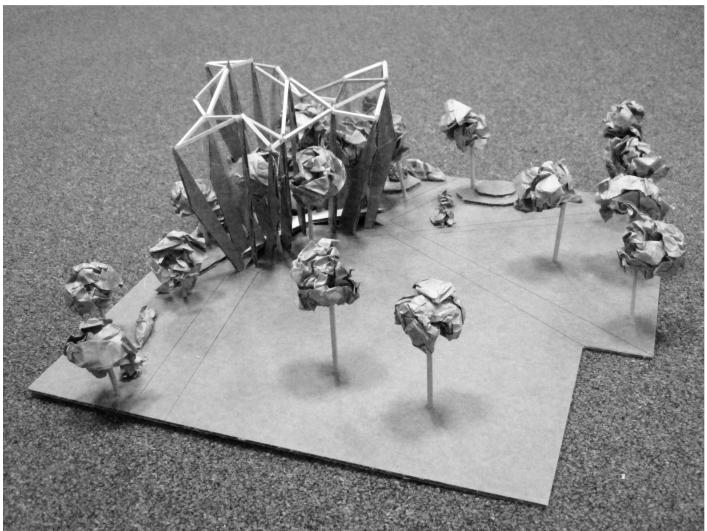
Right page: Diagrammatic study of views to and from site.



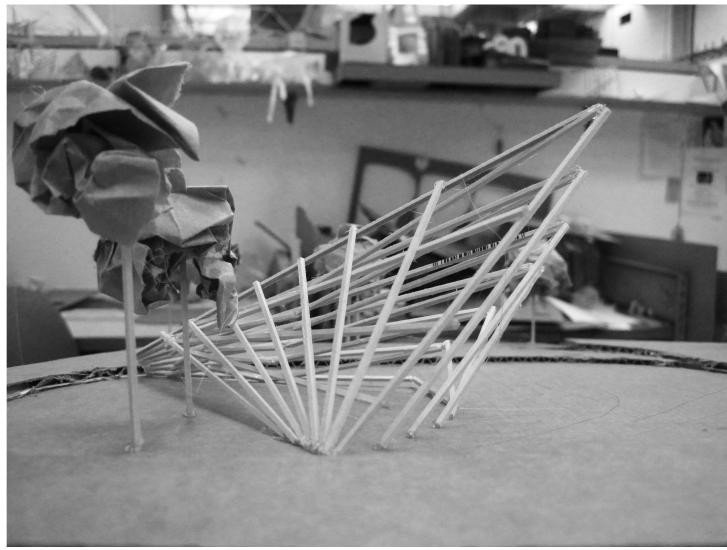
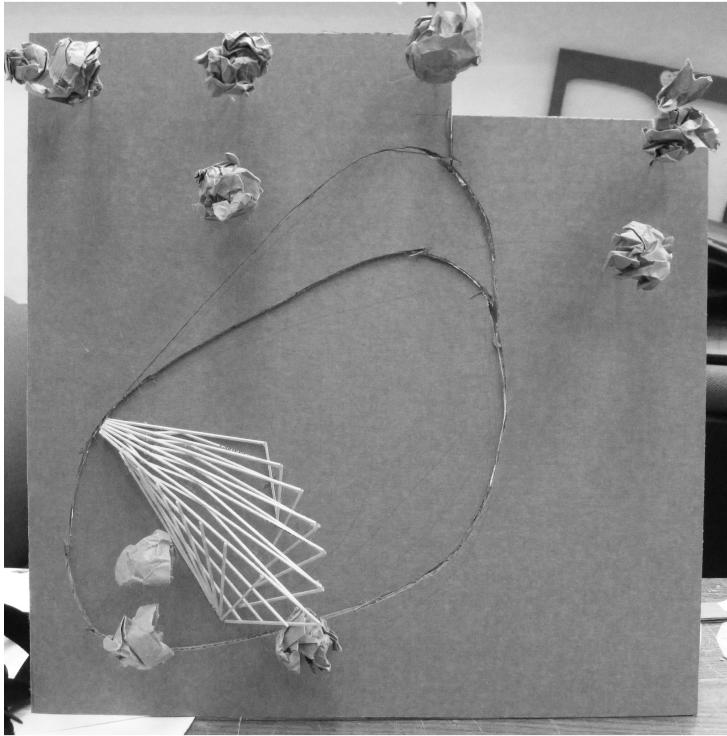


Above: Preliminary parti models of site experimenting with building location and use of foliage.

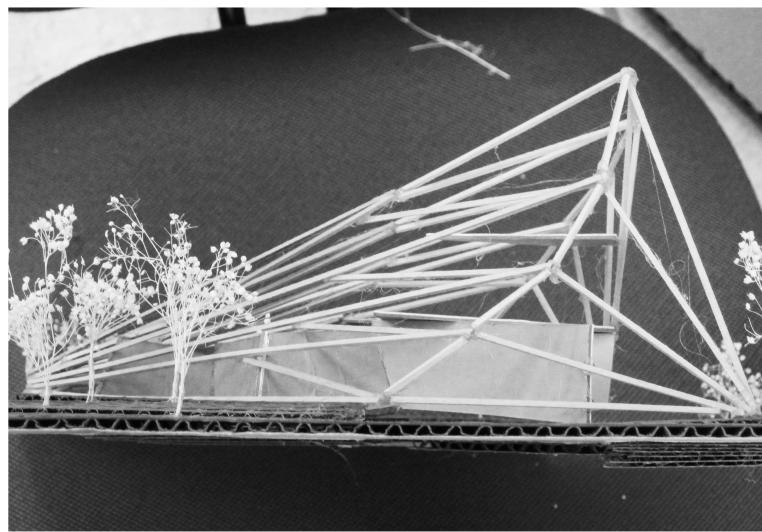
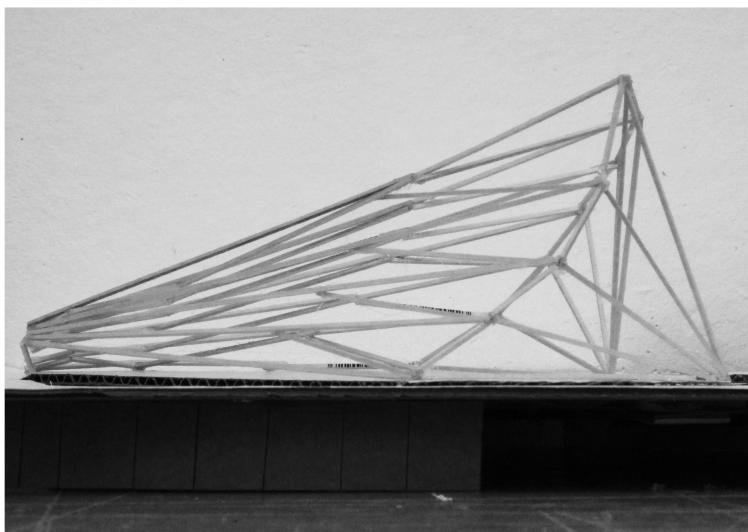
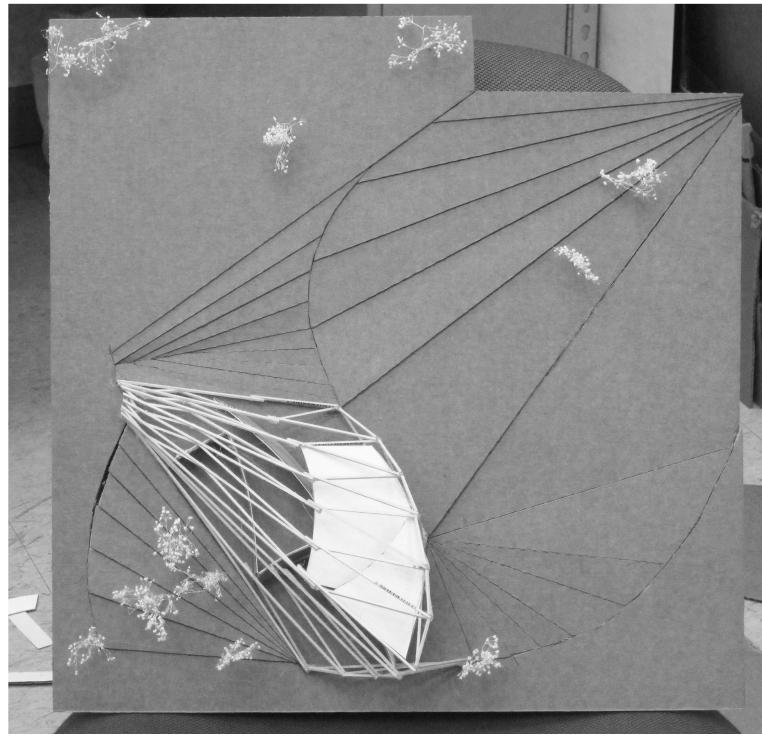
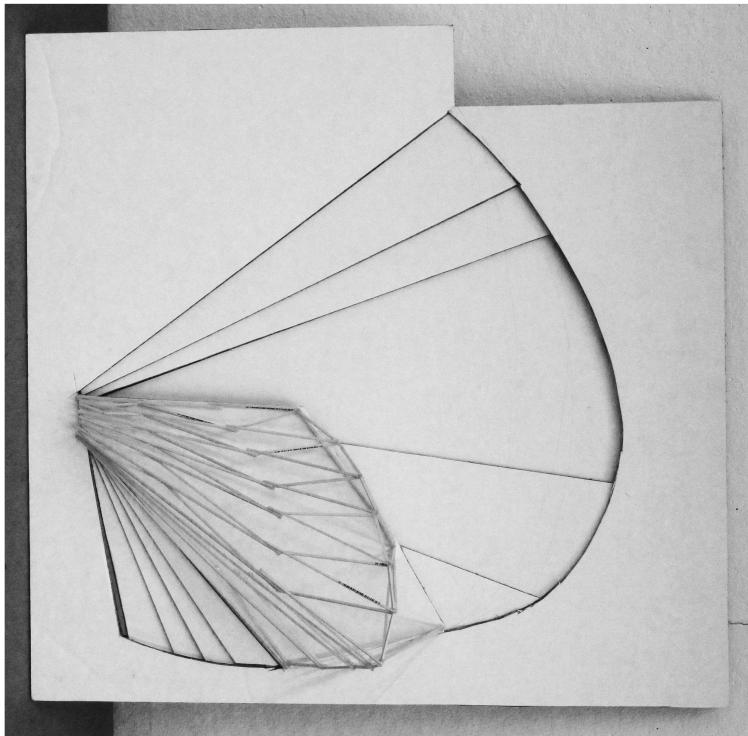
Right page: Second set of parti models exploring building/ground integration.



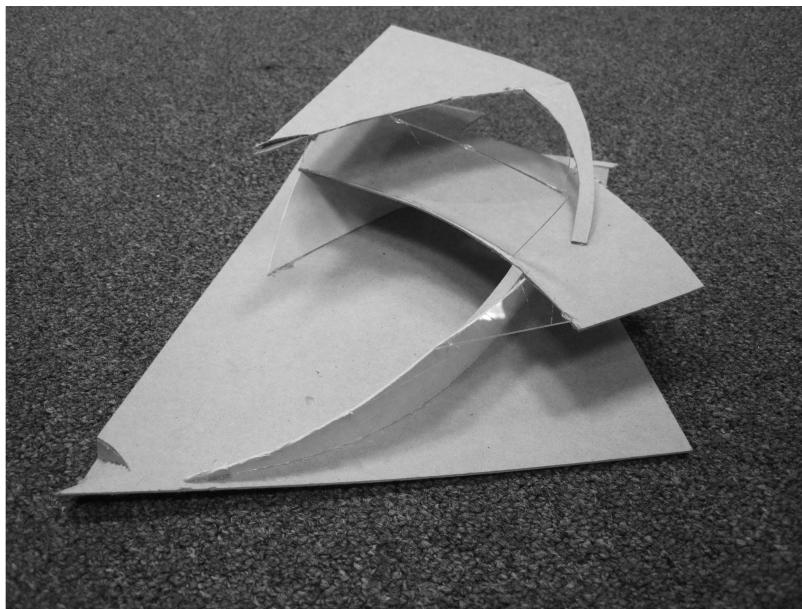
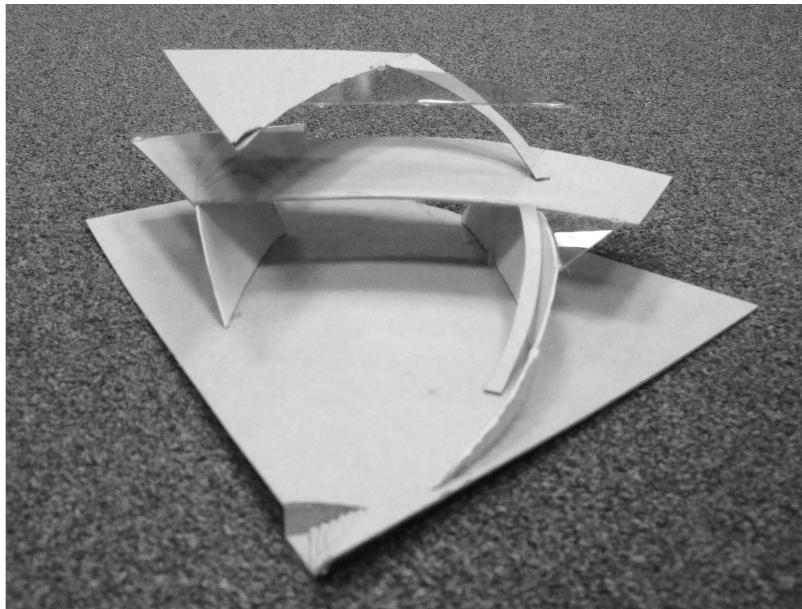
BUTTERFLY HABITAT



Iterative 1/16th in. parti site models.

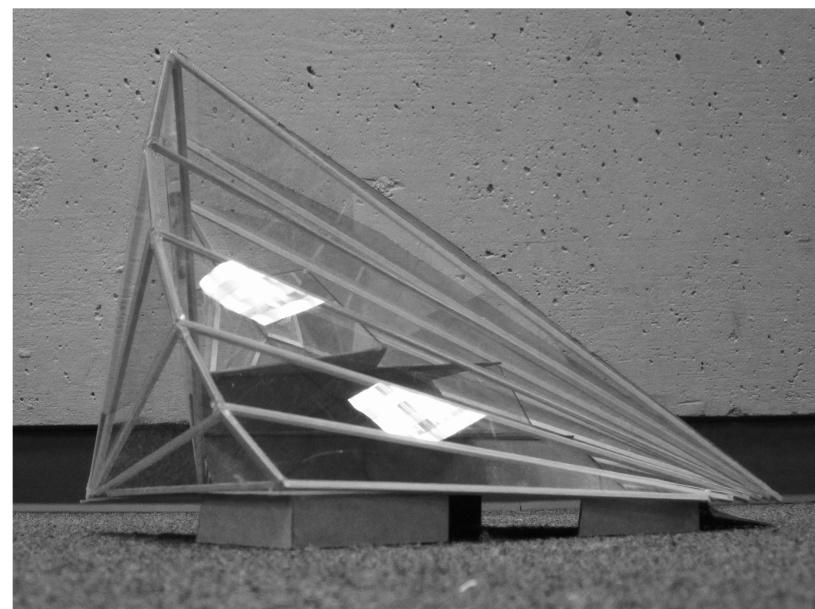
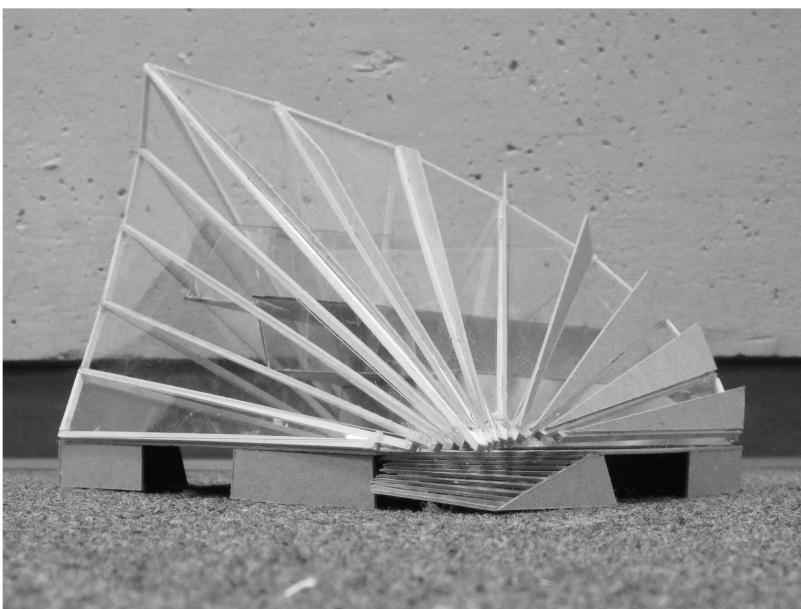
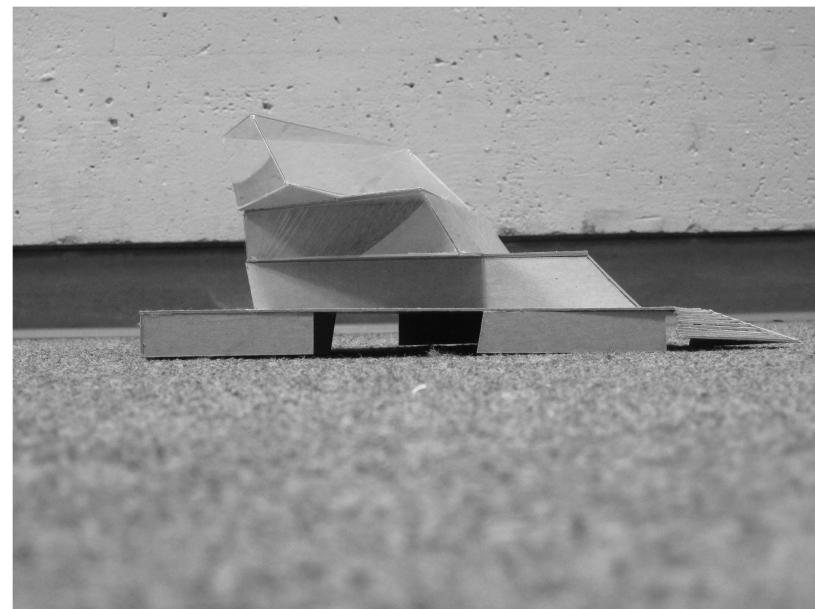
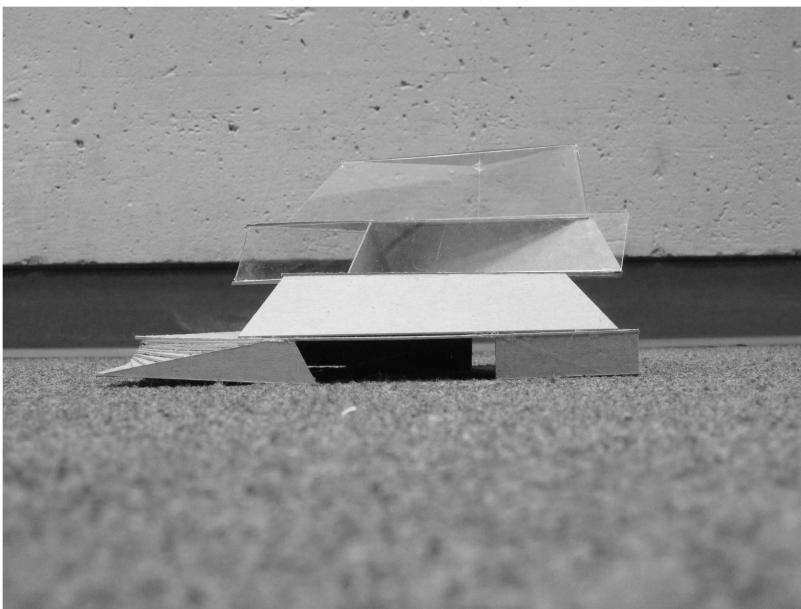


BUTTERFLY HABITAT

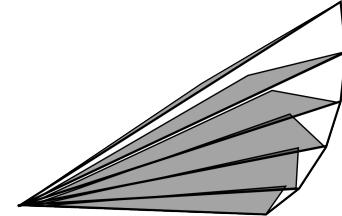
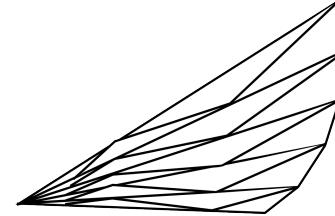
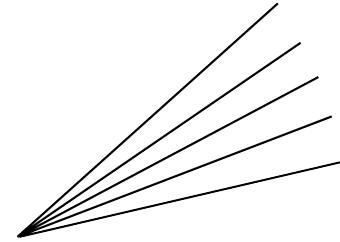
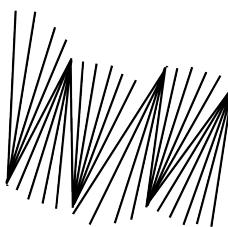
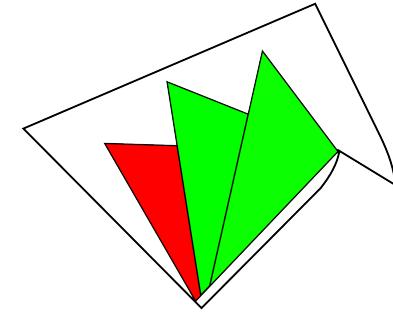
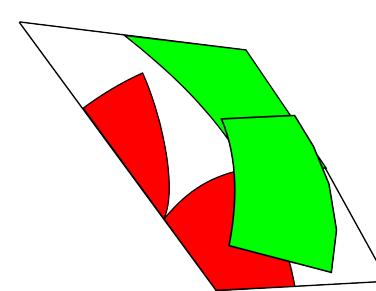
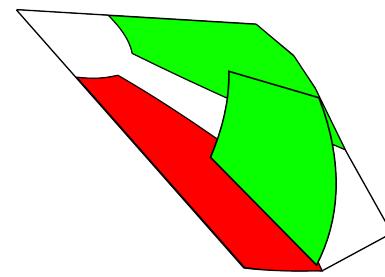
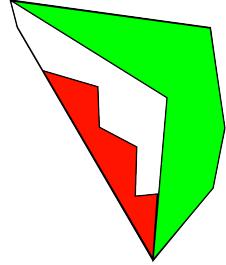
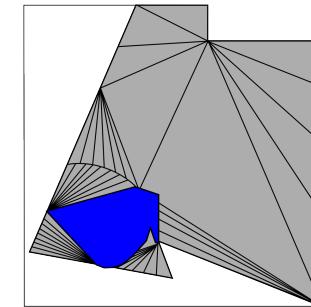
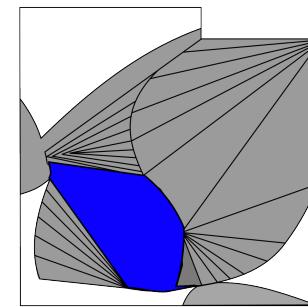
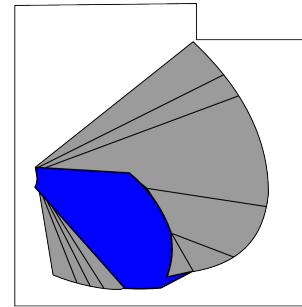
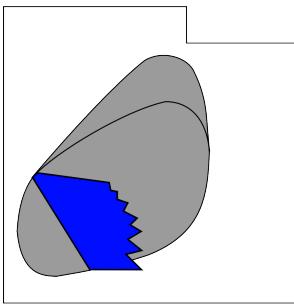


Left: 1/8 in. interior parti.

Right page: 1/8 in. revised interior parti
and outer shell.

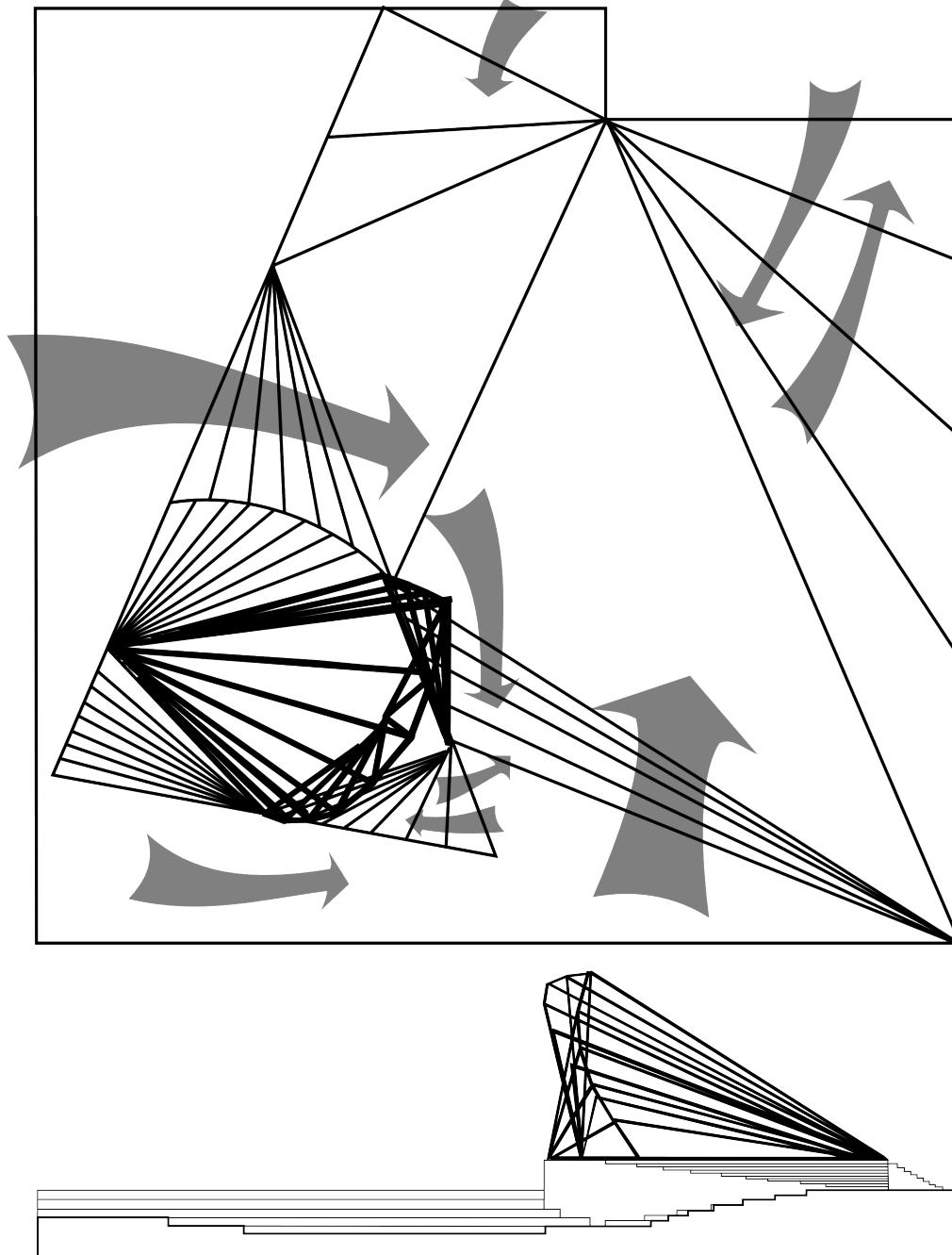


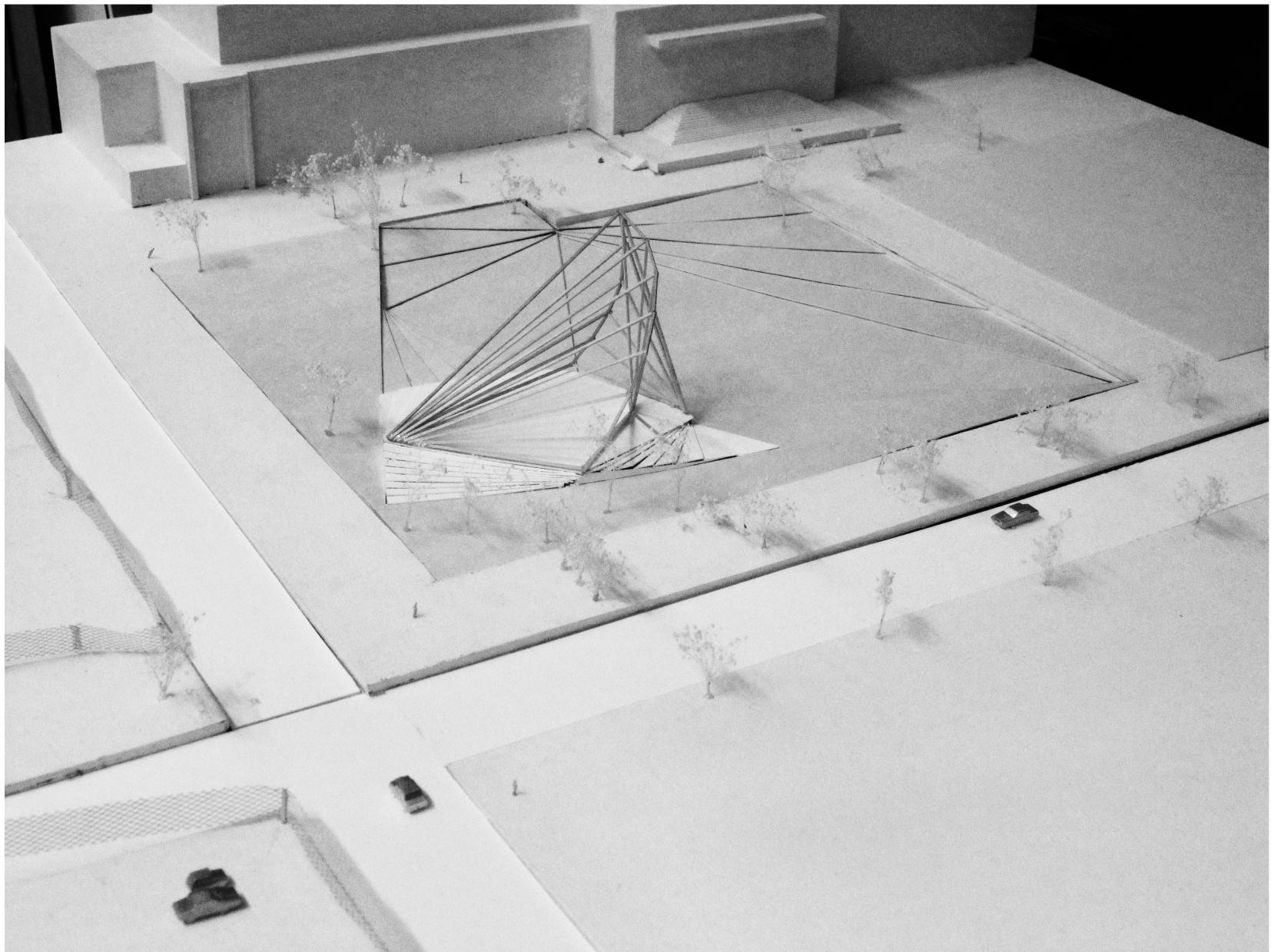
BUTTERFLY HABITAT



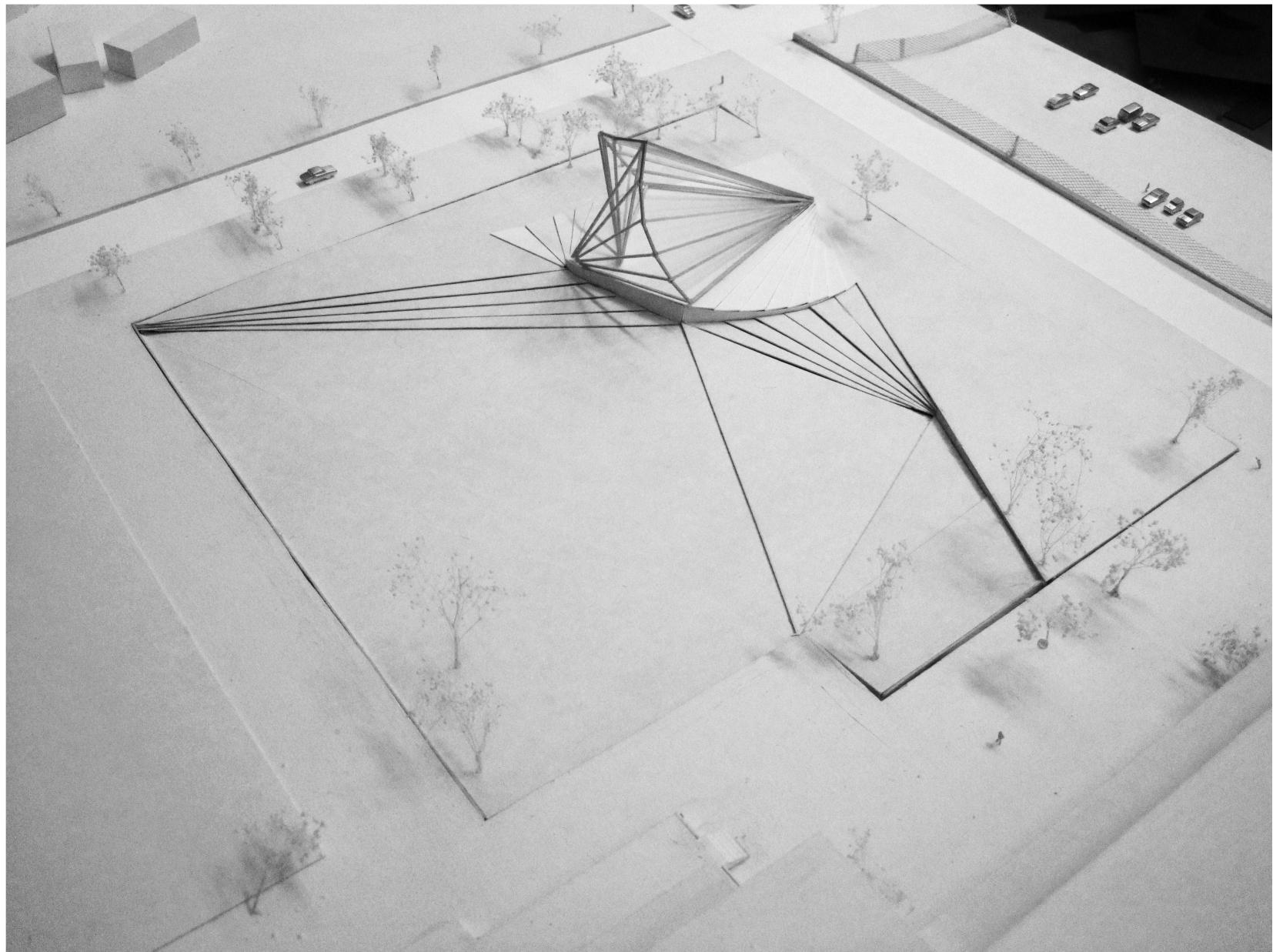
Above: Diagram set outlining development of site, building program, and tectonic system.

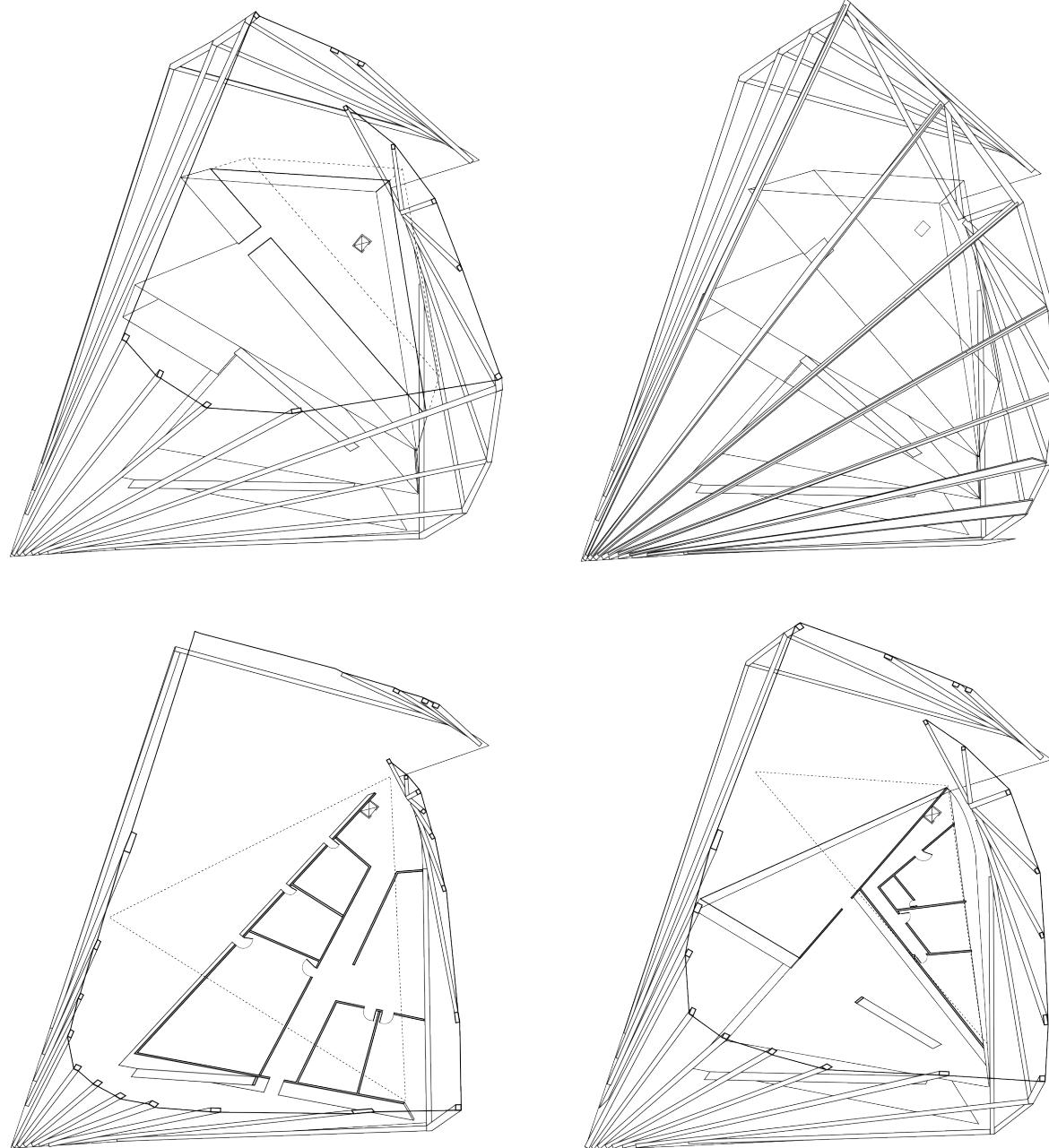
Right page: Final site plan showing circulation and section.





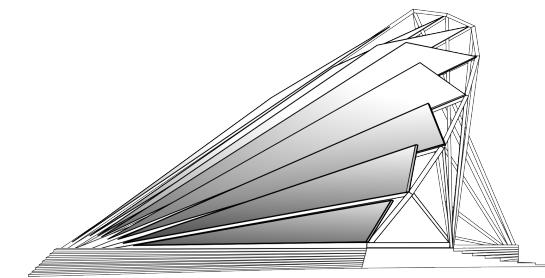
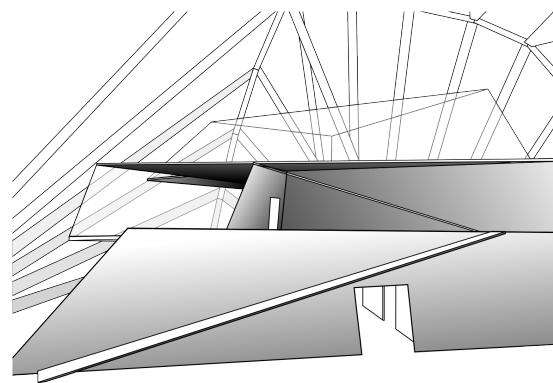
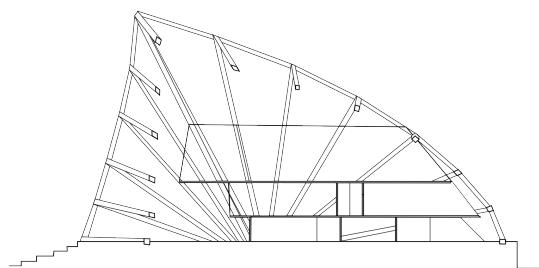
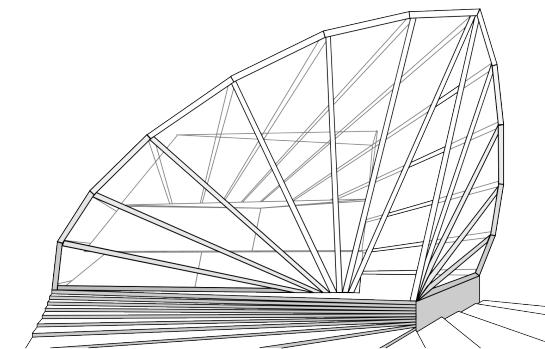
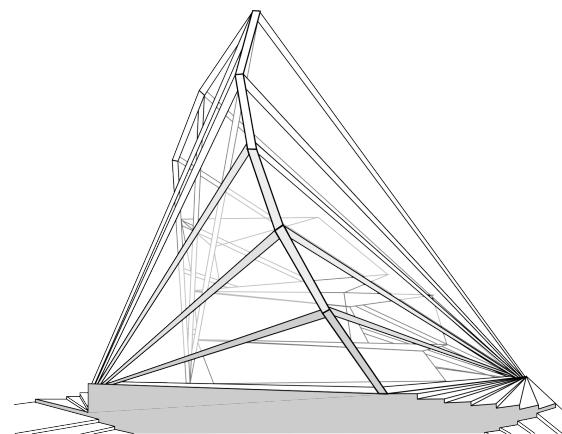
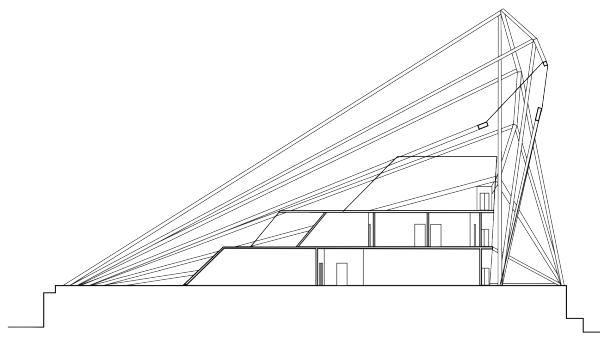
Final 1/16 in. site model.

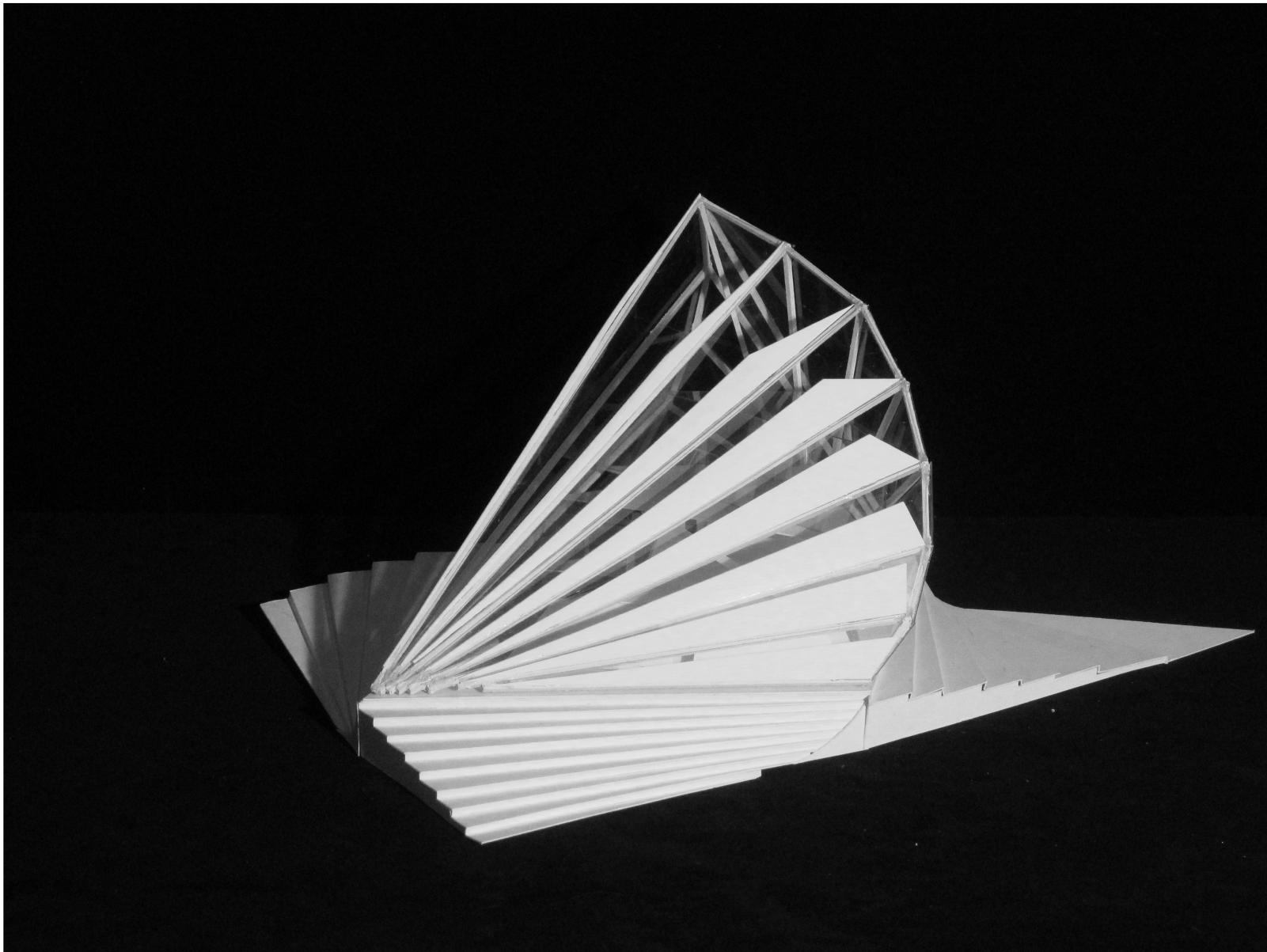




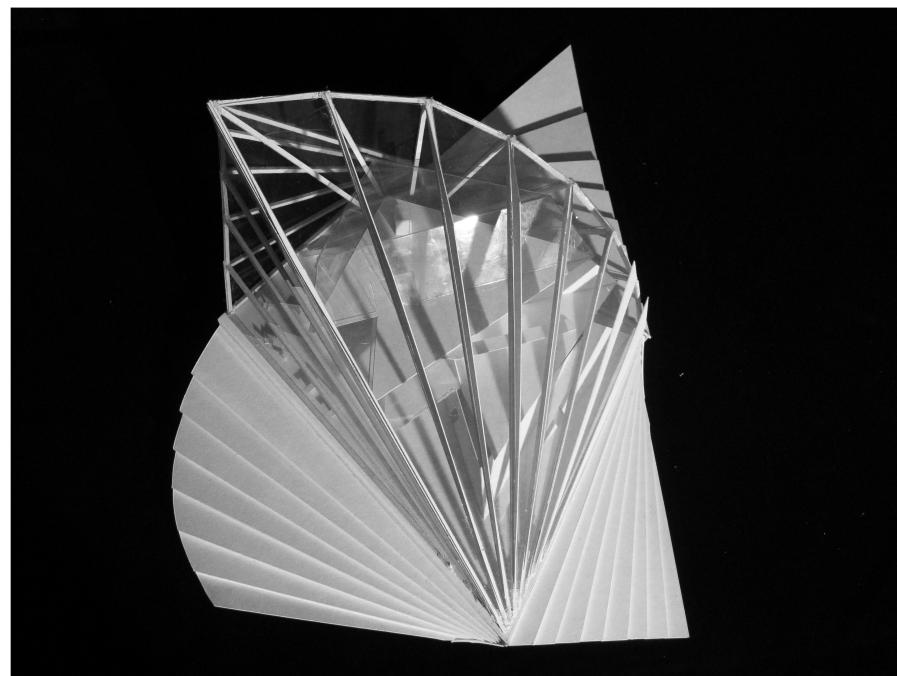
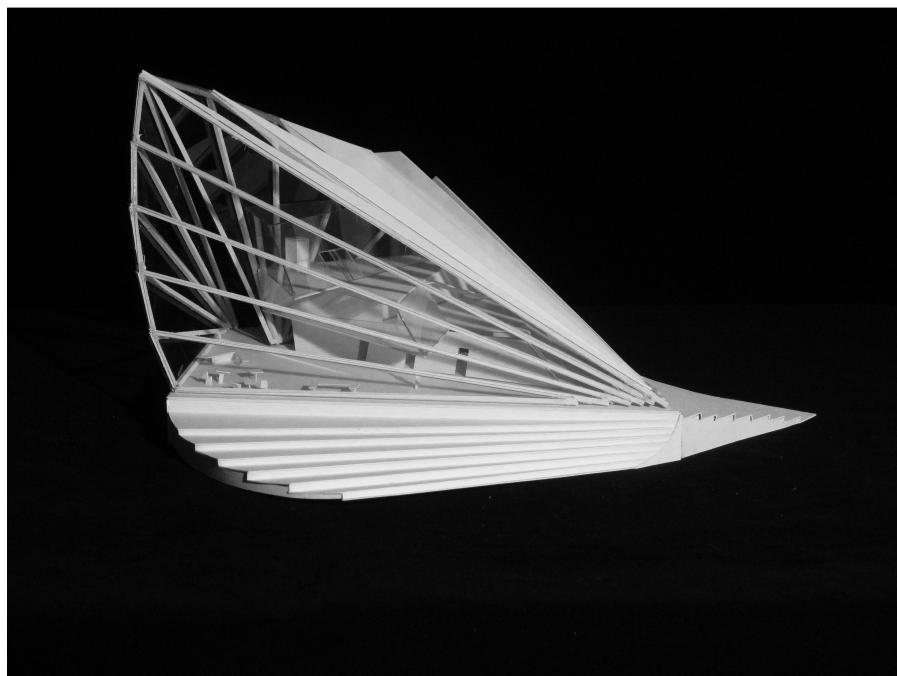
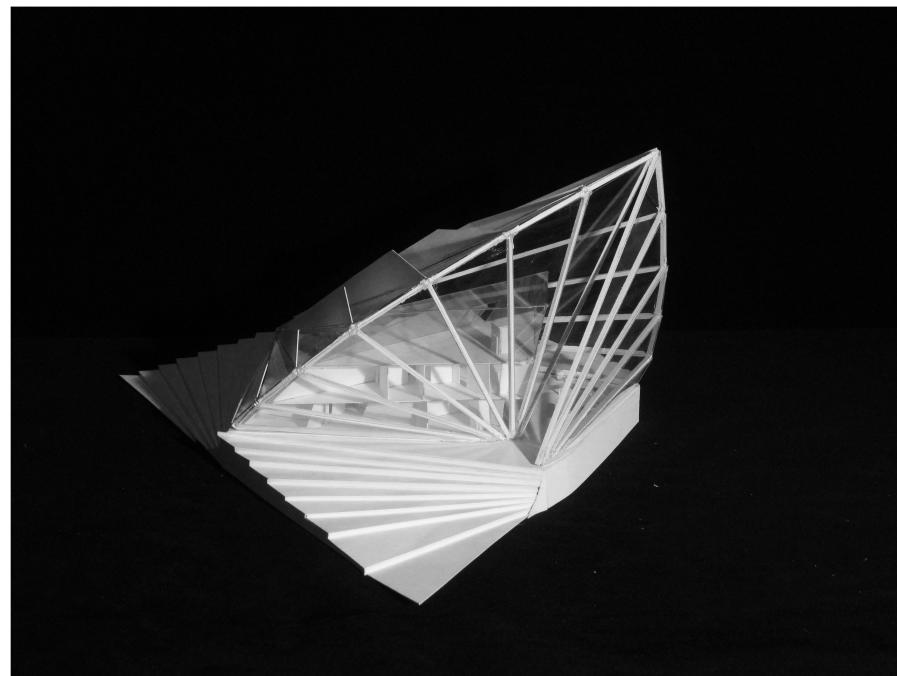
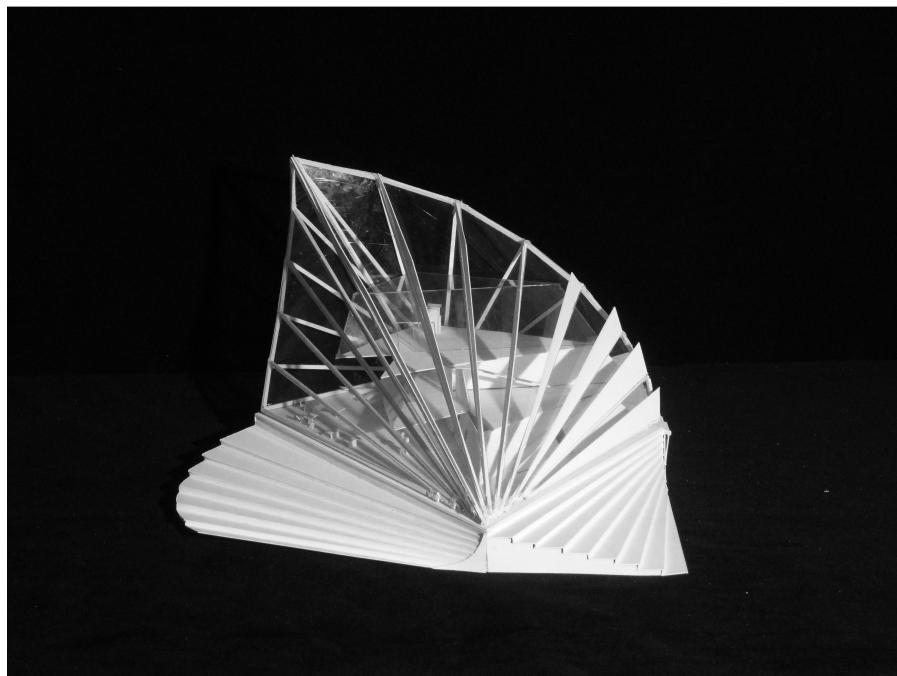
Left: Final building plans.

Right page: Sections and perspectives.

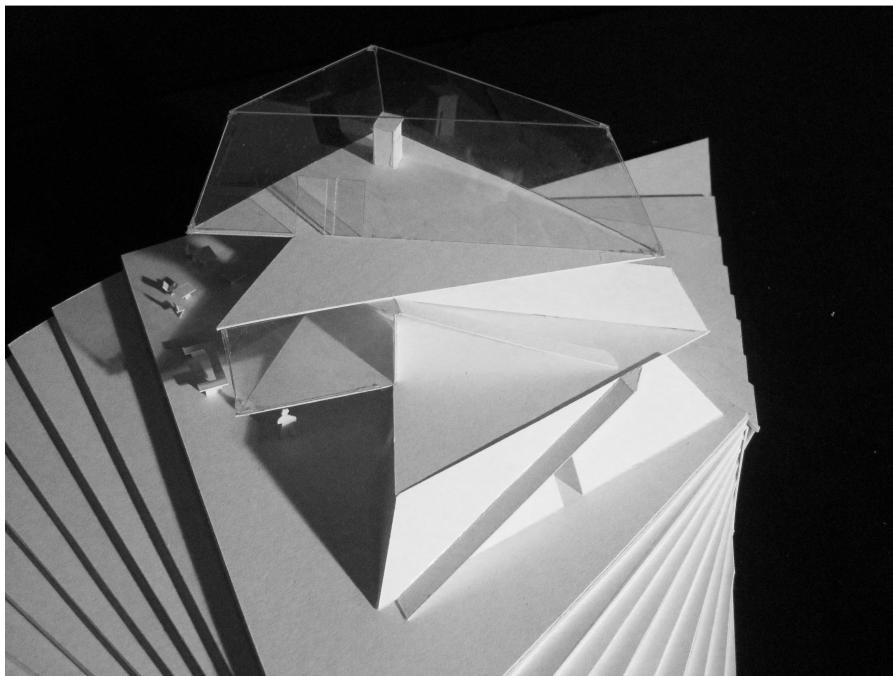
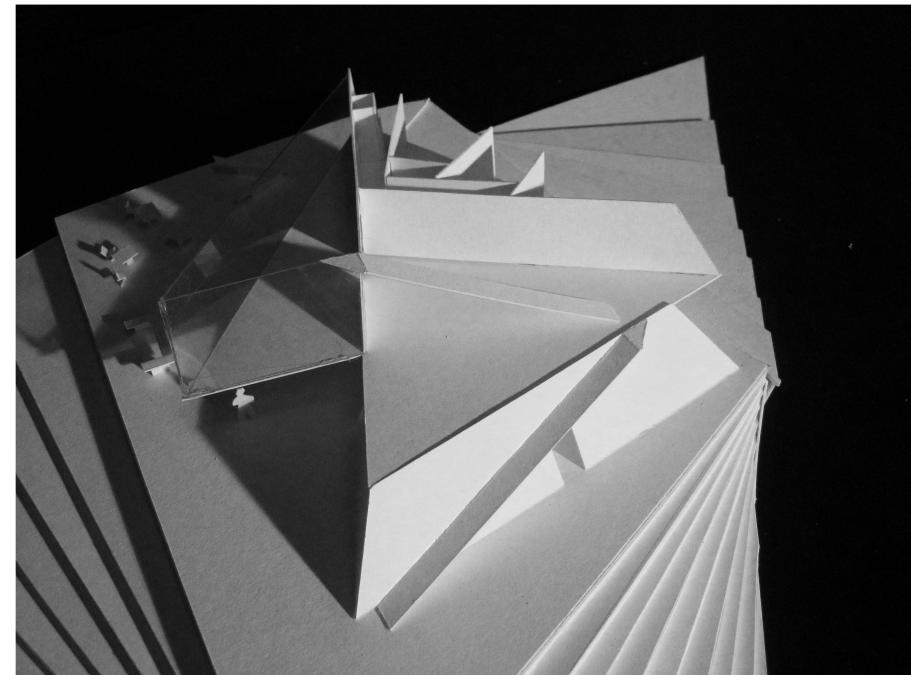
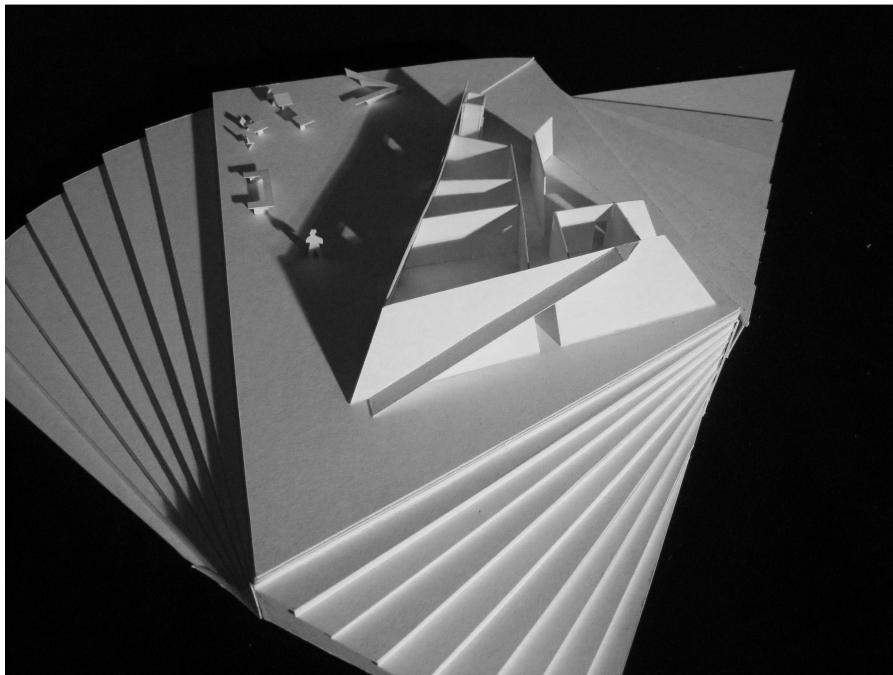




Final 1/8 in. building model.



BUTTERFLY HABITAT



Final building interior.

