

IN

# *Formation*

A PROCESS STUDY ON THE ARTISTIC MATURATION OF FORM



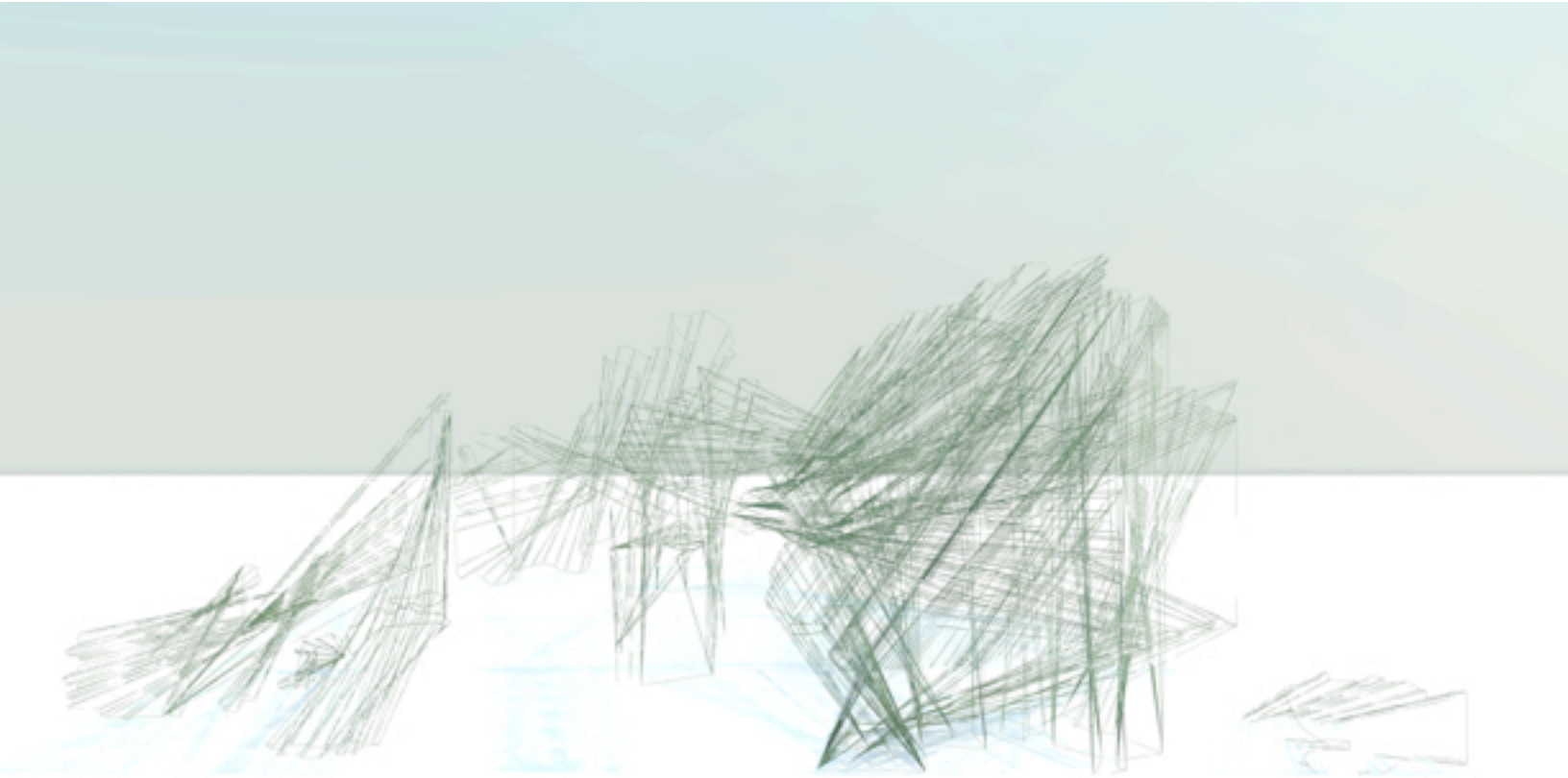
JAMES JENKINS III . UNIVERSITY OF DETROIT MERCY . 2011



In Formation: A Process Study on the Artistic Maturation of Form

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## ABSTRACT

Architects constantly speak of both nature and the built environment. They passionately concern themselves with the harmony that should exist between the two. They use precedence such as the Native American Tee Pee, drawing inspiration from how it lived within poetic relationships with the elements of its natural site.

The modern architect wishes to create a sustainable design. A design that accepts a civic responsibility to be more responsive to the natural environment at both the micro and macro scales. However, general observation will show hypocritical habits within the forms of modern architecture that dominate its attempts to do so. A question must be asked: how can respect, let alone harmony, with the site within its nature be claimed whilst there exist a constant disregard of its natural suggestions towards architectural decision of form and geometry.

This thesis strives to discover a process of design that allows the architect, as an artist, and the site, as a subject, to work together, sharing an open line of communication, working toward new architectural form that becomes evidence of the sites natural suggestions toward form.





# THESIS PAPER

James Jenkins III  
Thesis Paper  
University of Detroit Mercy, SOA  
Professor: John Mueller

The Architect is a product of practice. He is taught from his first day in architecture school that he will utilize all that he learns to create shelter for his fellow human being. In order to do this he must first become learned in the elements of design starting with its most fundamental element: the line.

Grade school geometry has taught him that a line is a two-dimensional object, formed of infinite points, that has no endpoints. Considering he has already accepted the “line” as a product of mathematics, he must begin the journey of architectural learning; accepting the line differently, architecturally.

Similar to its place in Geometry the line, or the *Architectural line*, becomes the cornerstone for which the entire architectural design practicum is built. There are many elements to architecture, most are products of, and none more fundamental than, the architectural line.

Through fundamental practices, the student of architecture learns that the *architectural line* reveals its diversity in a multitude of ways.

The line becomes many things through architecture:

- A way of connecting any one to another
- An individual extension
- The course or direction of something in motion,
- A length
- A row of characters
- A route within or boundary of an area

Through rigorous practice and critical examination the architect is taught to pair these understandings, at all times, with their individual relation to the human experience.

Learning his way, at first the architect, is methodically stripped from his prior beliefs of what architecture may be and encouraged to practice first, only with the line. Drawing, tracing, even folding planes to capture lines in three dimensions and examine their shapes.

Shapes, the product of boundaries created when lines connect or intercept, is done both in two dimensional and three dimensional exercises to investigate the potential for habitable volumes. Scaling between these volumes becomes a way the understanding and consideration of the human experience in space is expressed.

For the student, these practices assimilate the line and its products, shape, form, and volume with the human experience. The connection of two or more lines becomes very important in how the architect designs. As the student practices, he begins to understand that by connecting two or more definitive points he is not creating markings on a plane to draw as an illustrator, but is manipulating human experiences through the shaping of their environment, heightening his sense of design responsibility.

From the moment of this paradigm shift, how the student makes these connections becomes paramount to his artistic self discovery and ultimately forms his initial style as an architect.

Because art is understood as an expression of individualism and architecture encompasses the full palette of art and artistry, students are not instructed how to express themselves if considerations for the human experience can be revealed through their expressed designs.

Still early in the scholastic learning process, students of architecture are encouraged to push the boundaries of physical assembly. To break the box and expand the boundaries of the young artist mind, early design projects are discouraged from becoming overly concerned with real world problems;proportional physics, material insulation properties, or municipality code restrictions. As their understanding of these variables increases, the expectation for these considerations to be implemented within the students design increases. It is commonly said from elder students to the younger, “push the design

beyond your knowledge, while you still can". This cultural attitude creates a foundation enabling each young student to understand and create true artistic form before he learns anything else in architecture.

As the role of understanding real world architectural issues increases in the students understanding and the implementation of their solutions is merged with the artistic expressions, the architect and his works begin a journey towards practicality and away from the purest form of abstract artistry.

For the advanced architect student, an artistic foundation allows him to remove himself from the demands of the physical environment. In order to see the potential for new environments, the process of practically applying architectural building principles to real world environments pulls the art from the abstracts of the mind towards finite decisions of sheltering environments. Art becomes science. Most accurately, art merges with science to create Architecture.

At the union, decisions must be made to measure materials, volumetric ratios, light shading, structural calculations, utility systems, thermal conductivity, and so on. The implementation of building technologies does not allow for the lesser defined lines of the artist within the architect.

Although the practice of architectural design is a non-linear process, it does maintain a rhythm. Advanced architectural students are taught to practice this rhythm of design



# THESIS PROJECT:

## THE PRACTICUM

# Site Approach step one

The way the architect approaches the site will always determine what the final outcome will be. If he or she feels it is their responsibility to govern the land for the sake of their imagination, the results, or end product, will reflect an uncooperative relationship between the architect and the product environment. However if the architect has a more responsive approach to the site, as if he and the site were working together for a mutually beneficial outcome, then the end product will reflect a much more harmonious relationship

between the architectural product and the site on, or in, which it stands. As much of this is evident in the industries move towards sustainable design, a responsive process that takes into account all of the physical and chemical characteristics of the site. It may be possible to develop and exercise a responsive process into the methods we use to develop form. If a responsive approach to form can be successful it will create a rare architectural experience that becomes completely unique to the site itself.

*“Man is related to the character of things. From the initial animistic stage he gradually develops a conscious or unconscious understanding that there exist an Ubereinstimmung, a correspondence, between his own psychic states and the forces of nature. Only thus he may obtain a personal “friendship” with things, and experience the environment as meaningful”-*

*Christian Norberg-Schulz; Genius Loci: Towards a Phenomenology of Architecture,*



## A Phenomenal Prescription for Perceptual Gathering.-1

1. The first map is about the city. It should be highly selective and illustrate one or two issues at the most that characterize the city, in terms of organizational/spatial structure.
2. The second map is illustration how the place chosen inhabits the city – or how it is hosted by it. This map could include pictures, be abstract or distorted.
3. The path (sequence images describing dynamic perception\_

The initial analysis of the place should depart from the recording of the experience of it. A walk in that place taking pictures at regular intervals. Pictures should not be zoomed in, and should be explicitly sequential. Understanding where this place begins to manifest itself and where it ends can be of guidance to establish this path. A small figure ground map illustrating the path.

4. micro images on details/motifs

Create an ordered archive showing materials, patterns, details that constitute the place. This study should be considerate to the idea of rule/established motifs and exception/variation of the rule. Is there an architectural consistency in that place? Or is discrepancy the rule?

5. Study of facades

Create a photographic collage of facades by stitching together images that portray facades at the same scale. Try avoiding distortion (though it might be inevitable in some cases). Use text to call out notable connections/elements of continuity and cohesiveness or disconnect/elements of discrepancy between facades.

6. Overall experiential collage about place communicating the reading of meaning. This collage should be highly subjective and portray what is read and received from the place. Highlight elements and perspective that drive through this place; emphasize.

As a last action, invent, experiment and assemble exact (in the sense of truthful) but evocative graphic representations of the place by means of an appropriate graphic layout including all of the components.

-1: A phenomenological site analysis program created by Claudia Bernasconi; University of Detroit Mercy



# SITE MEETING

## THE RECORD OF EXPERIENCE

### *Macro Narrative*

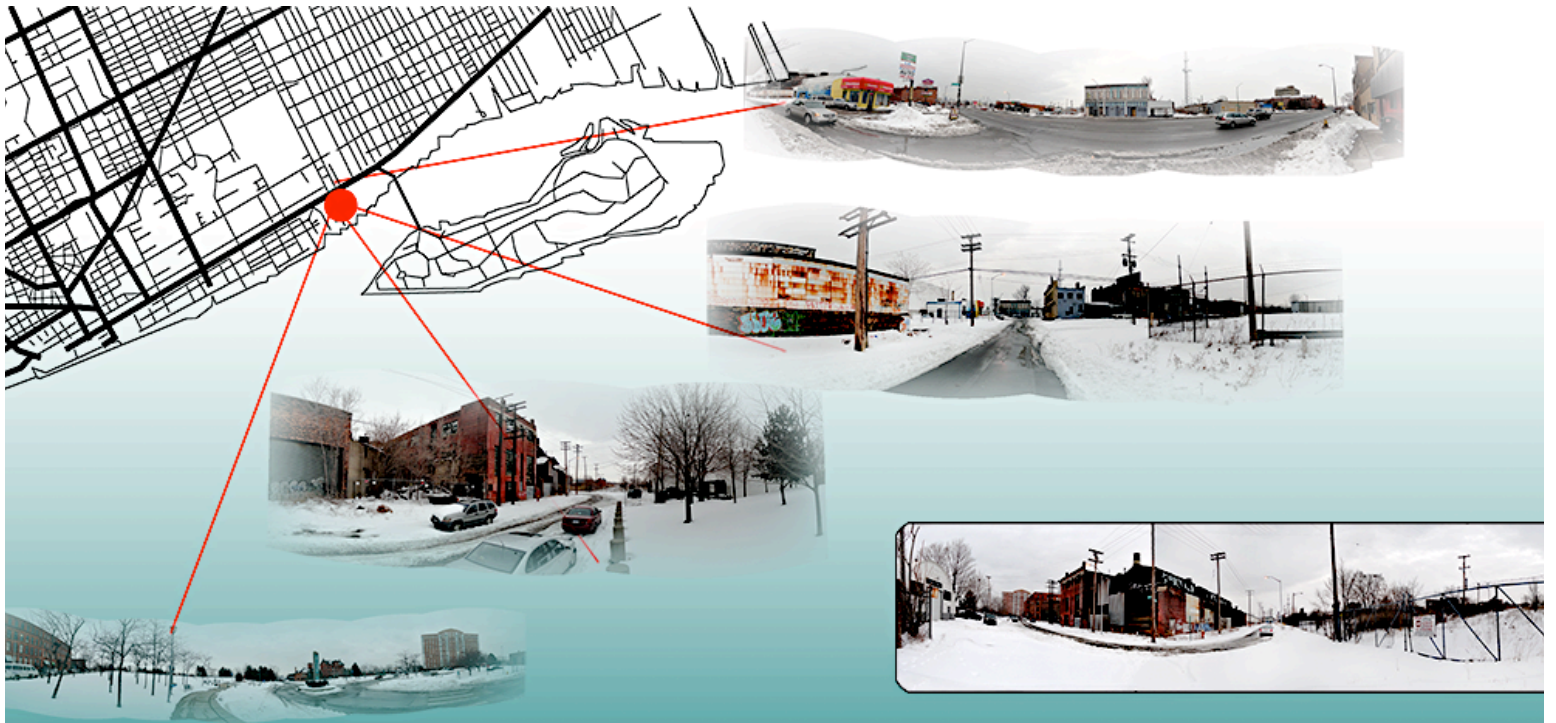
#### The Rivers Edge

The rivers water runs cold at this time of the year. The shallowest flows nearly still, frozen against it's retaining borders. A transitional gradient of human activity begins. This transition defines the edge where man and resource come together. A history of this relationship, between man and the earths resources shows itself in the footprint of the architecture and the city plan. There is both a chaos and a continuity that takes place along the city's edge.

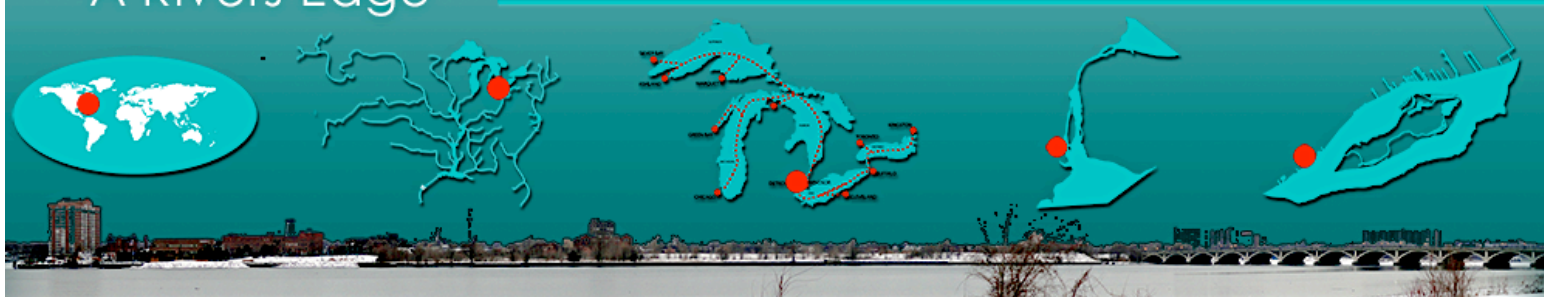
At increments parallel to the waters edge the old and the new create a linear dash of many contrast. The physical evidence of early 20th century industrial construction, now abandoned, presents itself uniquely along these incremental lines. Weathered by both the elements and the lack of human interaction time has compromised their opacity. At glance one can see both through materials and time. The contrasting character itself is created when these moments stand adjacent to there modern interventions.

Later usages of the urban edge and it's advantageous proximity to the river, blend in amongst the residue of the old. The glass of modern architecture refracts the glow from the river, often reaching high into the sky to do so. Roads align themselves in a grid away, as to always orient, both themselves and their travelers, with the rivers edge.

# Macro Scale

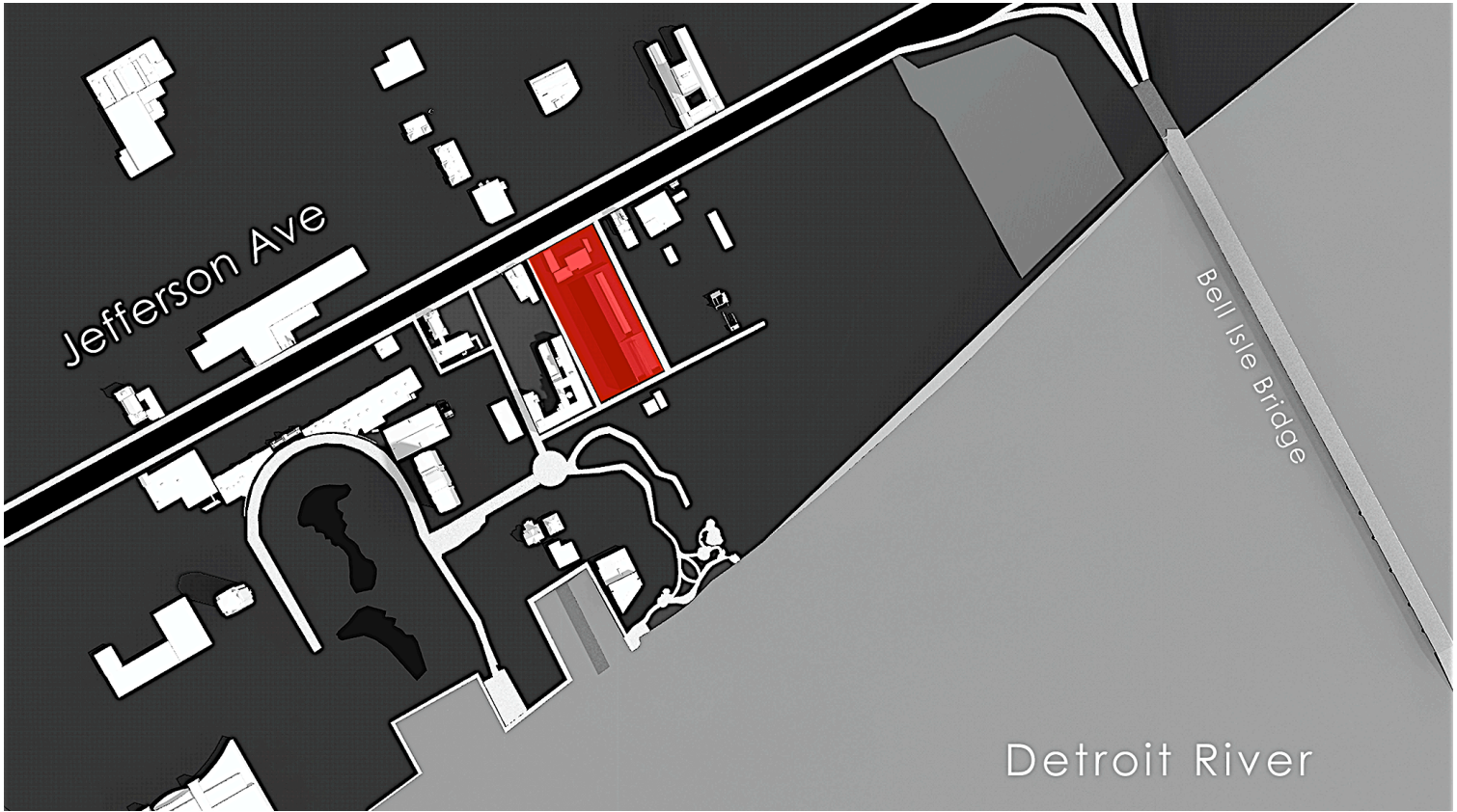


## A Rivers Edge

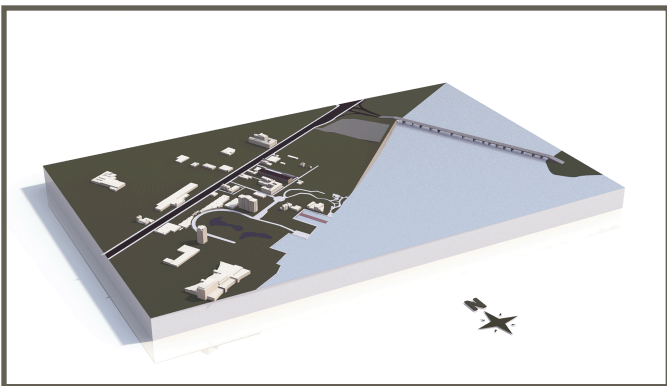


# Site Renders

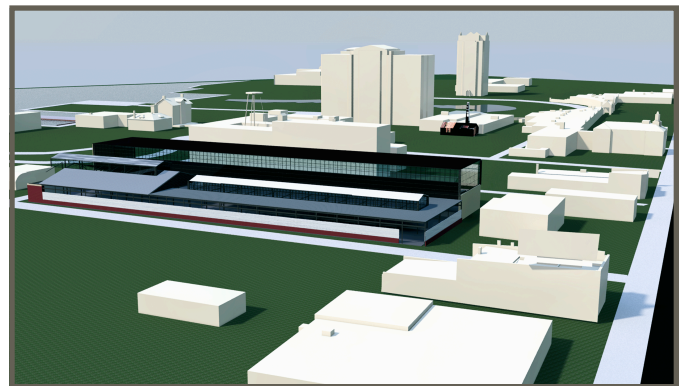
Existing Conditions



*282 Iron St Detroit MI*



*Arial Perspective*



*Arial above Jefferson Ave*



# SITE MEETING

## THE RECORD OF EXPERIENCE

### *Micro Narrative*

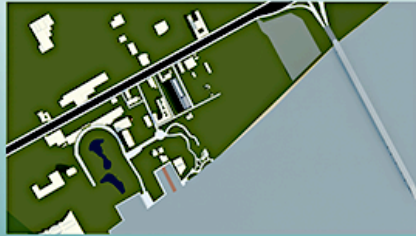
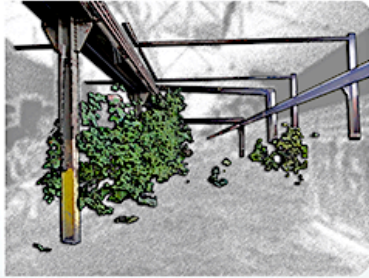
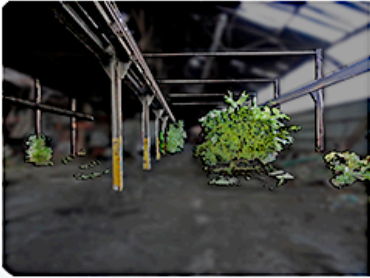
#### 282 Irons St

Approaching the address of 282 Iron St from the west the distance of another city's edge is close enough to see but far enough to capture. In the foreground stands a very modern architectural intervention. Stone, glass, and soft lit signage forms the coast guards city headquarters.

This newness removes itself quickly as the site appears to the left. A remnant of industrial productivity. A building stands as if stubborn to the elements and strong in its attitude. A brick facade is broken up by joining materials no longer remaining as strong in their resistance. Metals have rusted through and wood has degraded to create a quilt of void and solids that allow the interior to blend into the streets.

Entering the site the sound of structural compromise is evident. Wind tosses unfixed materials against each other creating a rhythm of elements that time has brought together. This song takes place around a new growth as nature has began to restore itself. Now pale materials share space with new growth and a dominant green.

# Micro Scale



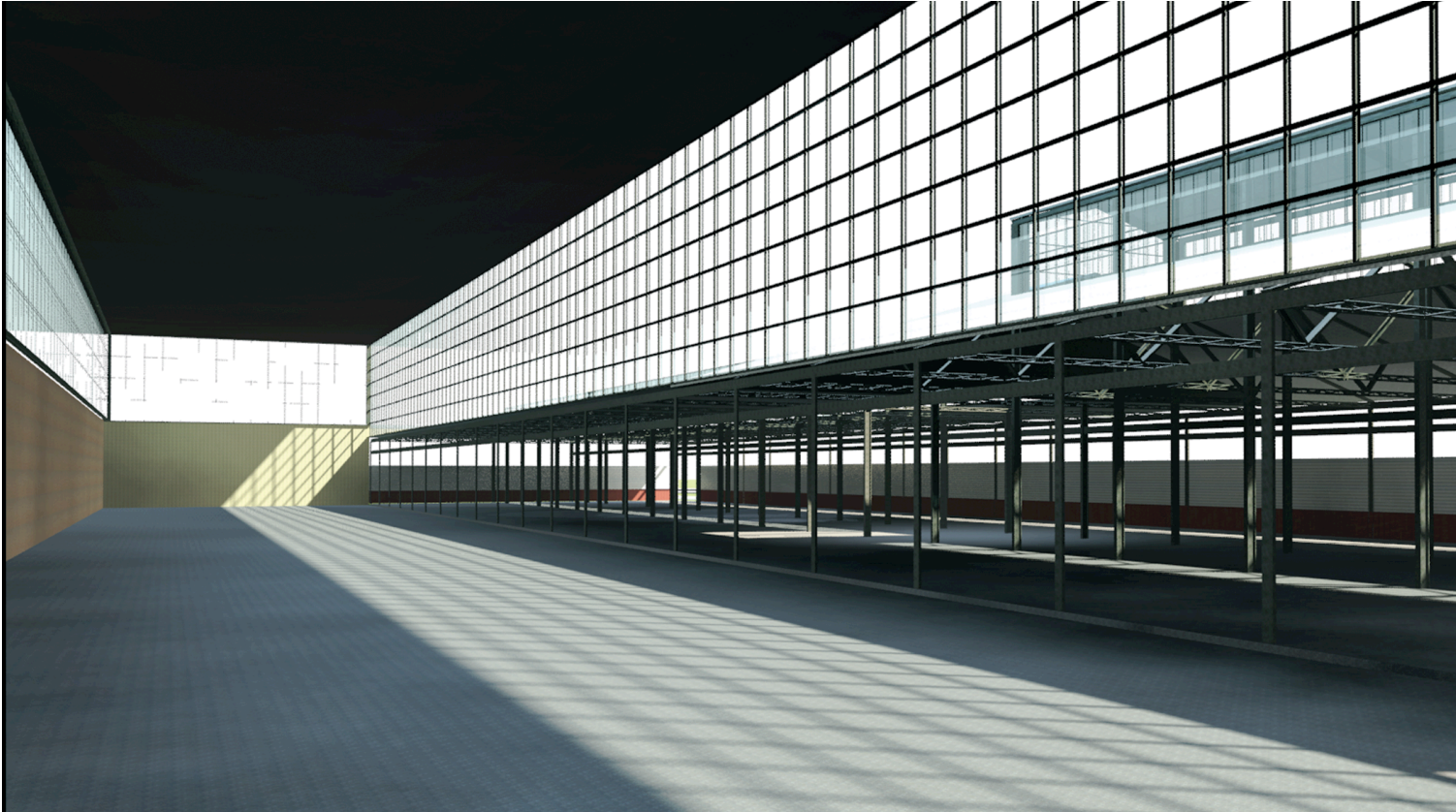
282 Iron Street



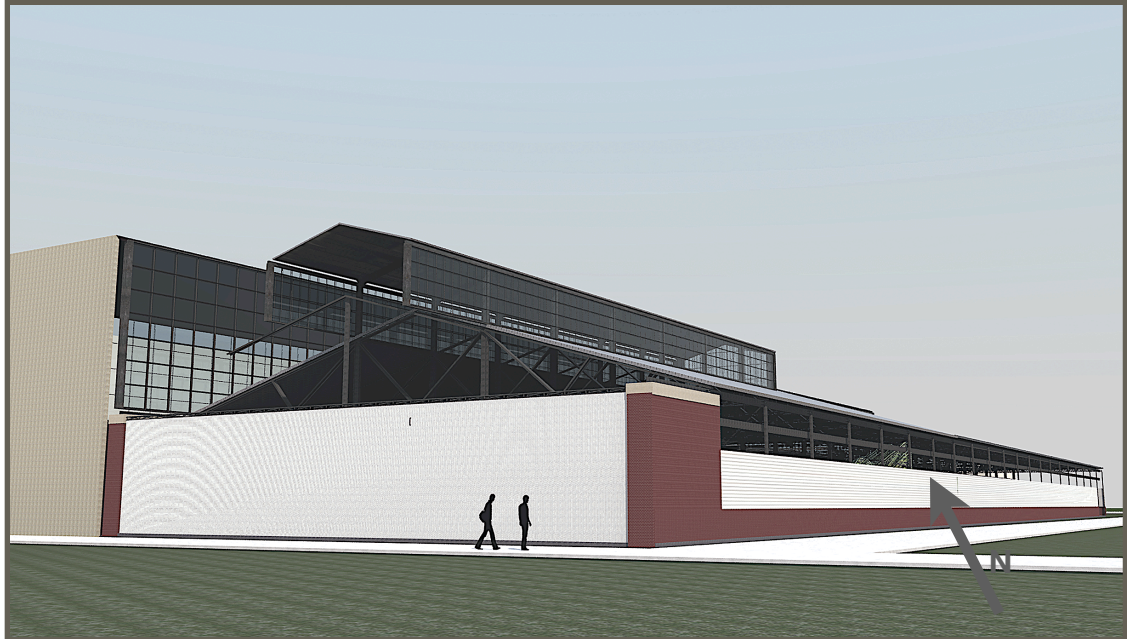


# Site Renders

Existing Conditions



*Perspective*



*Arial Plan View*



# Interpretive Analysis step two



Traditional site analysis reveals to the designer acute physical and social characteristics. This is done through the scientific gathering of data. Methods including mapping, surveying, and census analysis fit well into this category. While the scientific methods of the architectural discipline have proven themselves vital to the process. Choosing an artistic analysis method before the scientific will be the key to keeping the architect anchored within his artistic loyalties.



100'

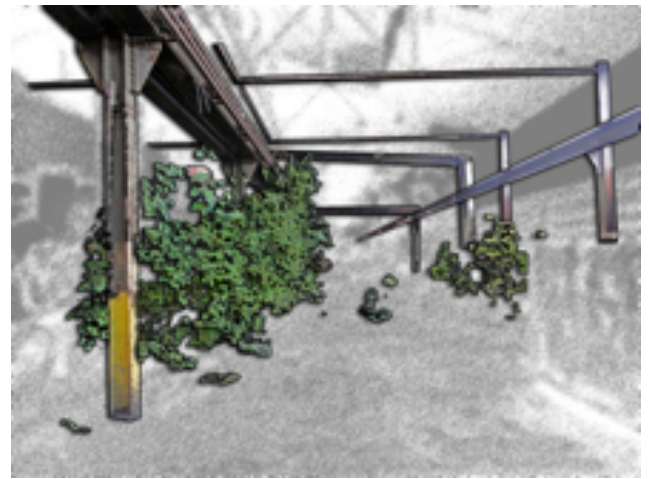
75'

50'

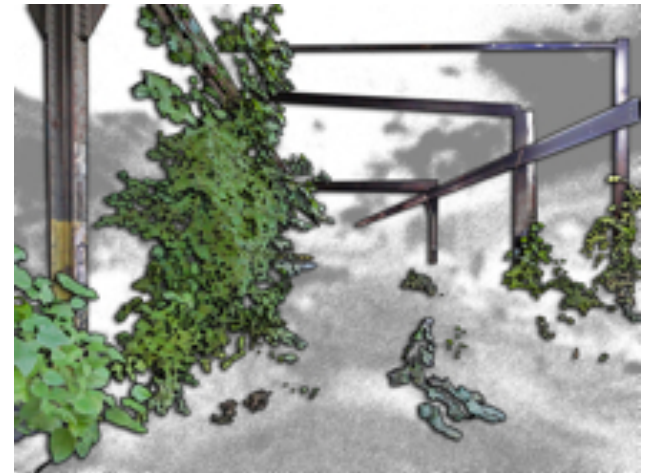
25'

### Measurable Sequential Catalog

The site is cataloged in measured sequential intervals. This allows for the artistic interpretations to maintain a reference to scale throughout the process.



*The green and the structure where separated and analyzed increasing understanding and intimacy between the artist and the subject*

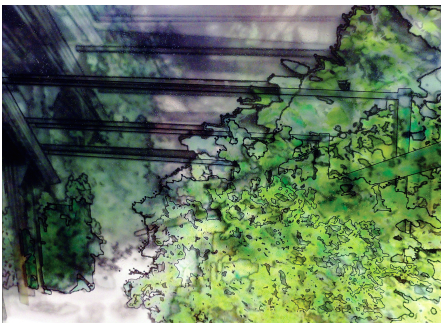


### **Two Dimensional Analysis**

After experiencing the site it is important to dissect the medium of record. Here is where the design process begins. By visually interpreting occurrences the artist begins to prioritize individual components. This can be considered the beginning of a responsive design.



## ABSTRACTION



*Fig. 1 A light box has been built around each image of the two dimensional analysis. Once the boxes are aligned new perspectives spacial possibilities, and formal relationships reveal themselves.*

### **Abstraction**

The next step in the artistic process is considering the site for its general qualities or characteristics, apart from concrete realities, specific objects, or actual instances.

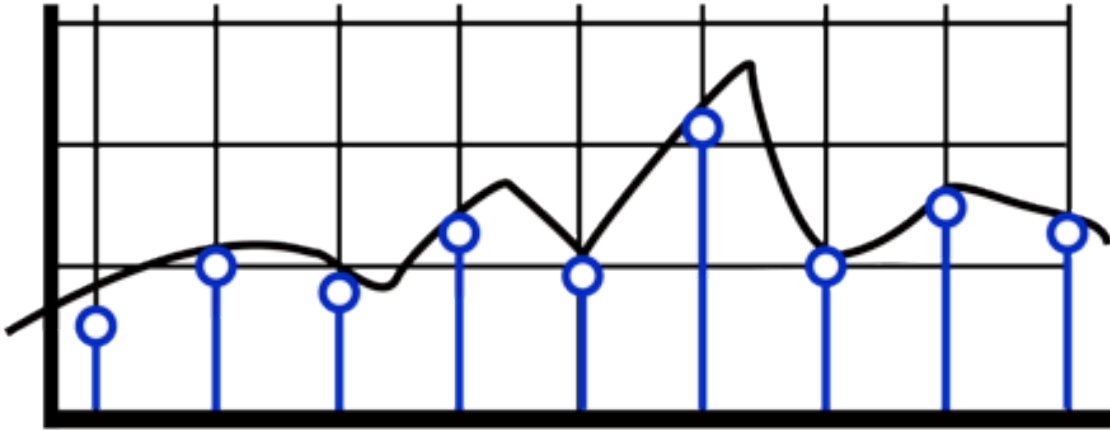
During an abstraction an artist allows himself to be completely vulnerable to the subject and its possibilities. Doing this with the site offers an intimate relationship between artist and subject. A harmonious relationship that offers a well negotiated transition from what is now to the possibilities anew.

*“The idea of the architect determining an end result, a final object, is changing,” ... “The architect as a controlling figure is a tyranny that is over.” - Lebbeus Woods,*

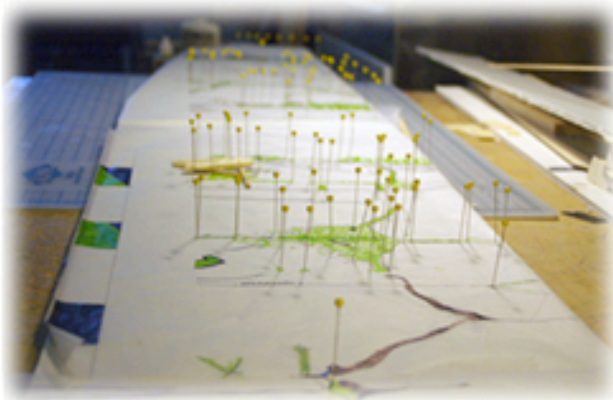




## QUANTIFY



*Fig. 1 Precedent Model A: This precedent model shows a prior experiment with the quantification process. Plots within the artistically recorded site collage have been marked based upon the density observations within the abstraction. Lines drawn between plots establish a formal representation of spatial relationships.*



### Observation Quantification Modeling

Creating a quantifiable model allows the artist to begin a consideration of relative scales and their potential for formal spatial relationships.

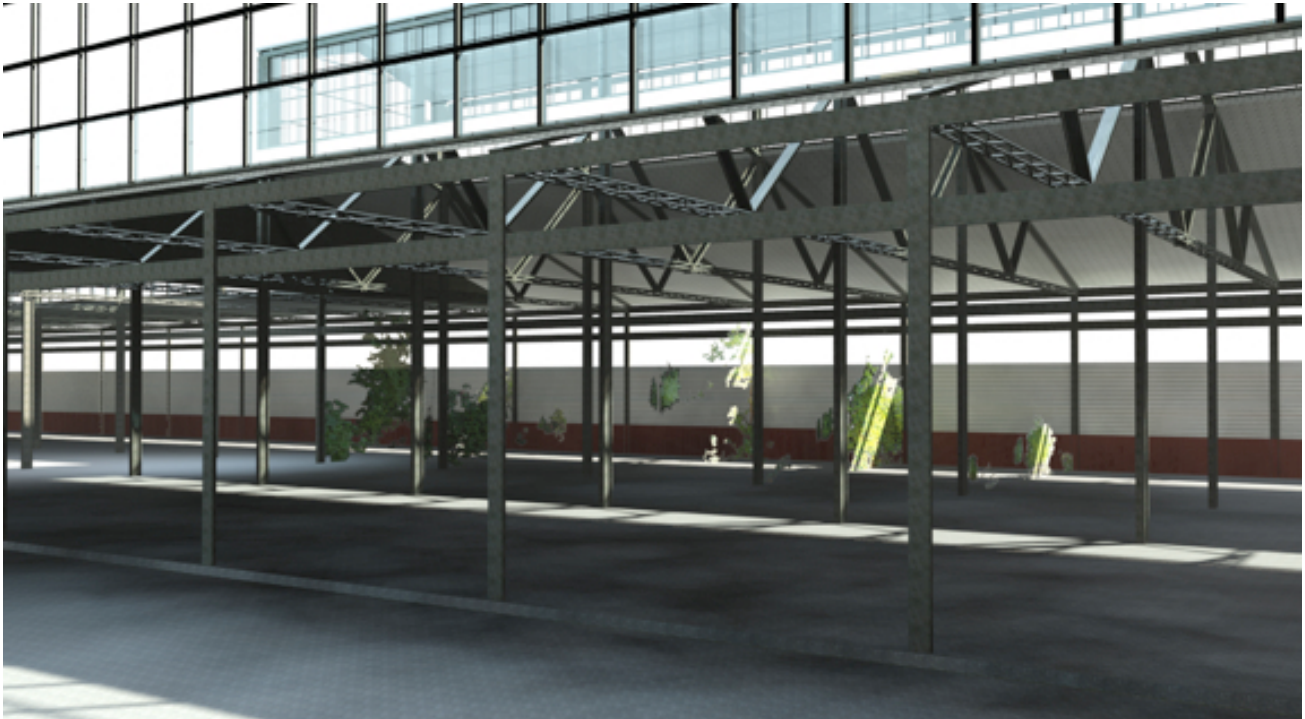
Process Renders

Existing Conditions



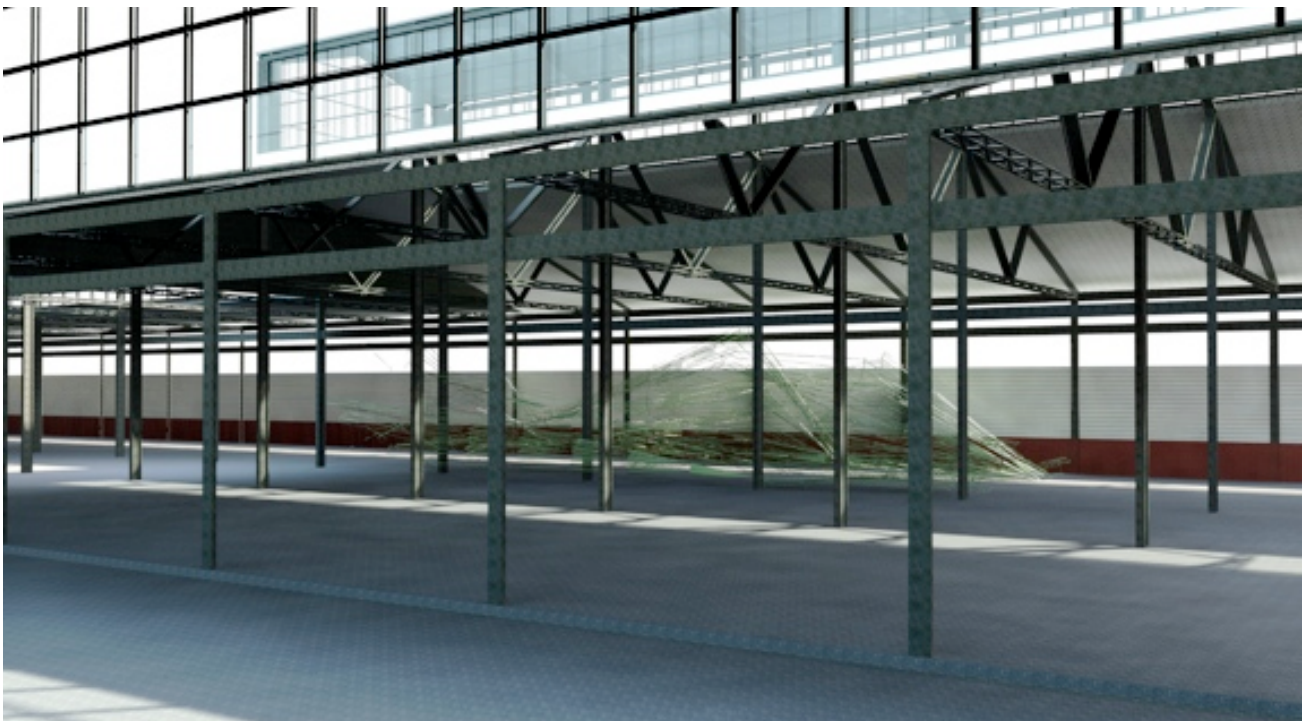
### Inside Perspective

Working within a scaled model of the conditions maintains real word representation of scale and orientation,



**Placement**

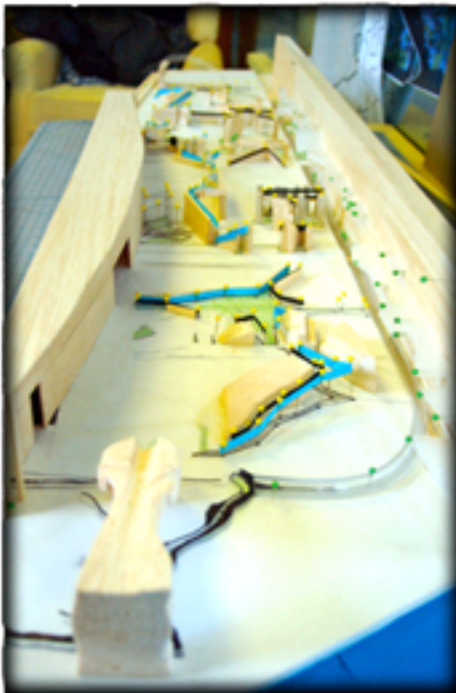
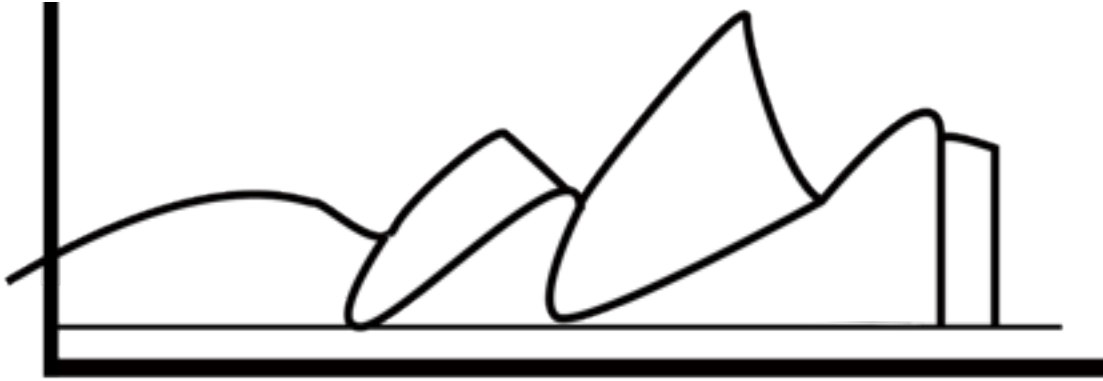
The abstraction layers are positioned as sections within the scaled model every 25 feet and maintain the orientation exactly where they were captured



**Connection**

Connecting sectional characteristics unifies individual assemblies and creates a web of interconnected conditions that possess dimensional qualities.

## FORM



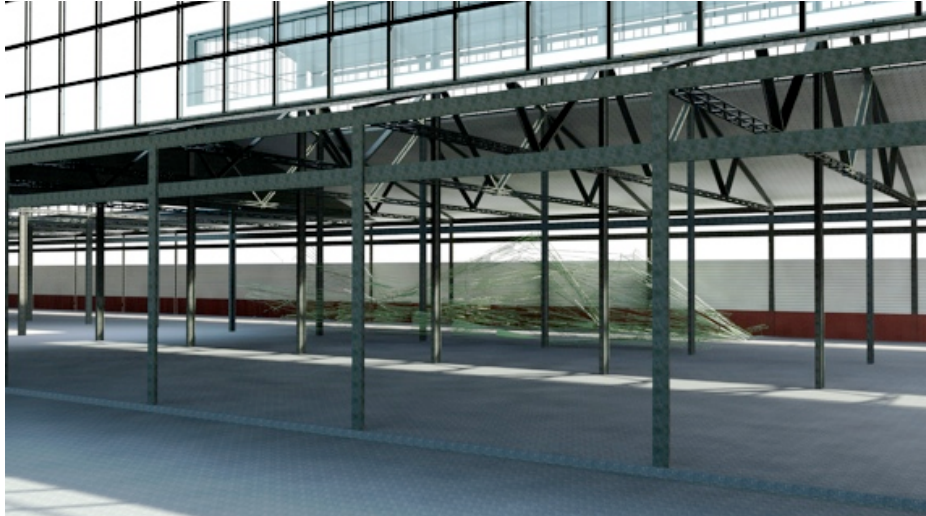
### Formal Articulation Modeling

The potential of these formal relationships is transformed and articulate themselves through direct connections, edge conditions, and pathways as they provoke the designers interpretations. Again, maintaining the mutually responsive relationship between artist and site.

## FORM

### Process Renders

### Responsive Forming

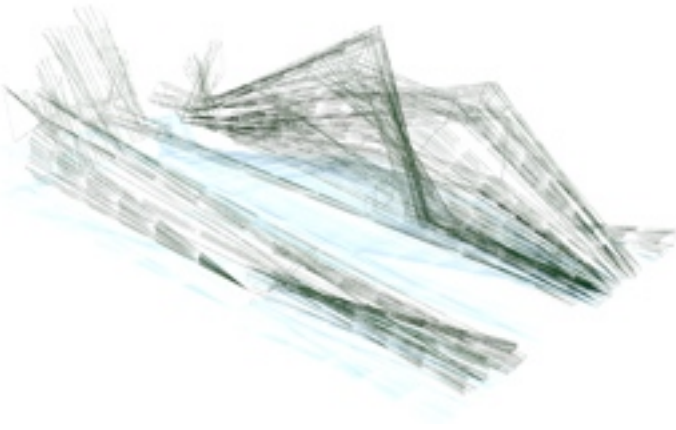


### Solidify

The unified connections are shelled to create a product model that can be investigated as a solid form.

# FORM

## Model Conditions and the Studies Associated



### Wire

Edge Conditions, Layers, Density, Connections Path



### Shell

Transparency, Layers, Density, Weight, Shelter, Path



### Solid

Opacity, Layers, Density, Void, Shelter, Orientation, Node

# Process Renders



# Process Renders



Existing Condition



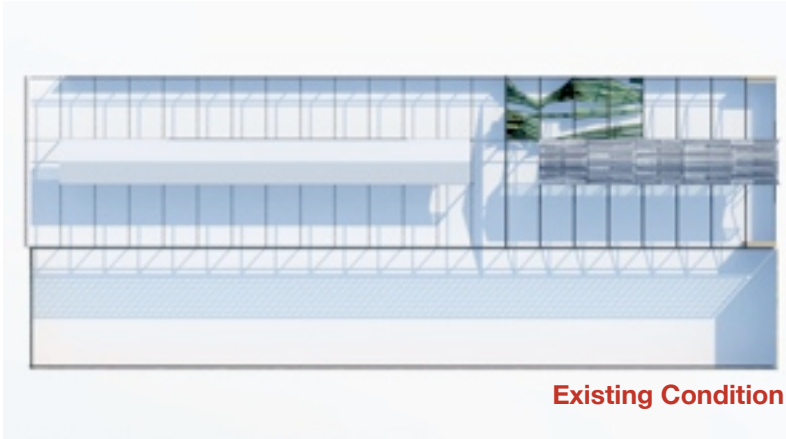
Sectional Connections



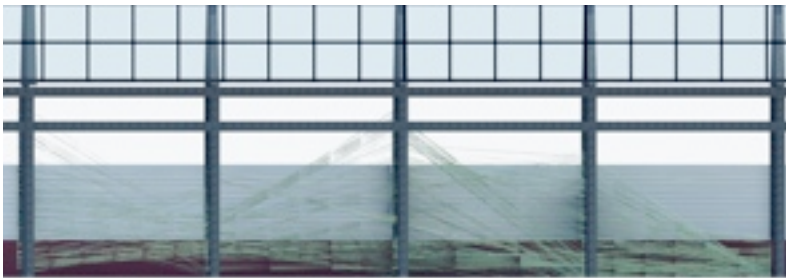
Solidified Product



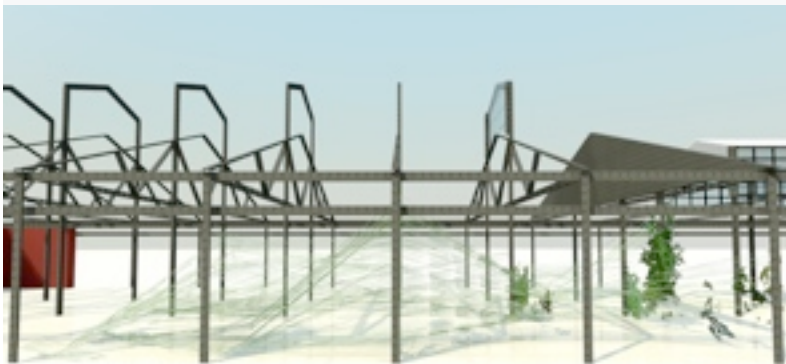
# Process Renders



**Existing Condition** *sectional plan*

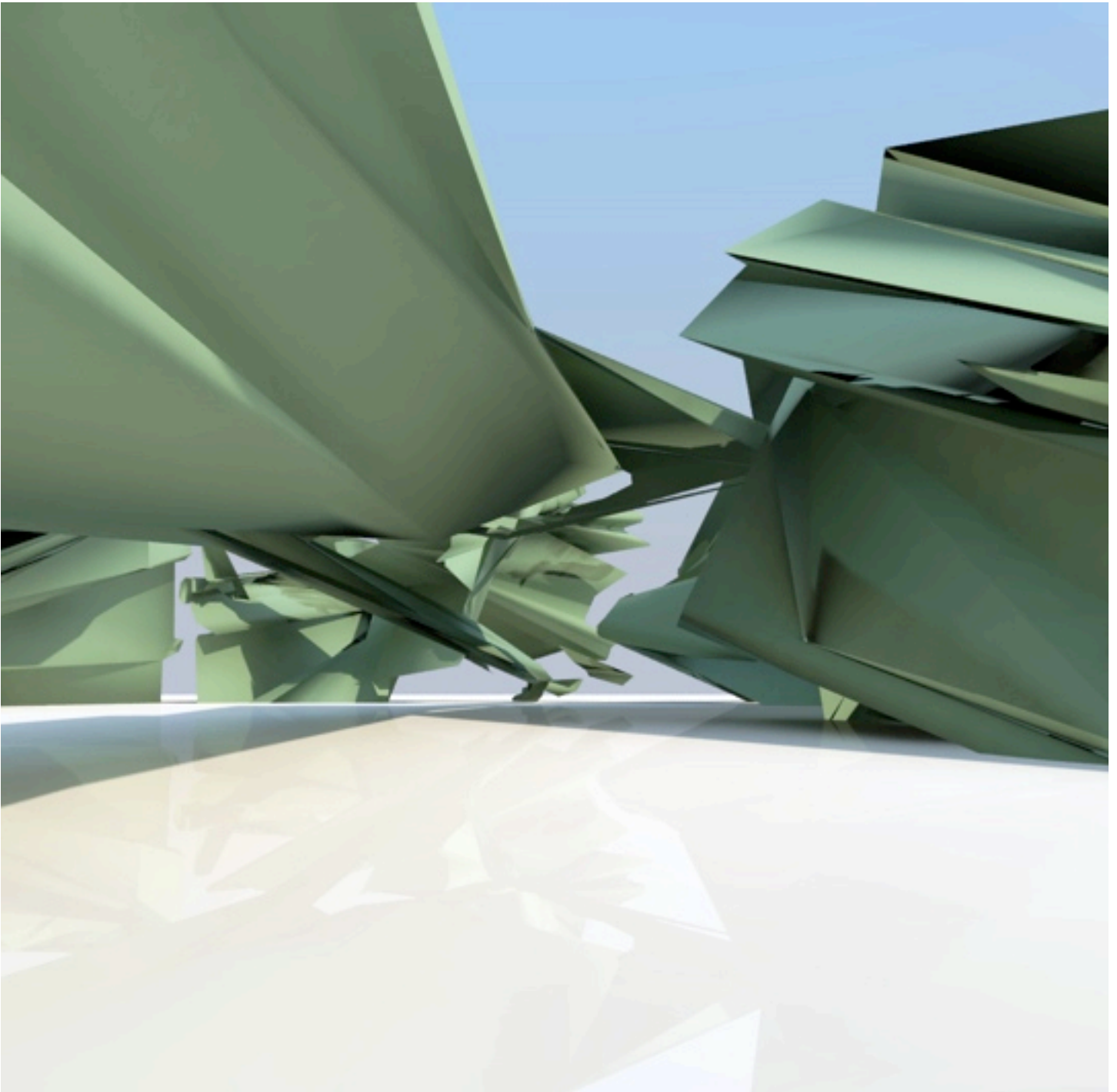


**Sectional Connections** *west elevation*



**Sectional Connections** *west perspective*

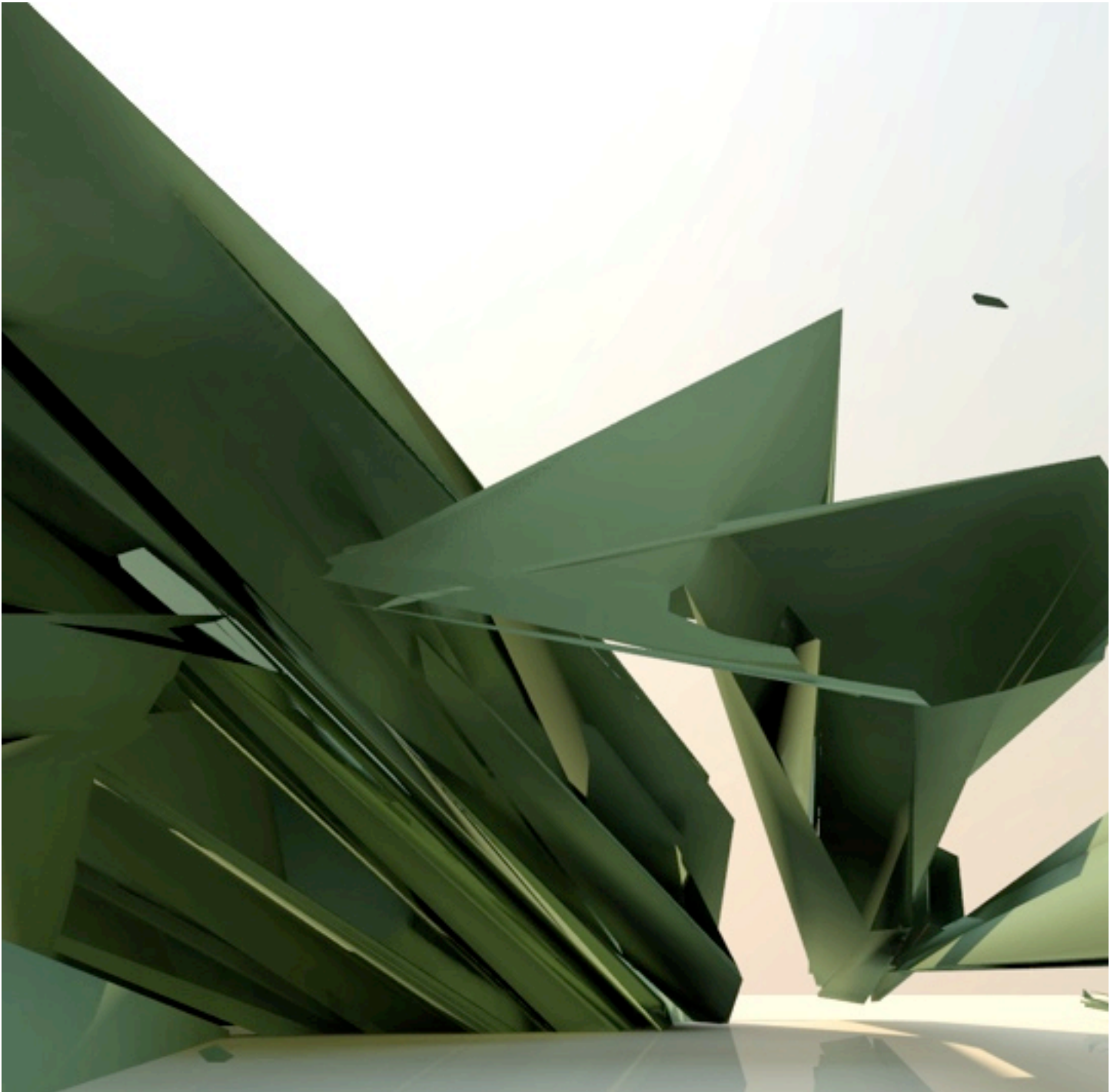
# Process Renders



## **Investigation of the Solid at the Human Scale**

Switching to the human scale allows for the anticipation of the human experience within the form. The designer can imagine the interaction with: view framing, sheltering, privacy, and path that result in an architectural product.

# Process Renders



Investigation of the Solid at the Human Scale

Paths, View Framing, Light

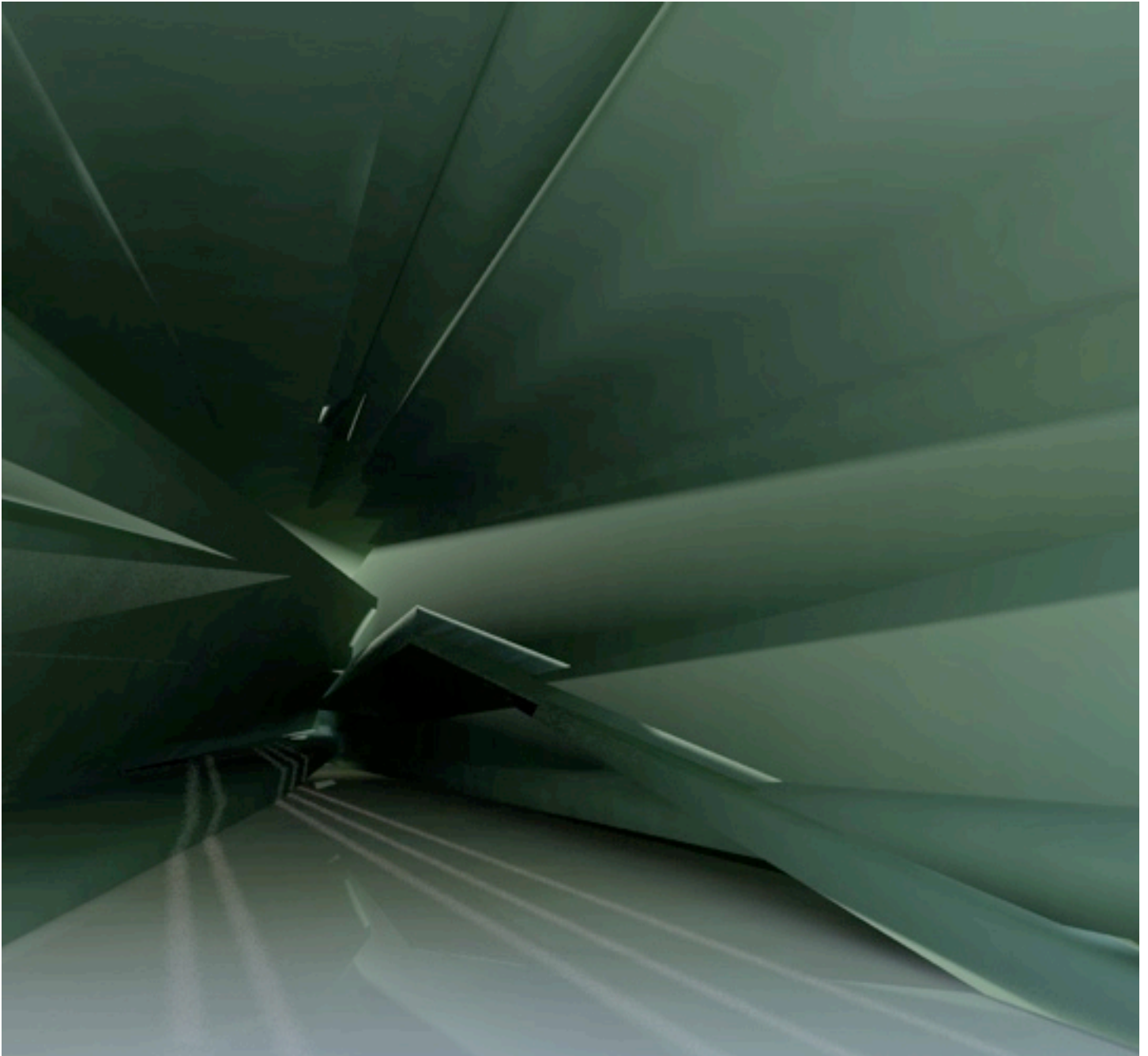
# Process Renders



Investigation of the Solid at the Human Scale

Light, Privacy, Shelter

# Process Renders



Investigation of the Solid at the Human Scale

Shelter, Privacy, Light



# THE SECOND TIME AROUND

## Repeating the Process

In partnership with his subject, the designer has now gone through a full process of responsive form making.

By meeting the challenges of this process he has become intimately familiar with the site and its unique potential to generate form through artistic interpretations along the way

The product of form provides a developmental understanding of the architectural properties.

However, true artistic interpretations do not become well developed through a singular process. The process of doing things is as important as what they produce. There is a greater amount of intimacy available between the site and the designer by repeating the process within a more mature relationship. Because it is not the first time it stands that familiarity will allow deeper understanding the second time around



1



2



3



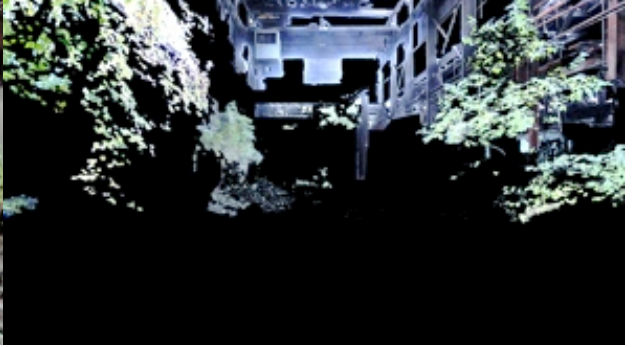
4



### Two Dimensional Analysis of Sequential Catalog

The familiarity of the process allows the second catalog of images to be collected from a different portion of the site and over a larger span of the building.

5



6



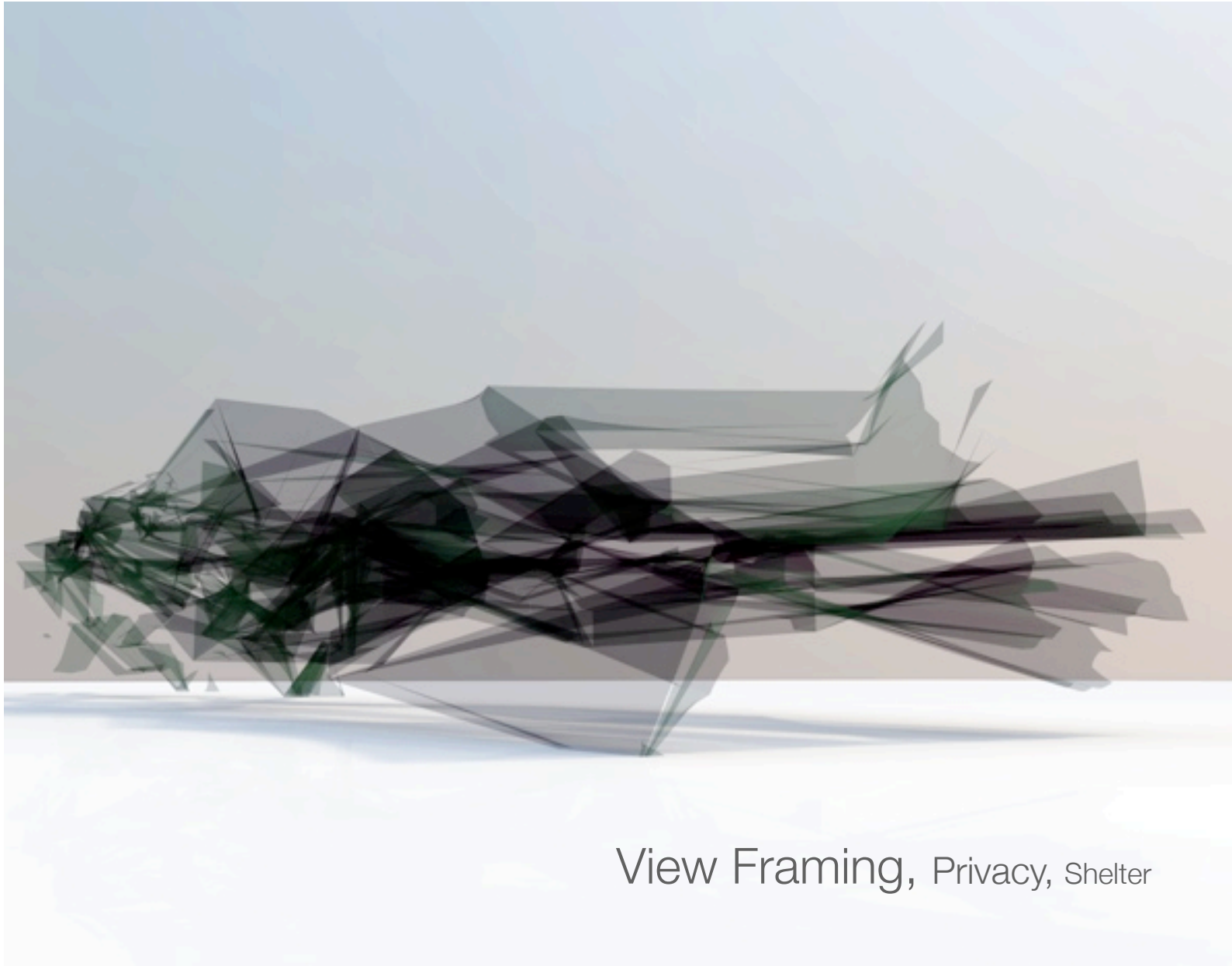
7



8



# Process Renders

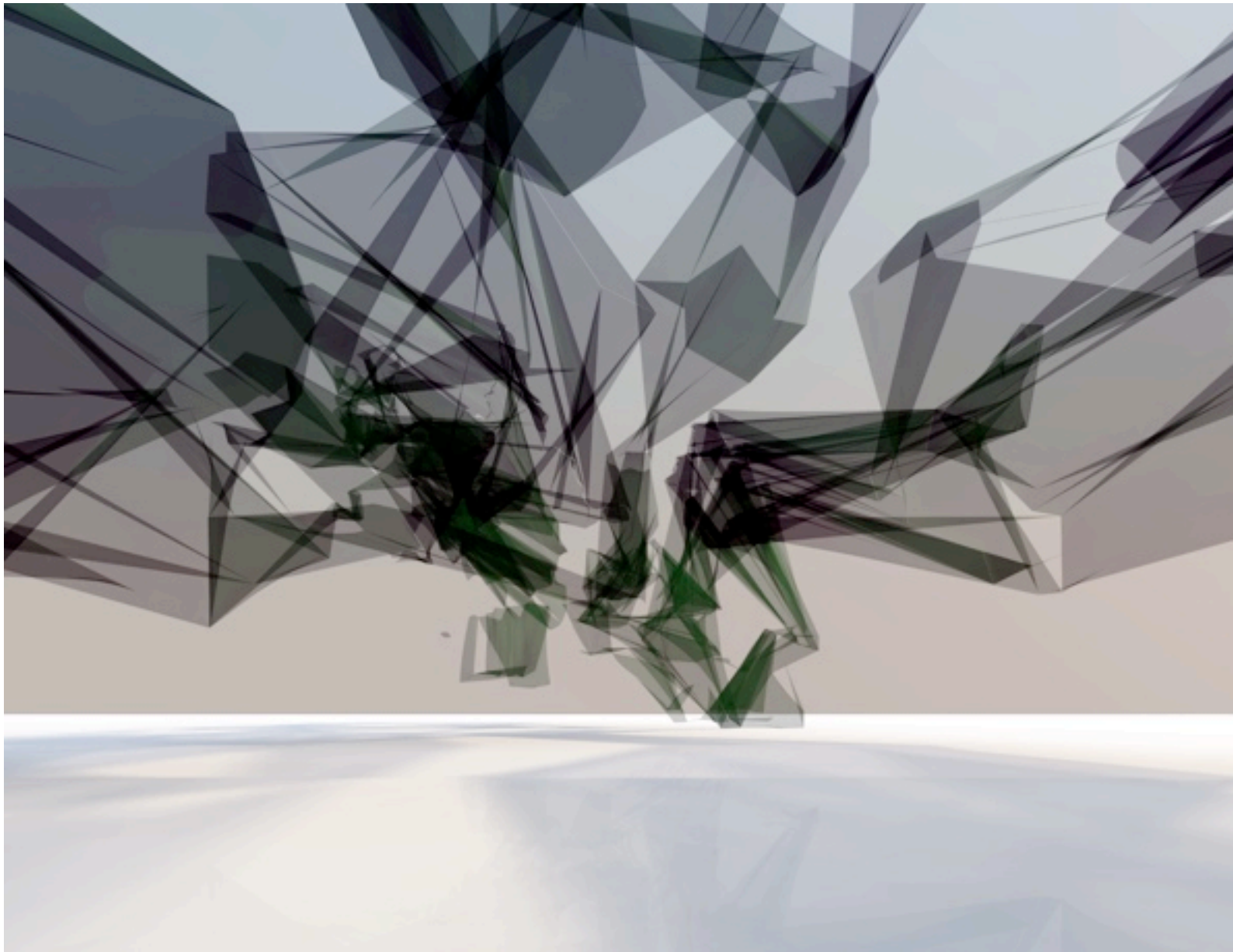


View Framing, Privacy, Shelter

## **Process Product Model**

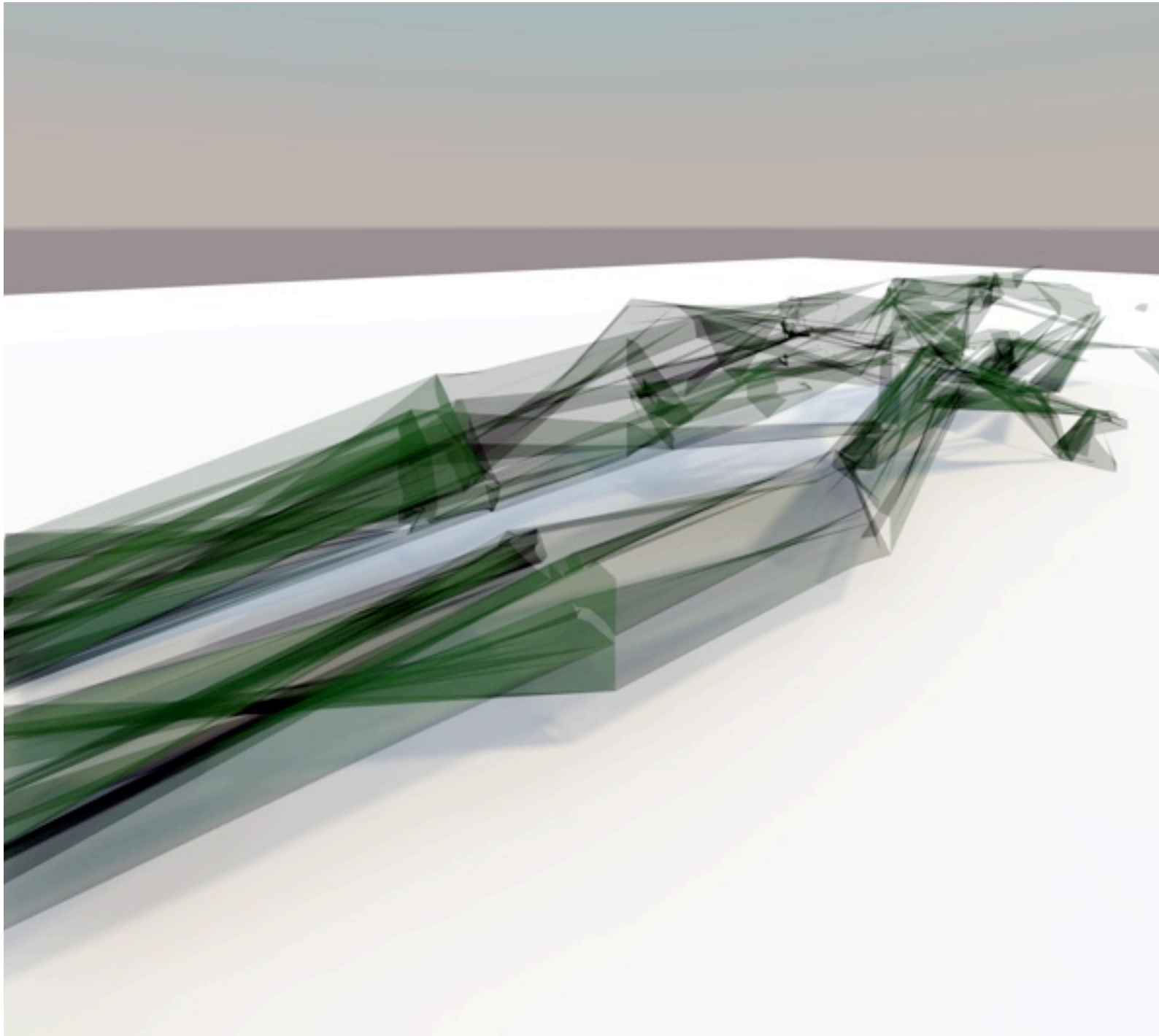
This shell model allows for the simultaneous interpretation previously provided by the Wire, Shell, and Solid Condition models of the first phase,

# Process Renders



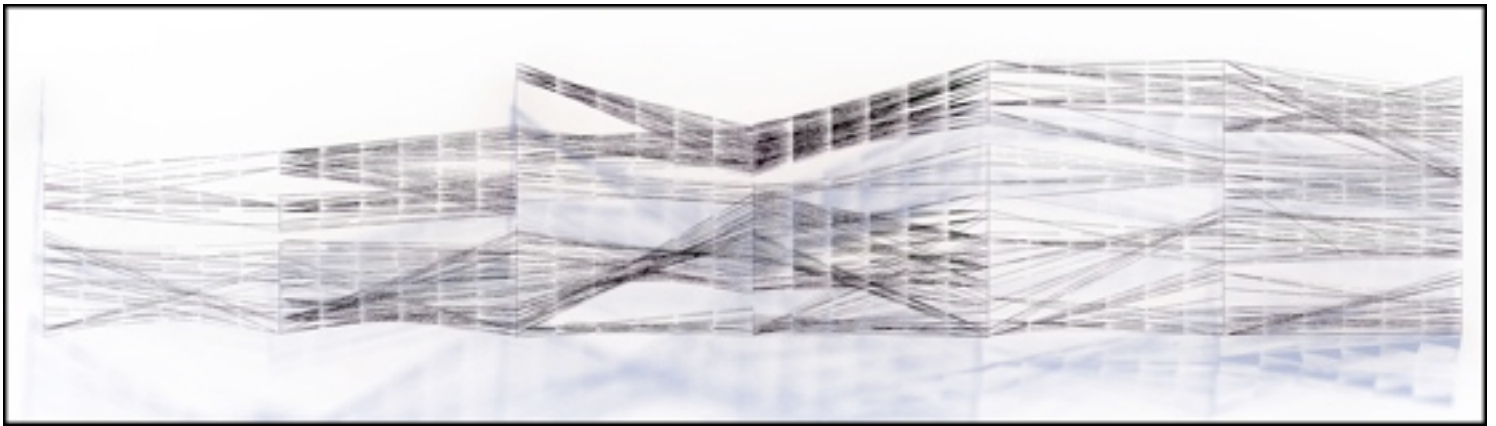
Shelter, View Framing, Light

# Process Renders



Paths, Shelter, Light

# Process Renders

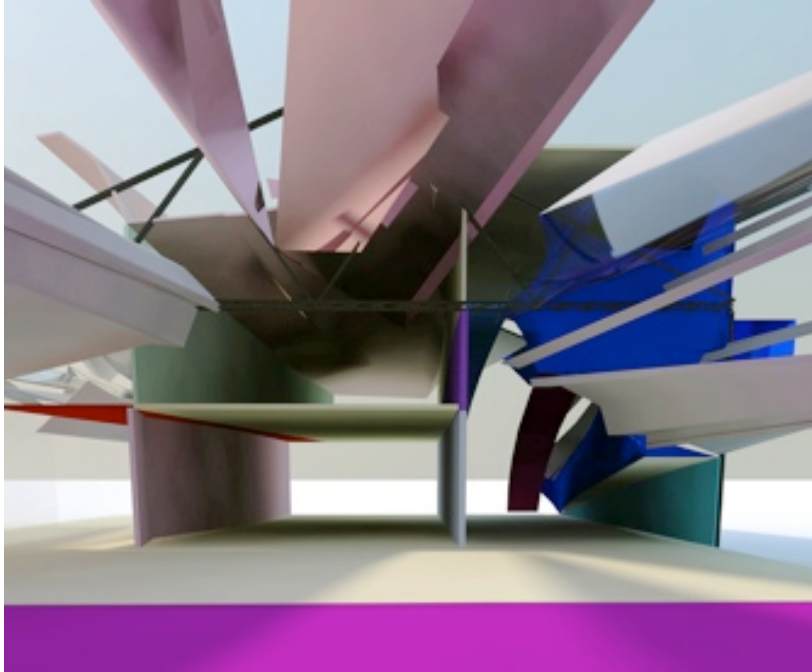


**Wired Model** in plan

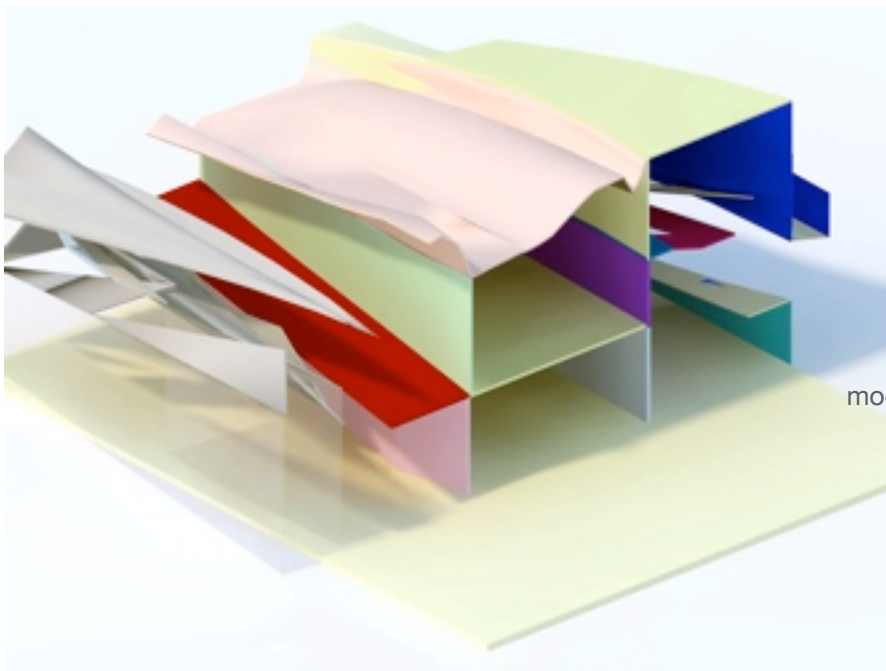


**Solidified Model** in plan

In this solidified model colors represent the actual paths of connection between the sample sections



The last reference of existing conditions. a truss from the structural system of the existing building, can be seen before it is removed and the model stands alone



A sectional sample of the product model now defines its own space

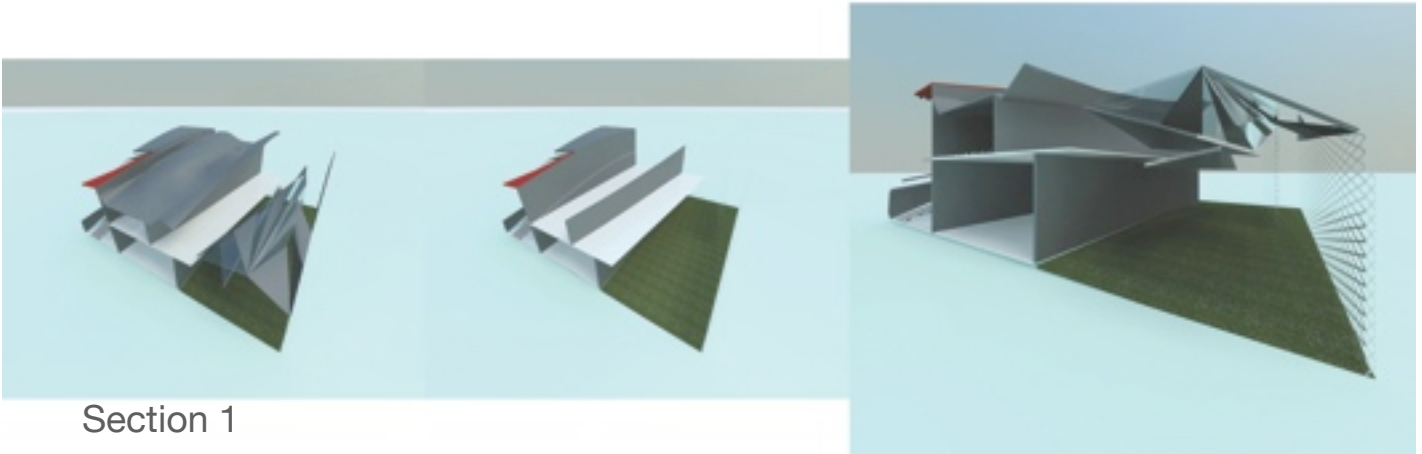
### **Separation from Existing Conditions**

The scale and orientation references available by working within the existing spacial boundaries of the site have served their purpose and the model can be allowed to develop from here on its own





# Process Renders



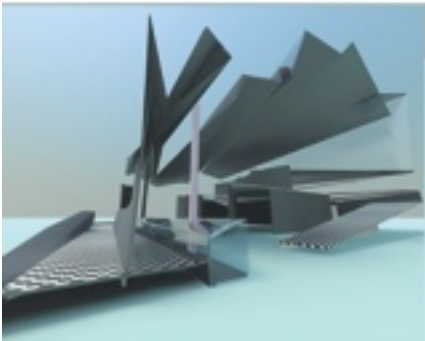
Section 1

Where can the user of this space stand, rest, or walk?

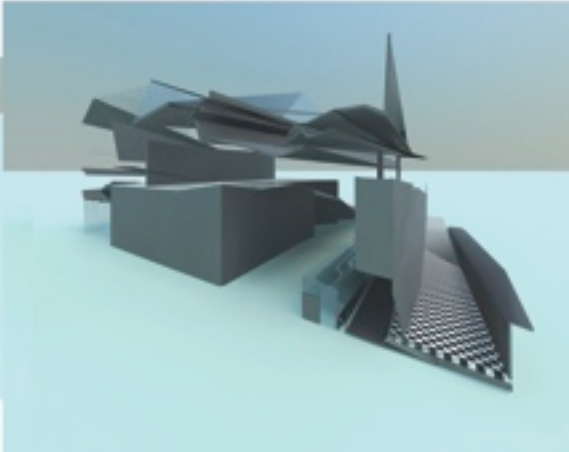
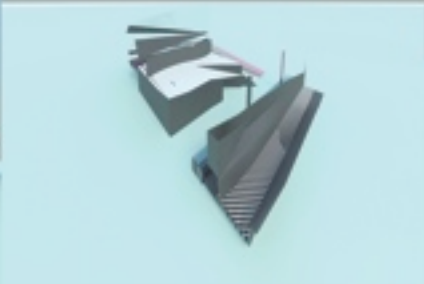
## Sectional Development

The sectional development of the model requires increasingly stronger consideration and movements towards occupy-able spaces

# Process Renders



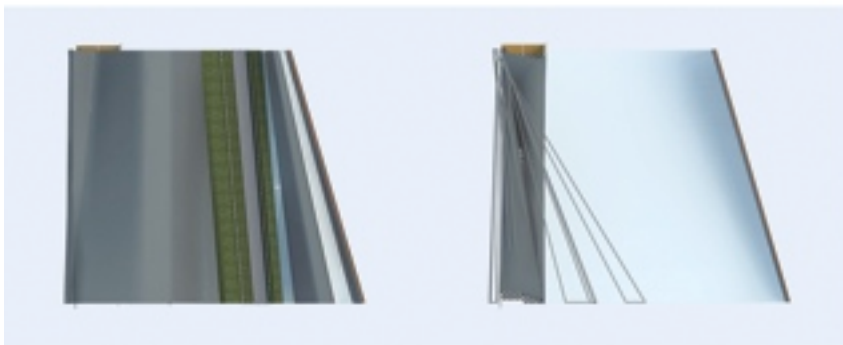
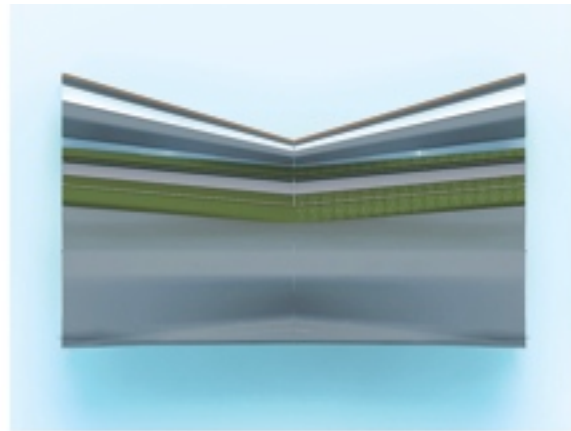
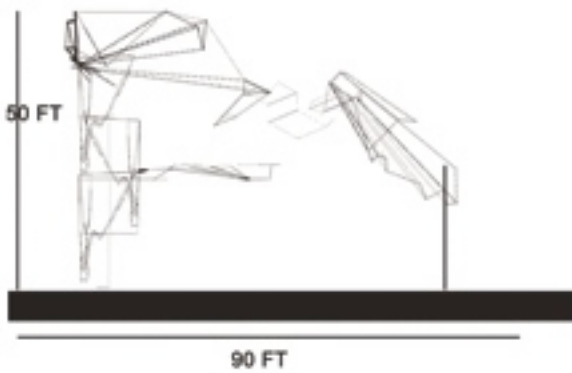
Section 2



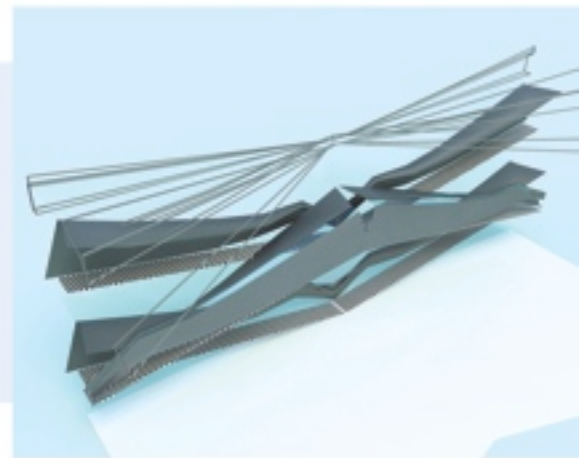
Where is the user of this space engaged, transformed, or protective?

## Sectional Development

# Process Renders



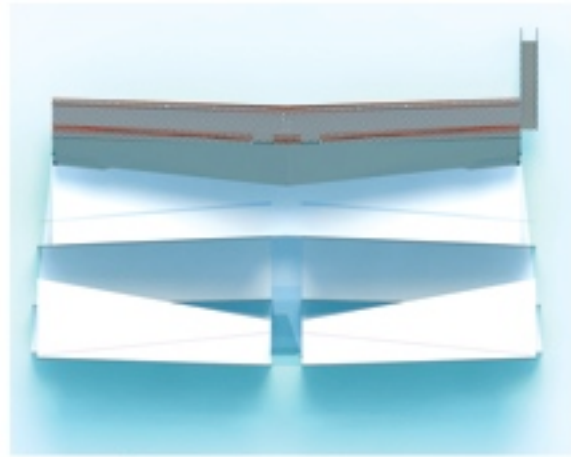
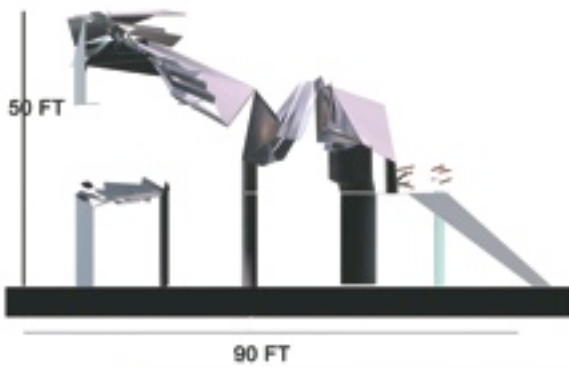
Section 3



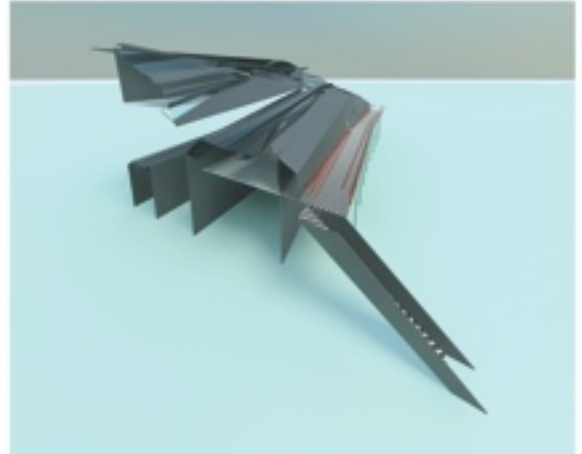
Where might the user of this space be invited to enter, traverse, or explore?

**Sectional Development**

# Process Renders

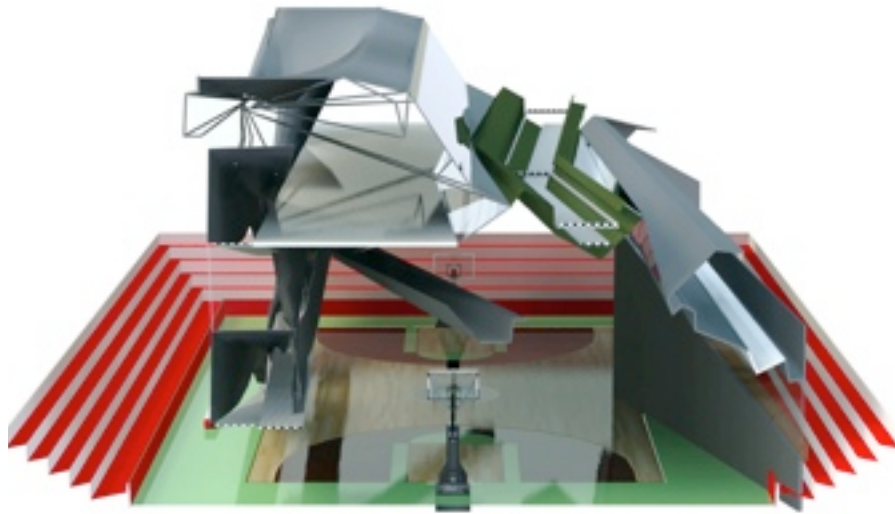


Section 4

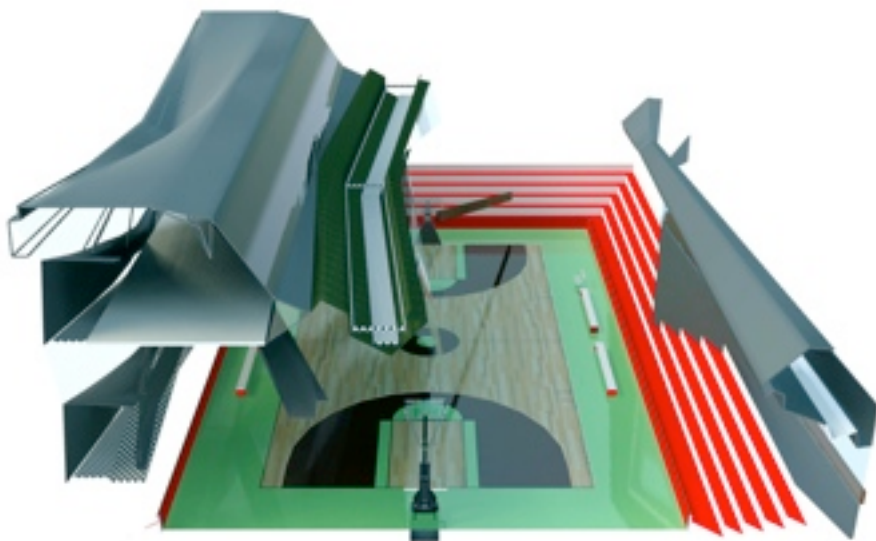


How might the user of this space experience exterior versus interior?

## Sectional Development

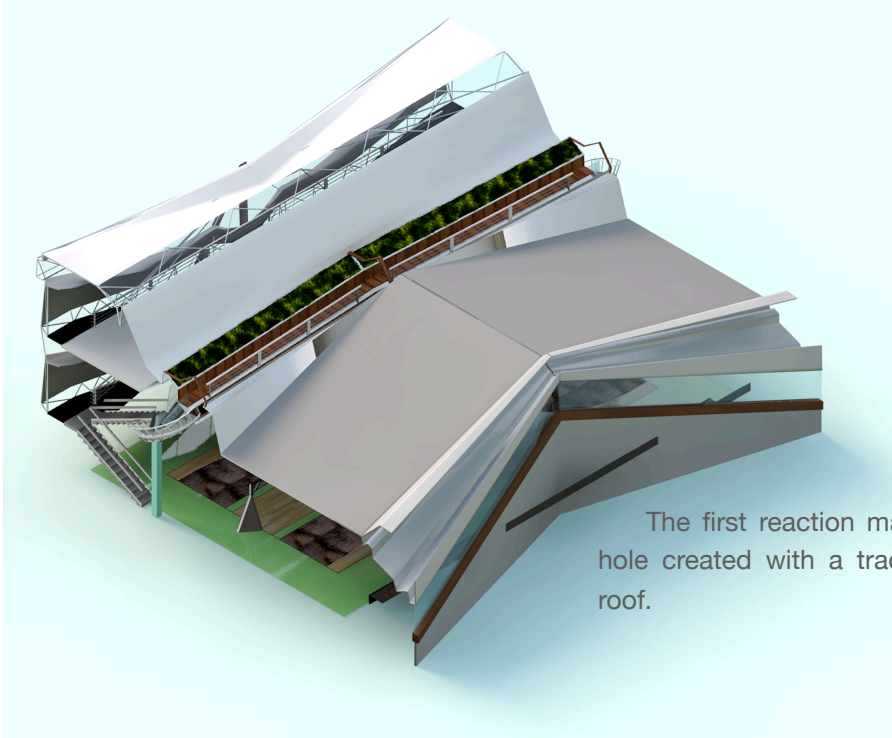


The spacial requirements of the basketball program forces the product model to respond accordingly.

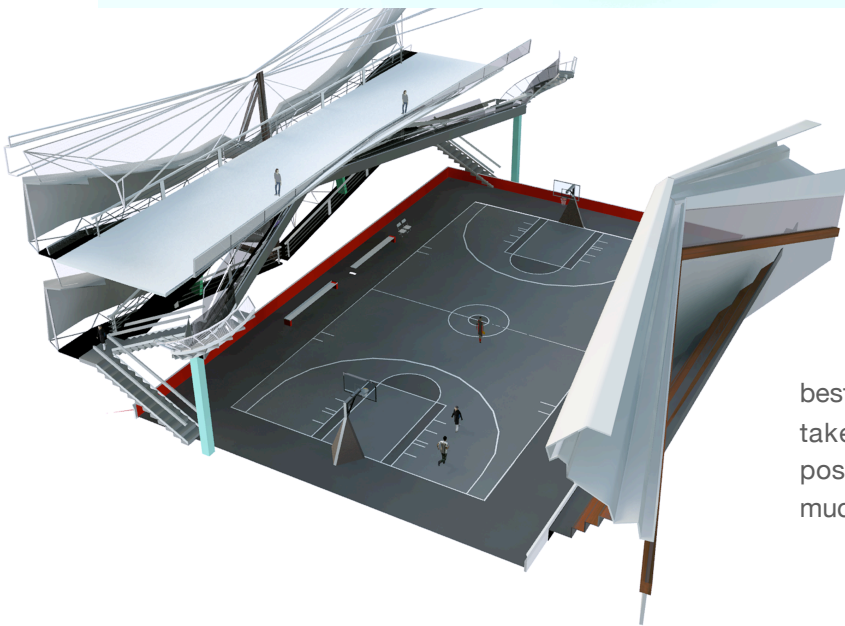


### **Formal Agitation**

Because the goal of the process is to seek toward a well grounded architecture, and not just remain in the abstract world of creation, a programmatic agitation is injected into the form to consider the absolutes of programmatic spacial requirements.



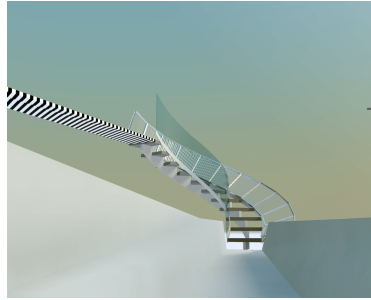
The first reaction may be to cover the hole created with a traditional gable style roof.



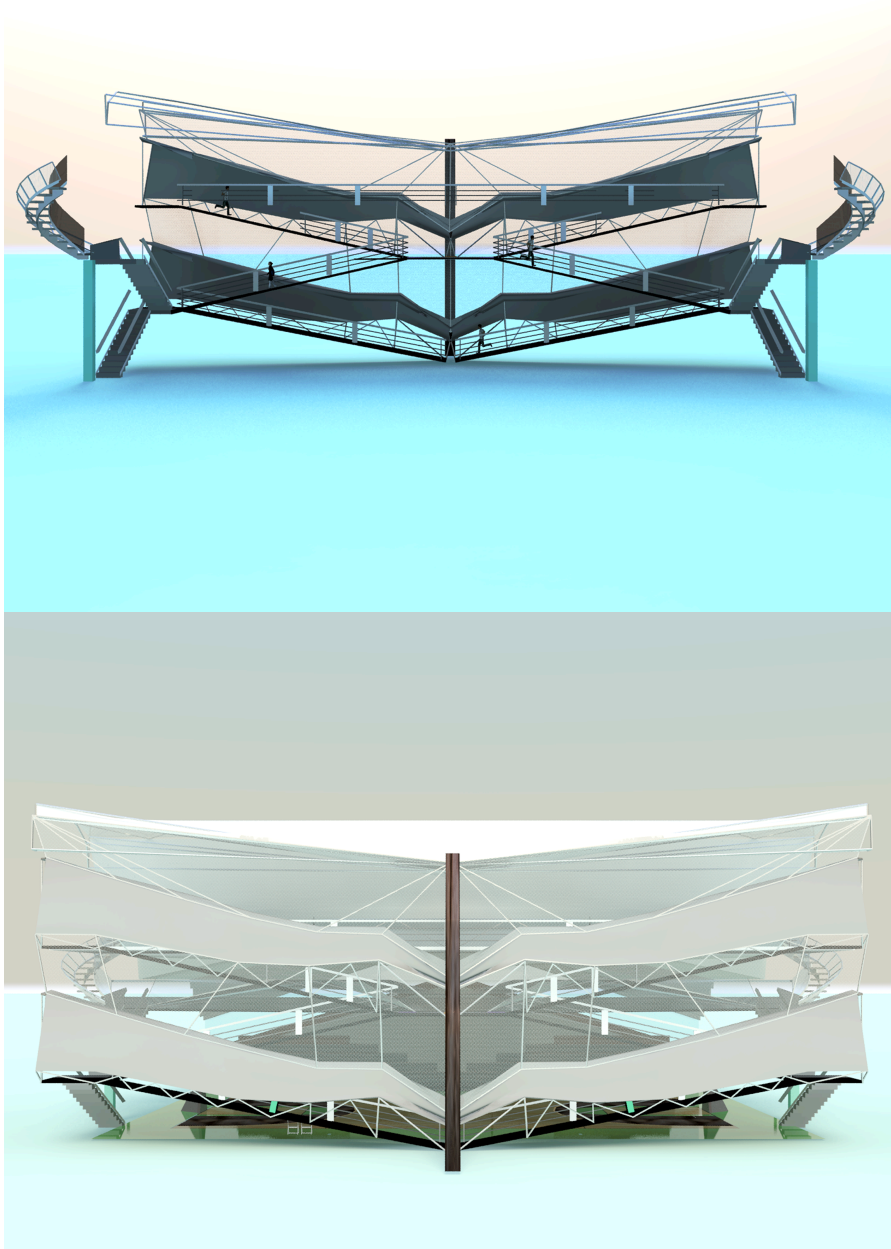
After further analysis it was decided best to embrace the models reaction and take advantage of the indoor/outdoor possibilities. Ultimately providing for a much more interesting architecture.

### Agitation Reaction

How the designer reacts to the models necessary reaction becomes important. It may be the first decision the artist makes without the process suggestion the answer. .



The connection of potential paths



### Further Considerations of Path

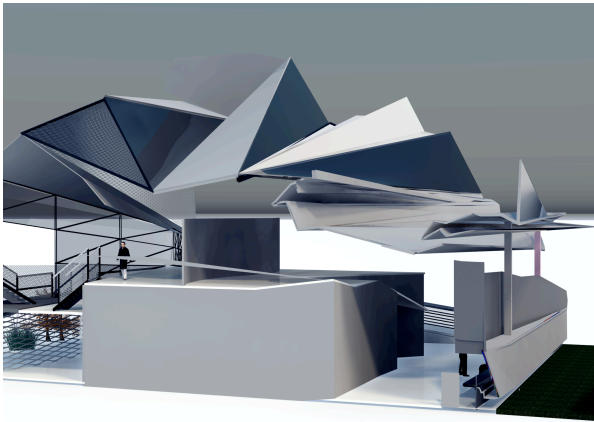
After allowing for potential paths to connect with one another The further development of path requirements factor in egress, slope, safety, and structural support.

# PRODUCT

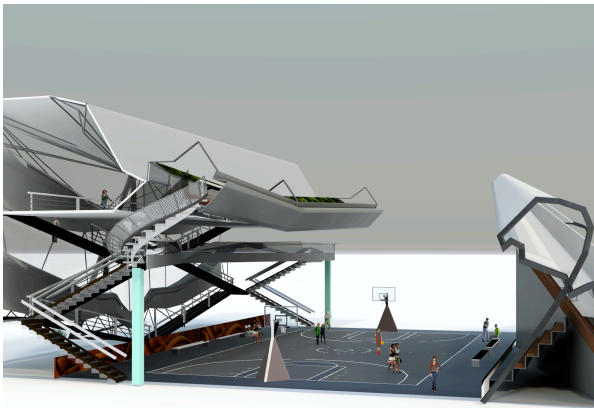




Section 1



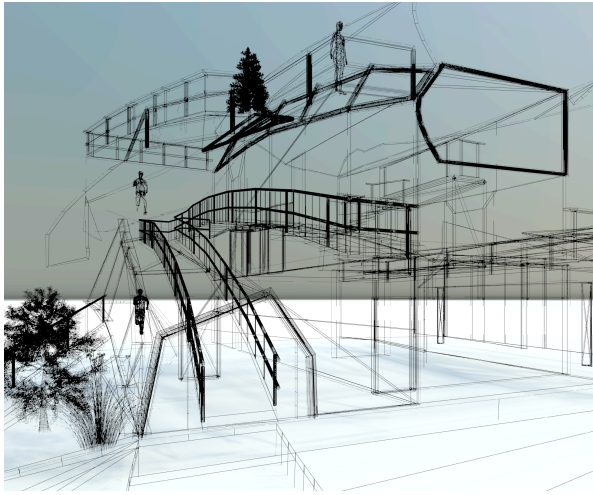
Section 2



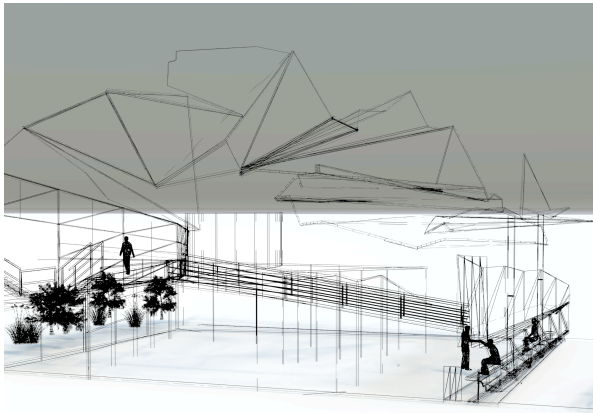
Section 3



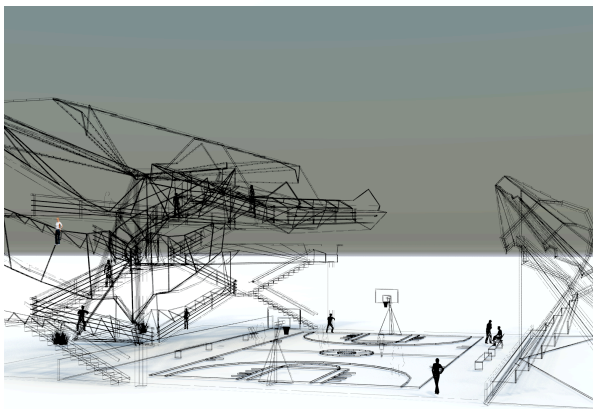
Section 4



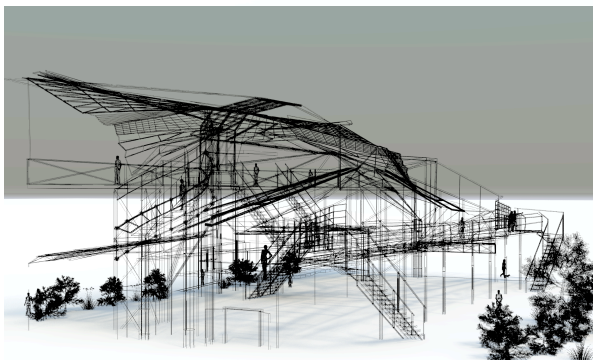
Section 1



Section 2

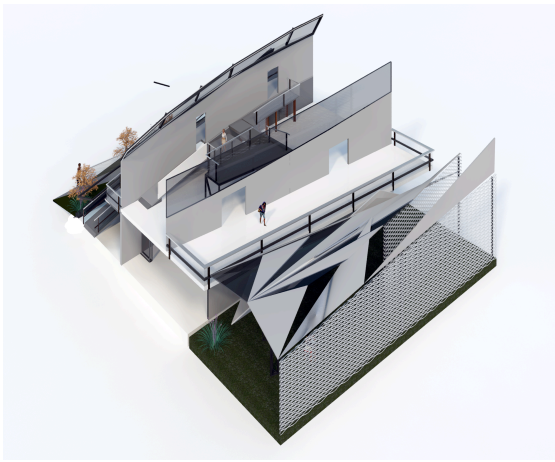


Section 3

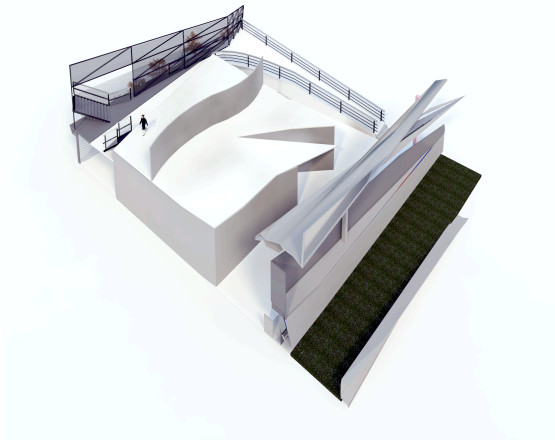


Section 4

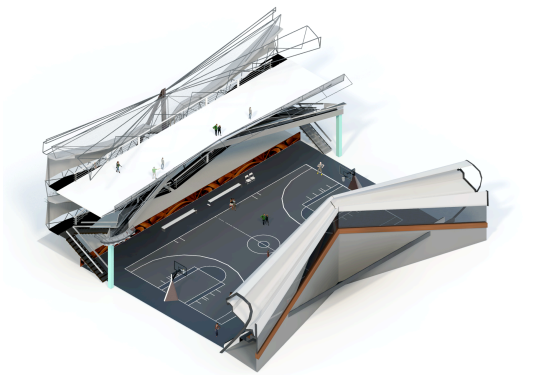




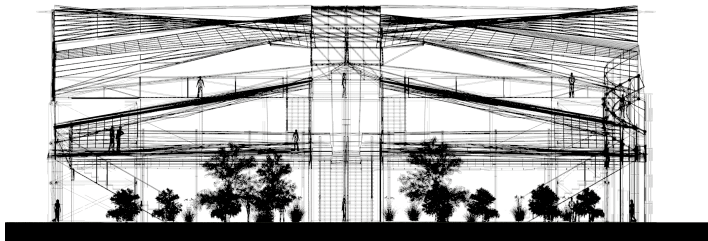
Section 1



Section 2



Section 3

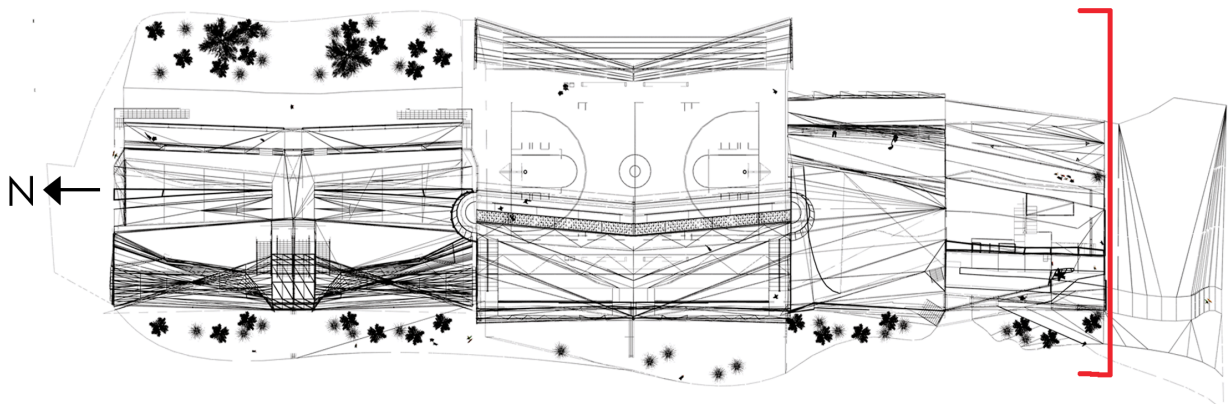
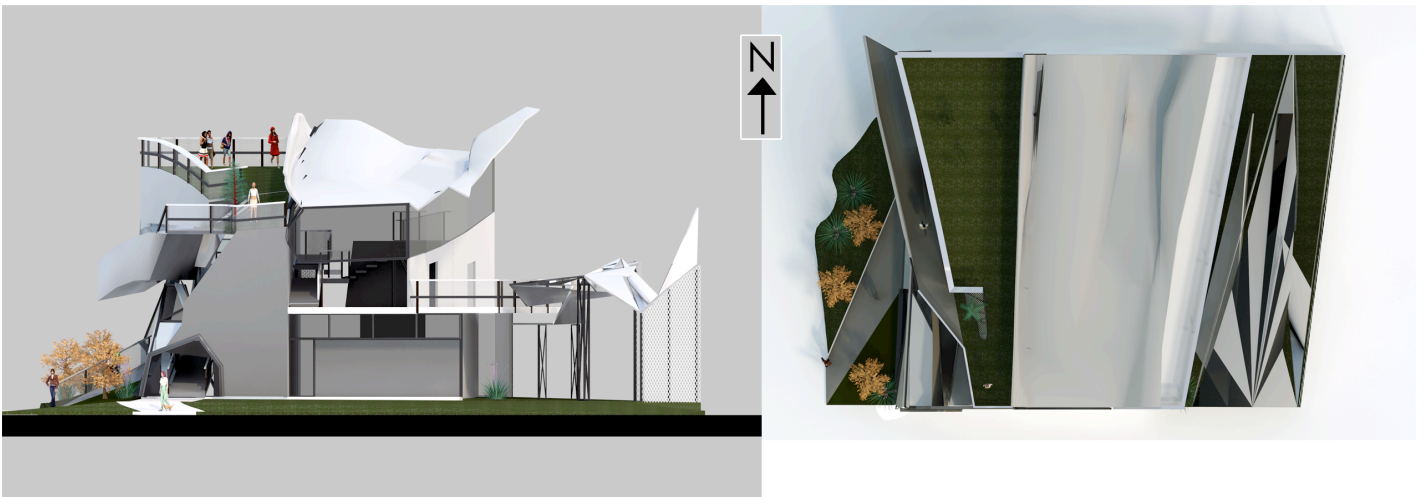


Section 4

N ←

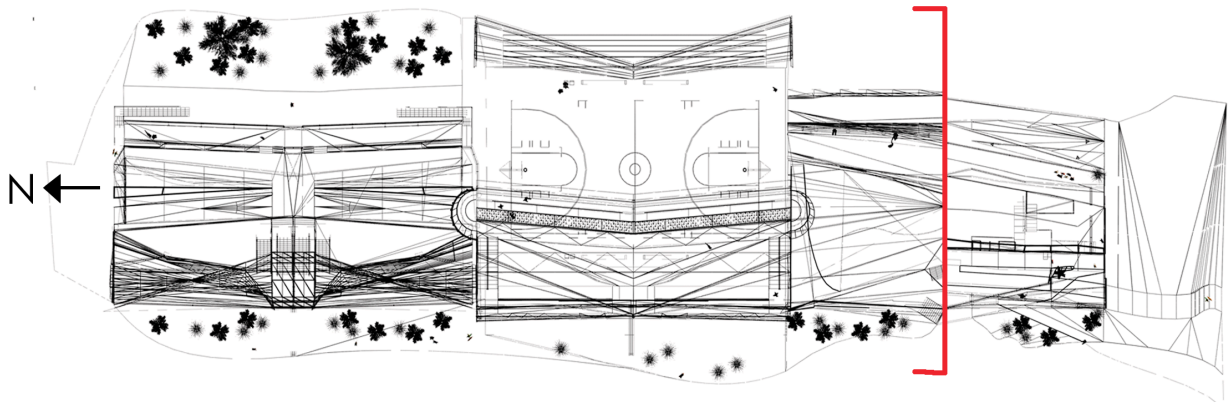
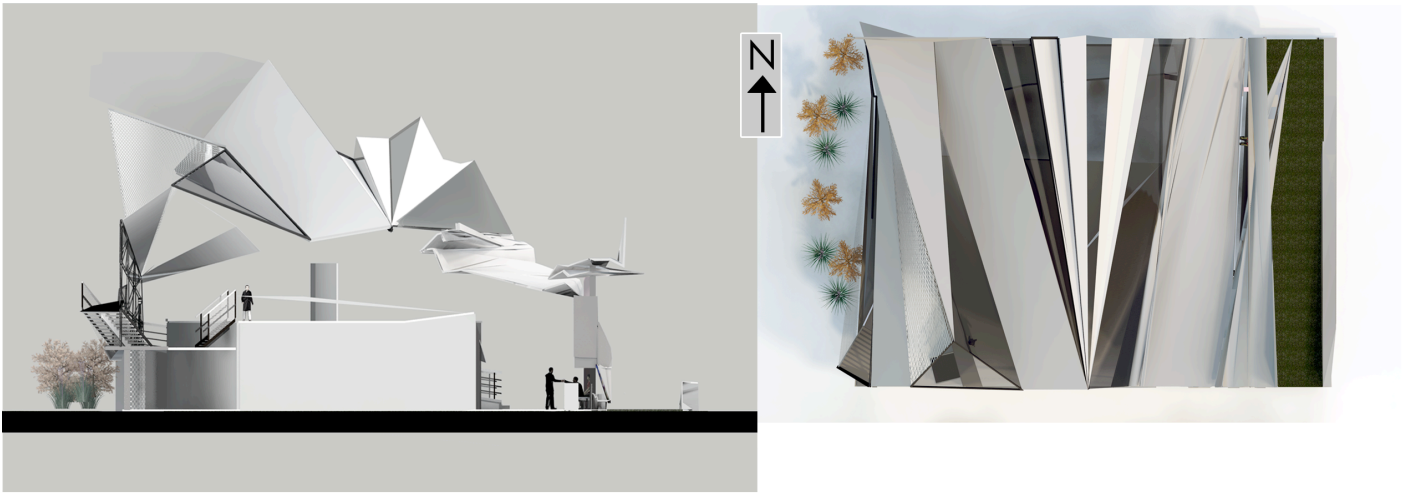
# Sectional Compilations

## Section 1



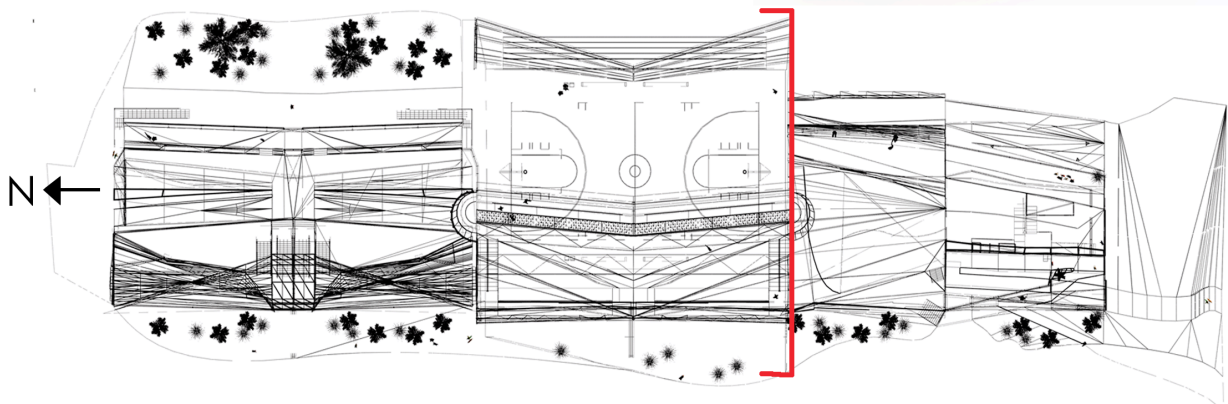
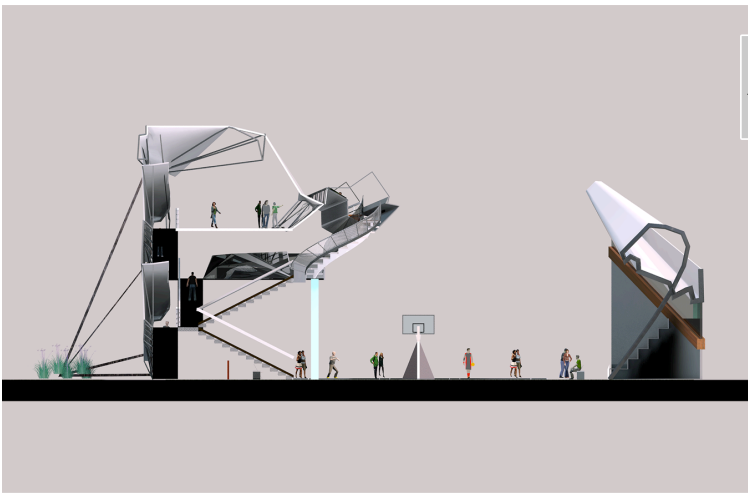
# Sectional Compilations

## Section 2



# Sectional Compilations

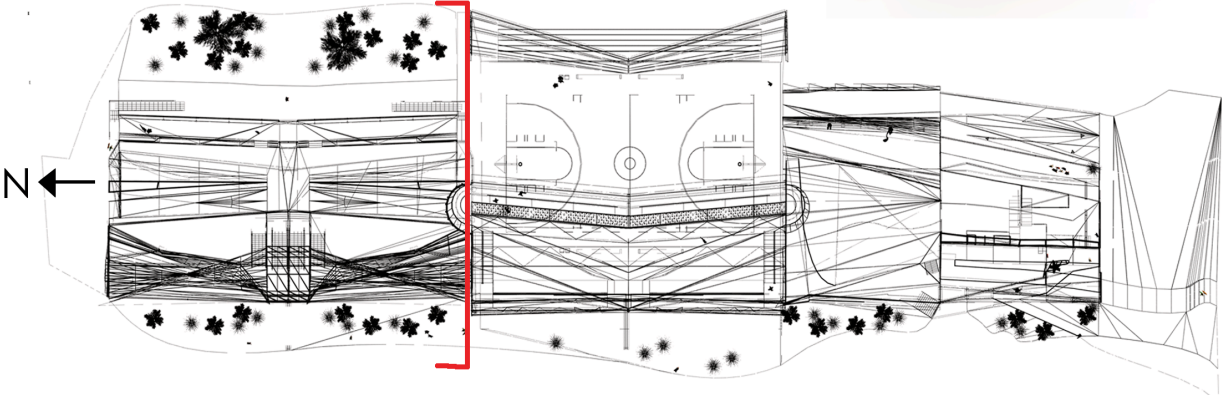
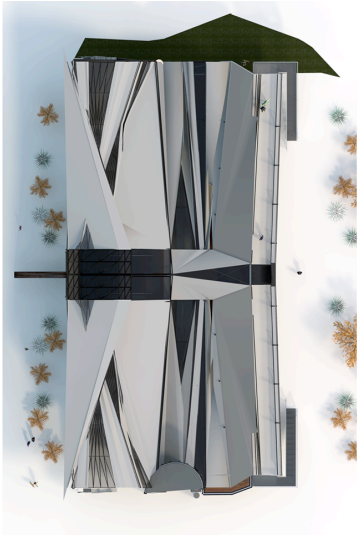
## Section 3



# Process Renders

## Sectional Compilations

### Section 4



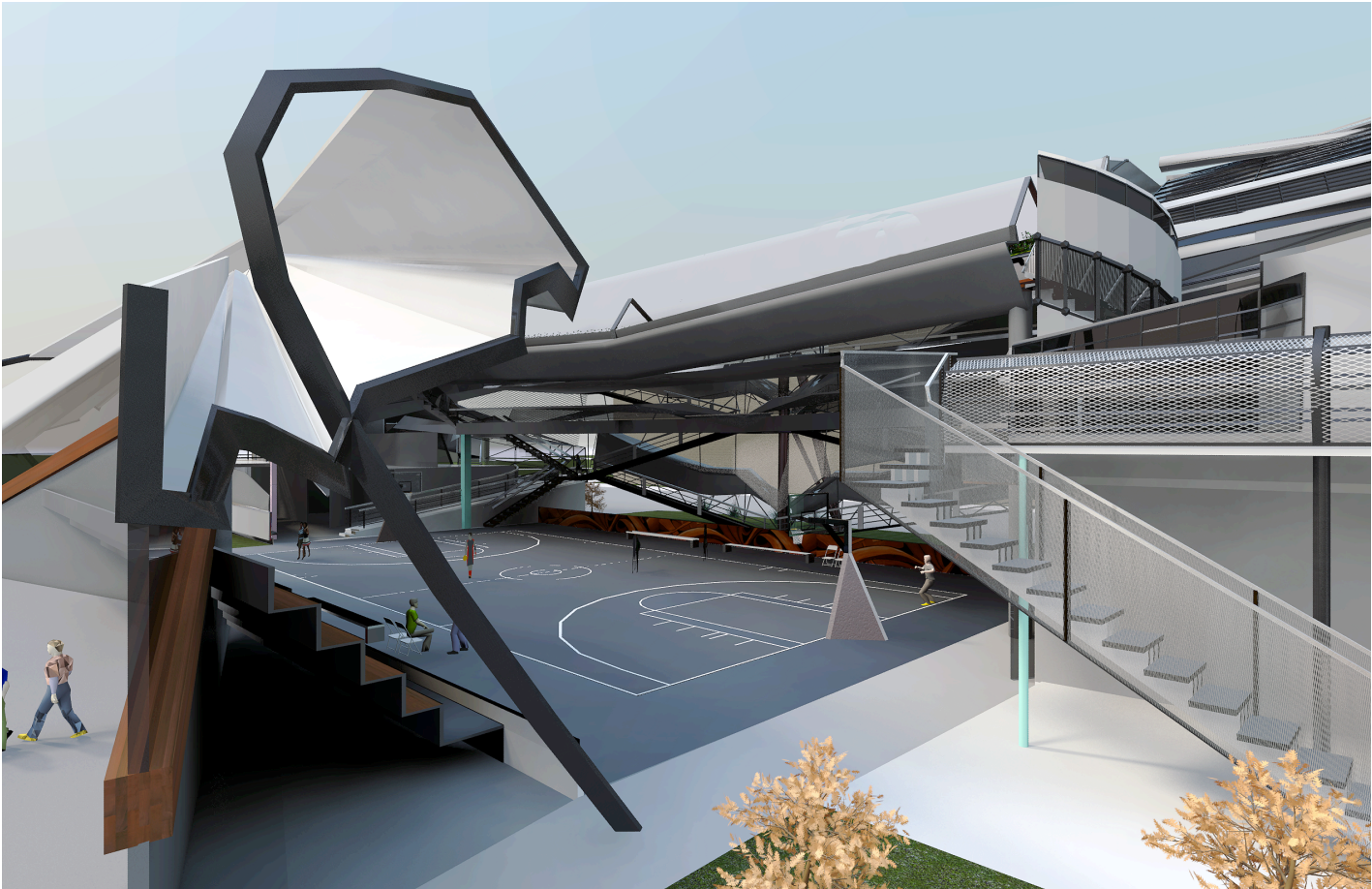


# Final Renders

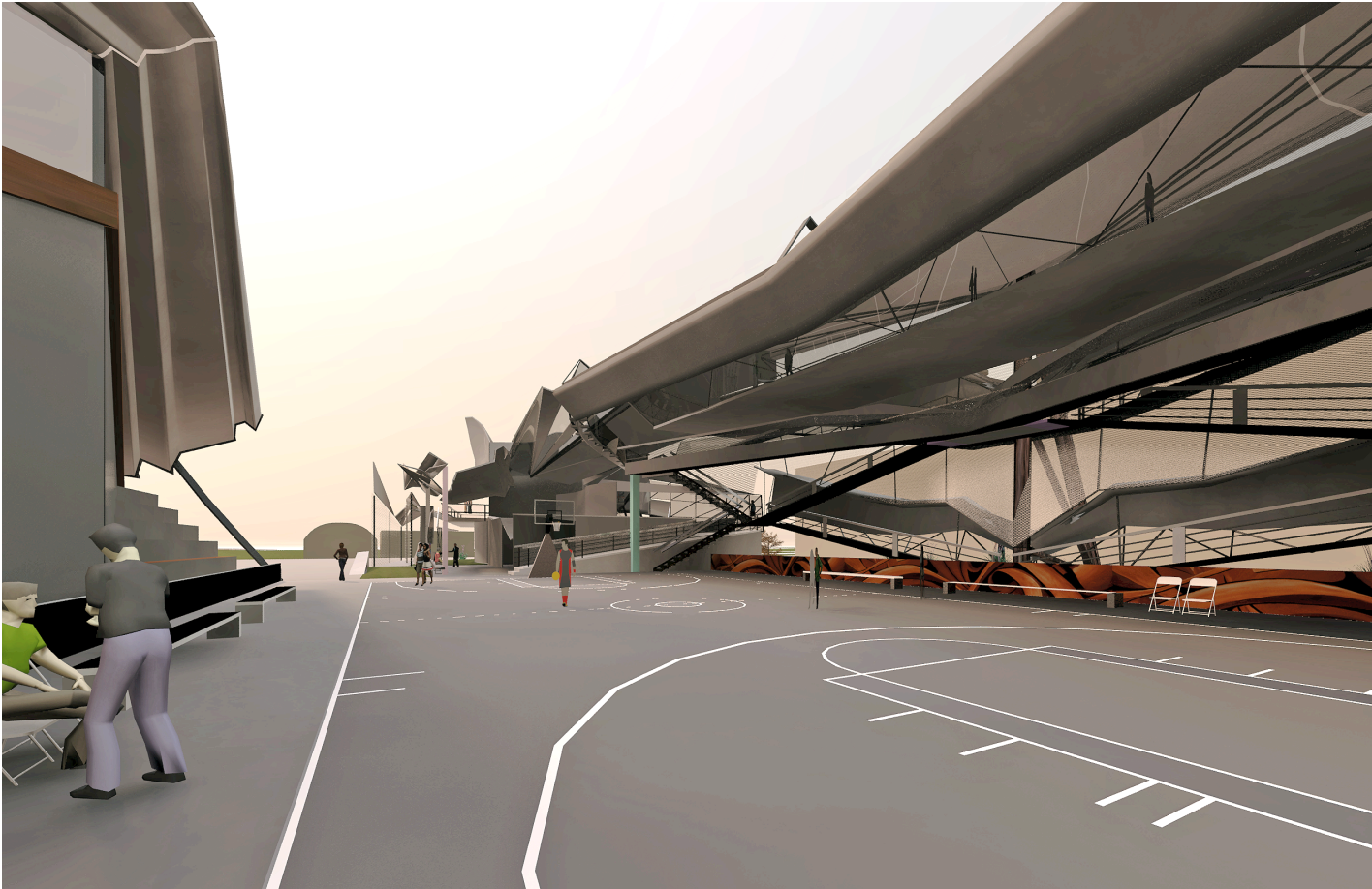
# Final Renders



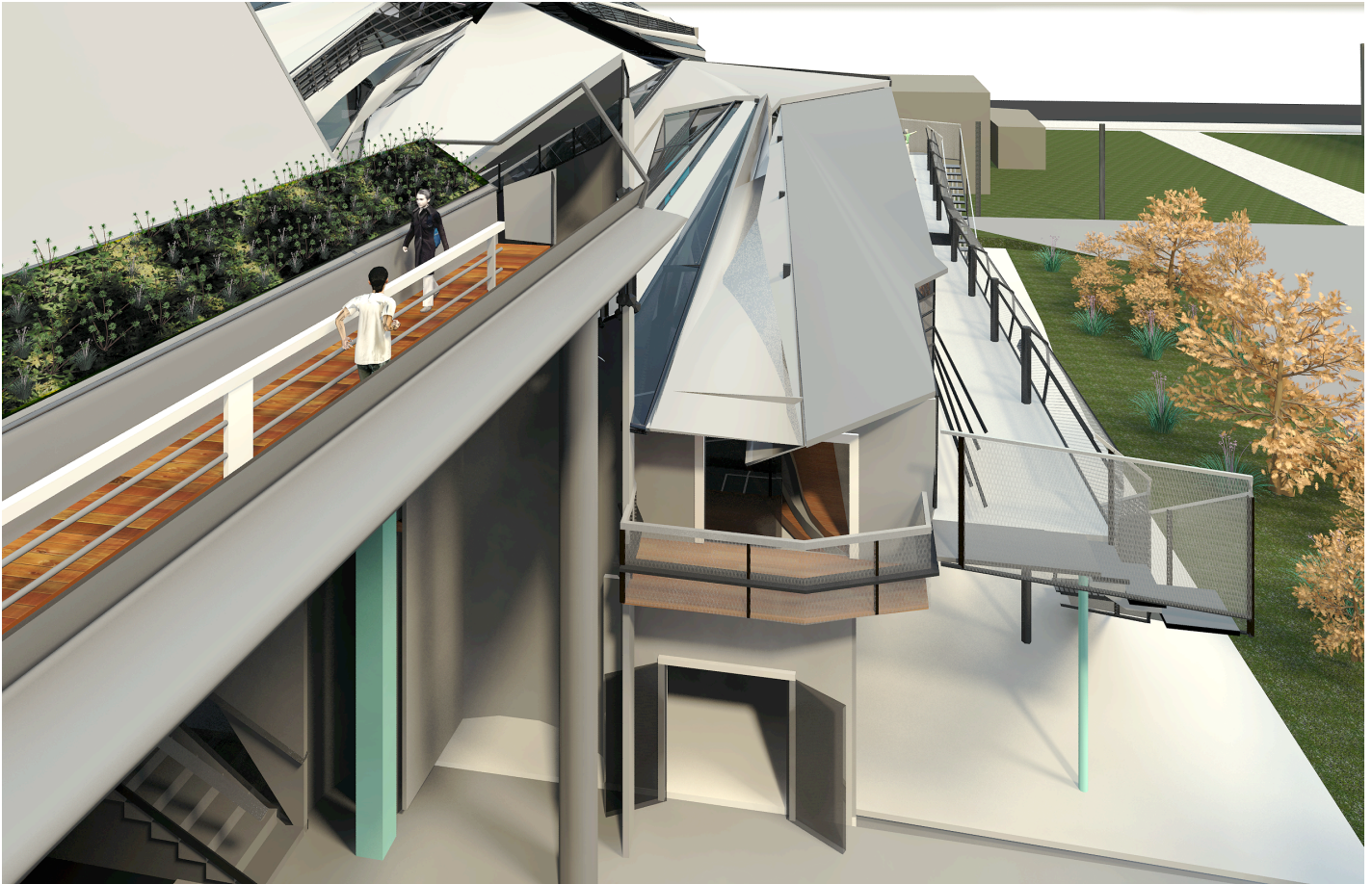
# Final Renders



# Final Renders



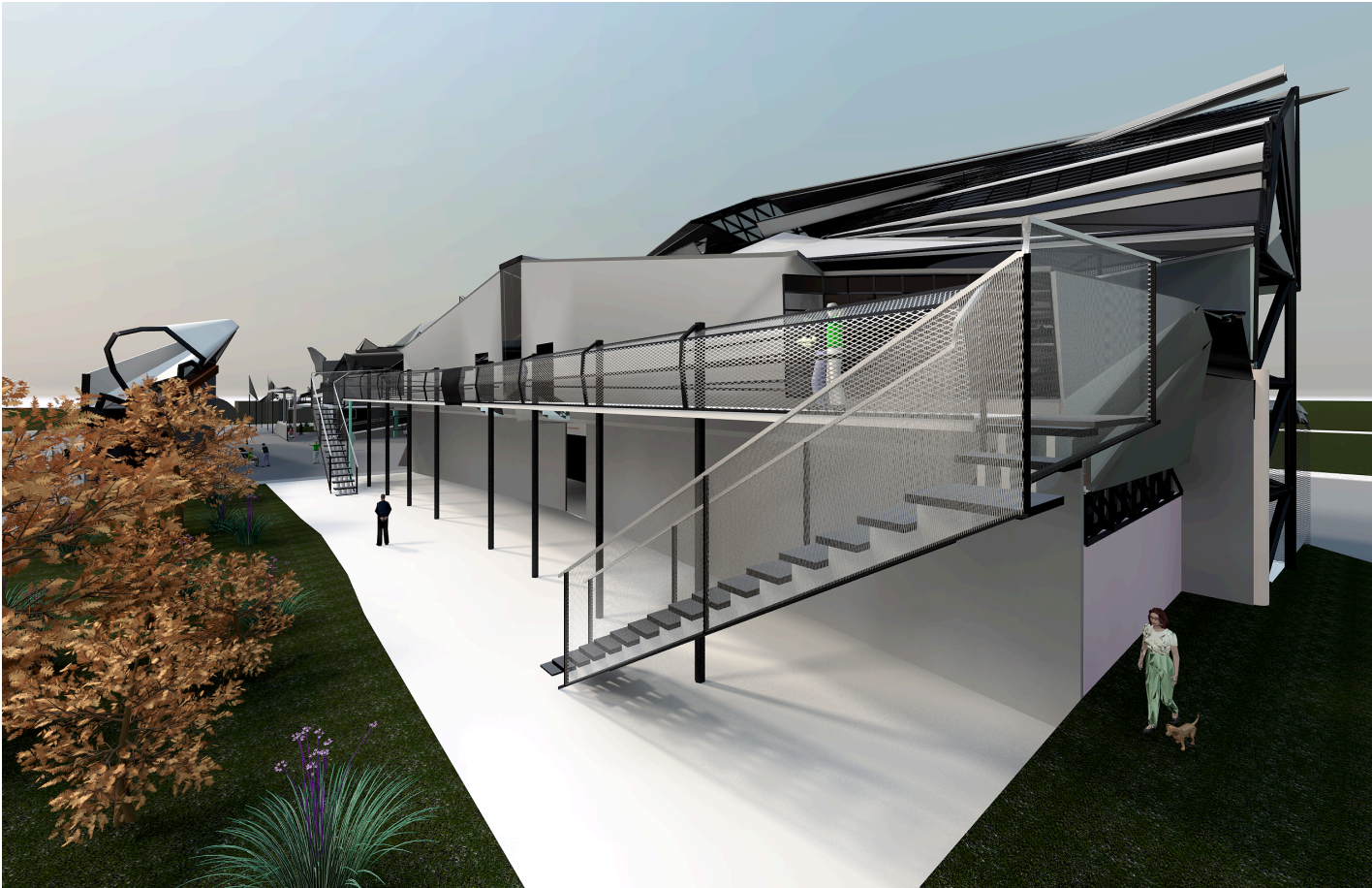
# Final Renders



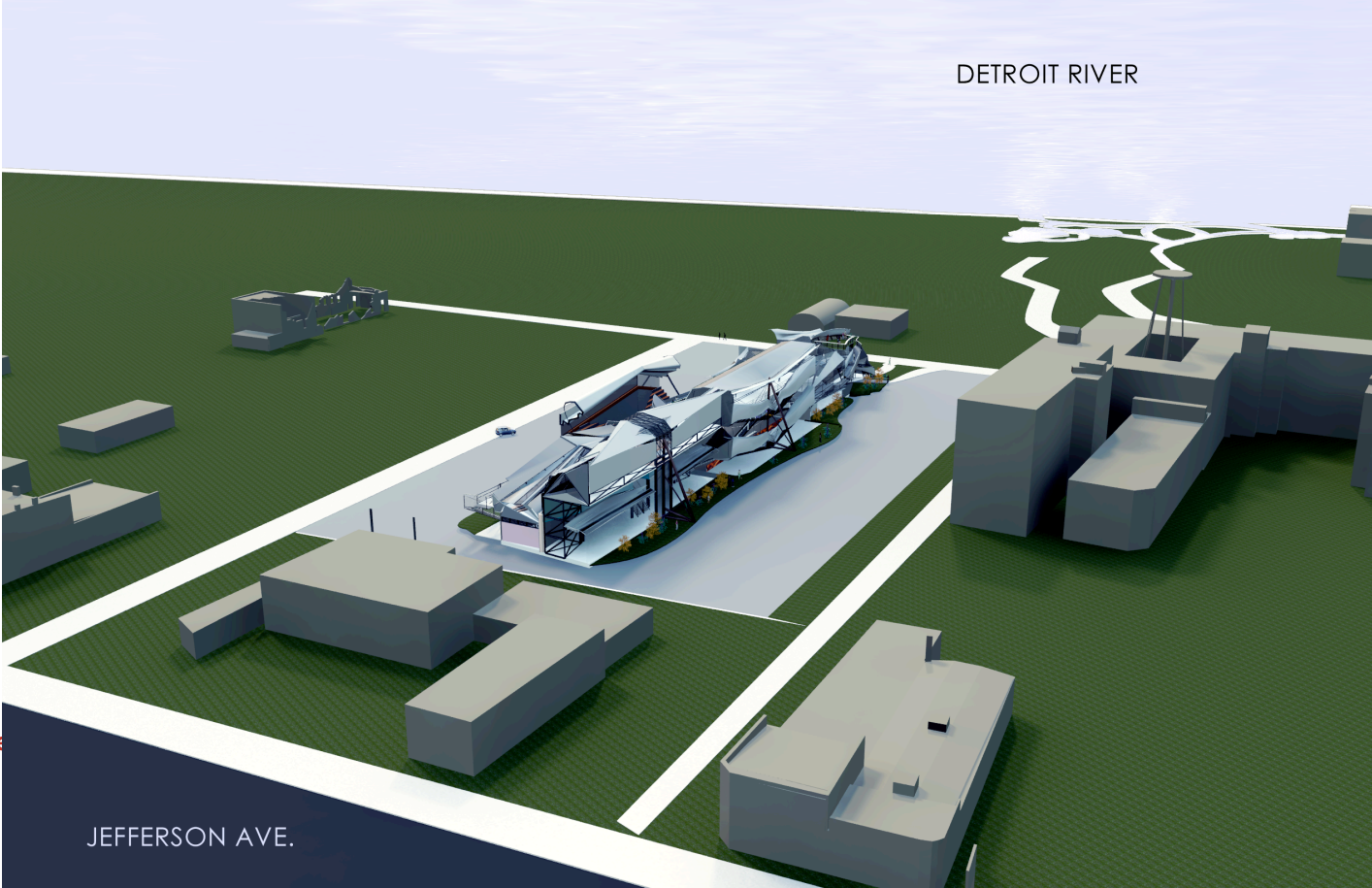
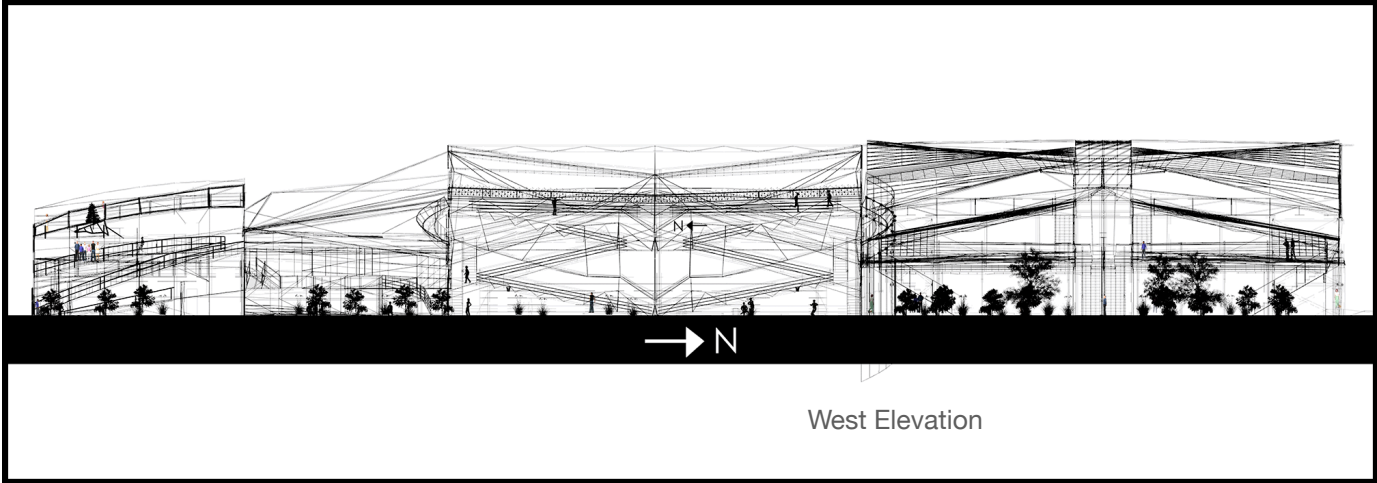
## **Neque aliquam faucibus adipiscing**

Vivamus in. Wisi mattis leo suscipit nec amet, nisl fermentum tempor ac a, augue in eleifend in venenatis, cras sit id

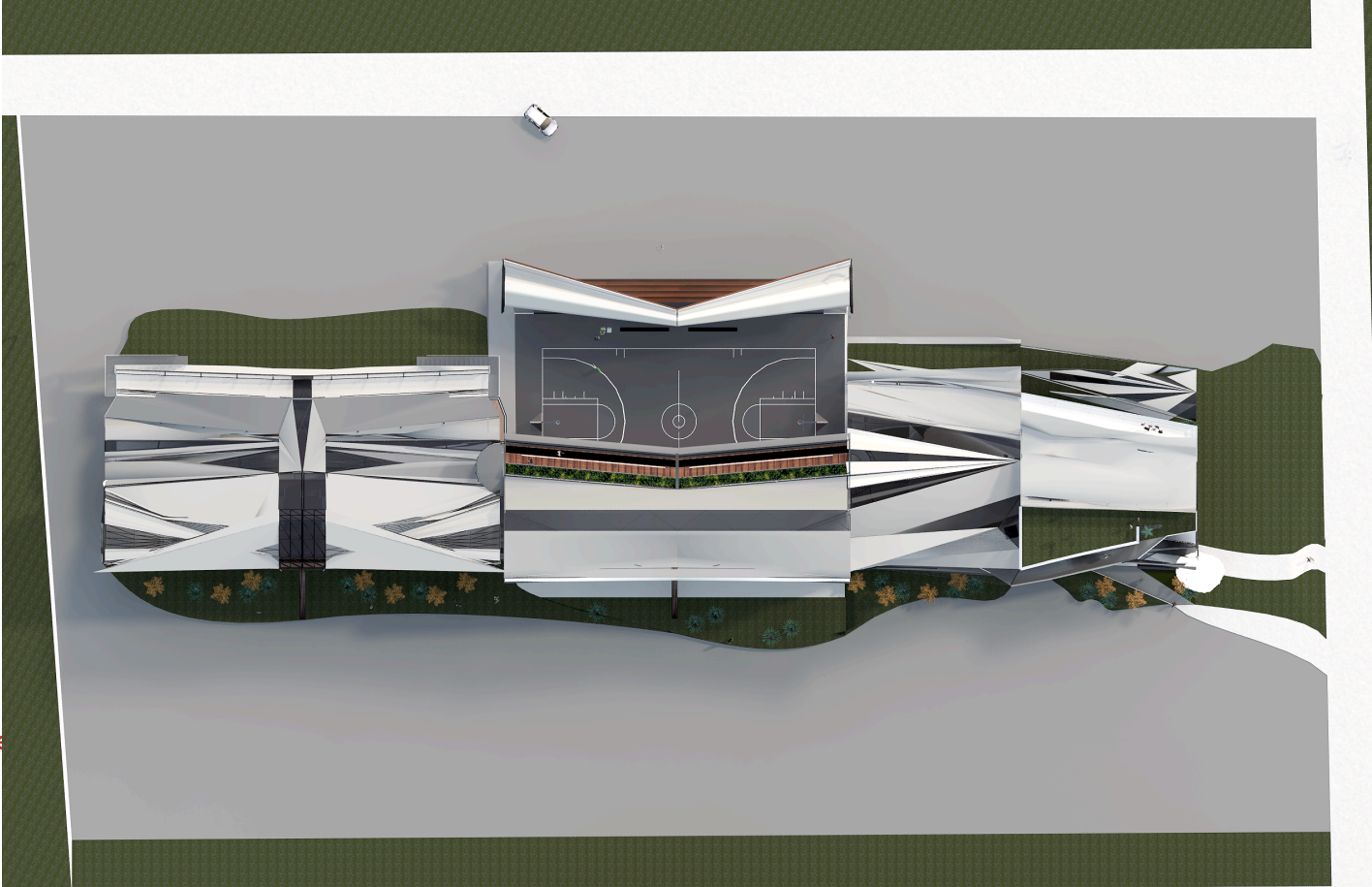
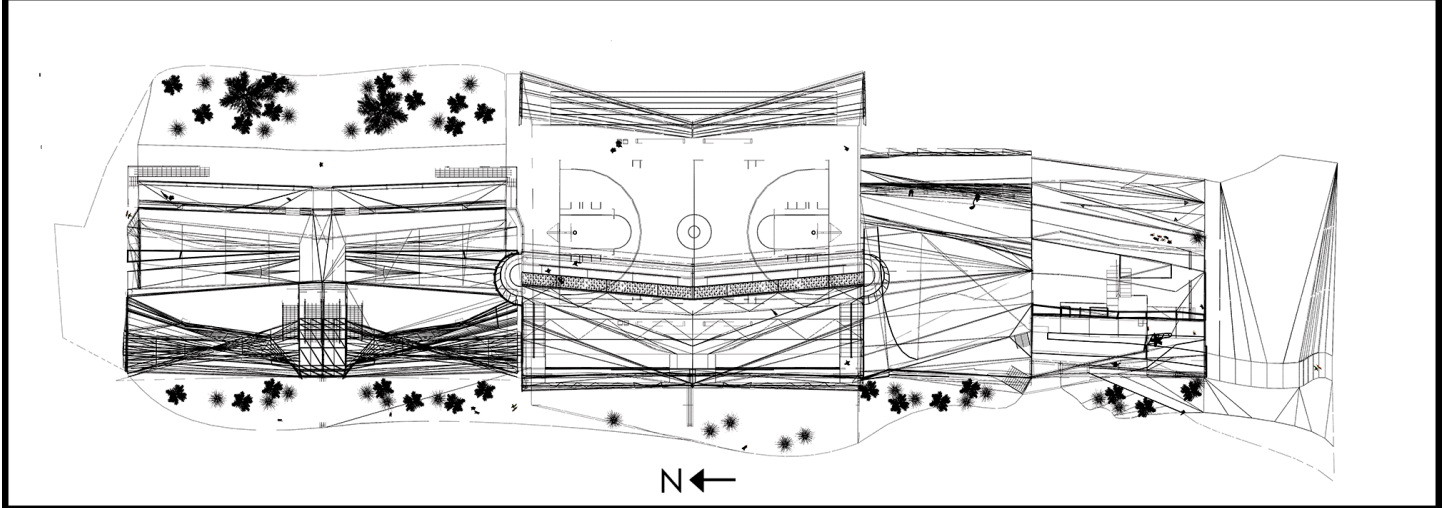
# Final Renders



# Final Renders



# Final Renders





## CONCLUSION

In conclusion the process has presented a strong design tool that can and should be further developed as a disciplined method of process.

Once the processes explained here is completed and can be applied to greater areas of sample. For instance, what are the possibilities of the process includes more than the site itself and is inclusive of the outside community.

Many questions have arrived as this study concludes. These include:

What are other uses the process can consider?

How can the artist continue to be responsive and develop the model further?

Once the model is completed what is the proper way to consider its connection to the ground and sky?

What may become the full potential for this to be a personal prototype of design?

Working in section somehow limited the exterior gradients?

Ways to include more sectional points of reference may hold the answer to this one.

In the end the process developed here holds much promise and inspires for greater investigations. It successfully encourages the artist within the architect to stay rooted in the artistic responsibilities of his professional and creative discipline.



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