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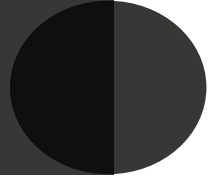
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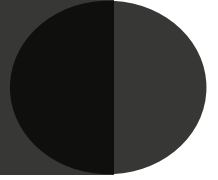
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Are you stressed? What makes us so stressed? With my proposed research I hope to find how we can use the study of human movement through built space and sensory environments to shape an architecture that can help relieve the stresses brought by the modern mode of life. Is it even possible to use architecture to help free the minds of its users to allow them to overcome the many negative affects of stress on the body? To help find the answer to such questions I will be using a multidisciplinary approach focusing mainly on the psychological, biological and social movement of humans through their environments. In the development of my own research I will be using several different forms of participatory observation studies, case studies of relevant architectural projects dealing with movement as well as number of face to face interviews with distinguished members of the many fields connected to human movement. With the use of such research methods I hope to garner further understanding of the many levels of interaction between humans and their built Environment, the psychology of natural human movement as well as the role of light in human spatial cognition, understanding and movement through space. The use of the previously stated research methods will allow me to successfully connect and understand the movement of the human body, which will allow me to more dynamically create an architectural intervention that responds to both the natural movement tendency of humans as well as the many stresses brought by the rushed disconnected lives we live.



Manifesting Movement

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INTRO

“All that is important is this one moment in movement. Make the moment important, vital, and worth living. Do not let it slip away unnoticed and unused.”

— [Martha Graham](#)

Humans are now able to move from place to place faster and more efficient than ever before. Although this rapid form of movement is ideal for the function of businesses and corporations it can cause multiple levels of stress as well as disconnection from the user and his or her environment. This disconnection can be closely related to Karl Marx’s alienation theory discussed in his *Communist Manifesto*. Marx expresses this alienation as the, “systemic result of living in a socially stratified society, because being a mechanistic part of a social class alienates a person from his and her humanity.” This disconnection is also discussed in terms of the craftsman and the object they are creating. In a stratified society the craftsman can lose sight of whom he is creating the object for, which causes him to feel alienated from the very life he is living.

The stresses found in the modern world of today are discussed in CNRS

International Magazine when a freelance writer named, Isabelle Tratner stated, “For some it is a spider’s web, for others, a tsunami. No matter the metaphor, there is one thing you can be sure of: Excessive stress is becoming increasingly present in our lives, both private and public, leaving in its wake an alarming number of bruised, broken, or even crushed lives.”¹ It has been scientifically proven that stress can have many adverse affects on both the body and mind, and with the rapid growth of our society leading to overcrowding and disintegration of personal space, this stress is flourishing uncontrollably, much like a ravenous weed. Physically, stress can have an adverse effect on many of the vital organs found in the Human body. High levels of stress can lead to reduced bone density, rises in blood pressure, increased risk of both heart attacks and diabetes and finally a less productive immune system. Stress can be found in virtually all structures of life regardless of culture and age. However, when considering some of the main stressors in the life of humans there are a few that instantly come to mind: the work place, money issues, educational institutions, social relationships as well as problems with health. One would think that with the expansion of modern technology interventions would be made to help reduce

some of the stresses in our day-to-day lives. However, very little has served successfully in this aspect. The rushed modern mode of life that we have come to accept is not only leading people to have emotional and physical distress in the work place but is also forcing the public to live very efficient, impersonal lives with little connection to the world surrounding them. Are humans put on this Earth to simply live “efficiently”, or are we here to live “well”? Instead of blindly rushing through life in an efficient stressful manor only concerned with the time it takes to get from point A to point B, we should be enjoying and truly experiencing this journey we call life. Moving through changing spaces, using our senses to connect and relate to our environment in more intimate ways.

This Paper addresses the following questions: **How can we use the study of human movement through built space to shape an architecture that can help relieve the stresses brought by the modern mode of life? Is it even possible to use architecture to help free our minds to over come the many negative affects of stress on the body? How can architecture move the body?**

METHODOLOGY

Through implementing a multidisciplinary approach, my research includes the study of psychological, biological and social movement of humans through their environments, especially in public spaces. Several different methodologies are used such as participatory observation studies, case

studies of relevant architectural projects dealing with movement as well as literary reviews relative to the fields of my research. Through these methods, understanding the psychology of natural human movement as well as the role of light in human spatial cognition will be the foundation to create architectural interventions that respond to the natural movement tendencies of humans as well as mitigates the many stresses brought by the rushed disconnected lives we live.

In order to answer the questions posed by my research it is necessary to conduct a number of observational movement experiments. To understand the social circulation and interaction in urban public spaces, I analyzed the pedestrian movement through College Ave. and High St. intersection as well as the newly constructed Armstrong Center. I situated myself in a location hidden or not apparent to those being studied because humans behave and move differently when they know they are being observed. The following tactics allow for more specific and directed observation experiments: record of the walking speed, path of travel, character of motion, group/social connections and the roles gender, age and culture play in shaping the human factors. In addition, I also propose to design a number of physical installations that I would place into an existing interior/exterior context to analyze the influence of architectural forms on the movement patterns of humans.

How can movement manifest space as well as the circulation paths chosen by individuals?

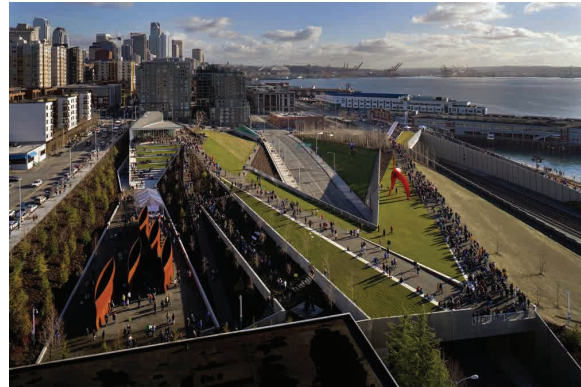
In the short amount of time I have been able to call Oxford, Ohio my home, this city has experienced a number of adverse winter conditions, from the over night winter wonderland snow fall to the extended weeks of extreme cold air temperatures. However, within these somewhat frustrating weather conditions I found the great opportunity for the dynamic study of the movement of humans in an educational landscape. On my morning walks through Oxford I notice the almost magical appearance of movement paths that instead of following the direction of laid sidewalks would veer off into more natural, free flowing paths of circulation to some desired location. This delicate blanket of shimmering pure white covers the entirety of the campus infrastructure creating a blank slate allowing for freedom in expressive movement as well as more direction oriented paths. The crisscrossing, overlapping walking paths created through the alternative chosen paths of students on their rushed movements to class seem to create a form of art work in and of them selves.

Artist Teri Rueb also discusses the magical transformation of a landscape due to winter conditions. She however focuses on a more dense urban context. Rueb discusses this often over looked opportunity when saying, "A wonderful thing happens when it snows – a lot. The spaces of the city are temporarily transformed and the humble pedestrian reigns supreme once again. The steady, silent accumulation of snow, weightless and ephemeral,

stills the echoing canyons of endless traffic and tumult. A hush covers the land that waits now, like a blank slate, to be written upon by so many footfalls and improvised architectures. The cluttered visual space of the city, now unified by an expanse of white evenness, invites us to cross lines, improvise, detour and play in places forbidden or ignored in our everyday lives."ⁱⁱⁱ Rueb labels this wondering form of movement across space as "exploratory movement", and I instantly saw its vital importance in the ideals of such movement in my architectural intervention. I have observed we travel in our most natural form when given a "blank slate" of travel without any directors or influence from outside determinants. Rueb uses technology and human movement to create new forms of spatial interaction and cognition. In her research she has developed a number of interactive installations that test the varying ways humans connect and respond to their changing environments. I found one of particularly importance named, Trace (1996-1999). Rueb explains this project by saying; "The project was an interactive sound installation along a network of trails in the Canadian Rockies. Visitors would hike with specially equipped knapsacks that contained a laptop and GPS. As they hiked, sound recordings would play back automatically in response to their movement through specific locations along the trail. Sounds were made as memorials and contributed to this sonic cemetery where, instead of visible monuments, visitors would weave their way through a series of sounds that punctuated the landscape, itself a memorial record of natural history."ⁱⁱⁱ I found it exciting to see that an object such as a cell phone, which is now culturally infamous for the disconnection of the public from their environment, could be adaptively reused to

allow humans to have new profound relationships with their physical and social habitat.

Rueb's study of the movement of humans through a wondering natural space can also be directly related to how humans move through built public spaces. A project that cannot be overlooked when considering the social and physical connection between humans and built public space is the Olympic Sculptural Park found in Seattle. This new look into the methodologies of urban parks serves as an ideal architectural precedent for the study of human movement, connection and stress relieving recreation. This urban project is situated on Seattle's last undeveloped waterfront property, one of the reasons for this could have been that the polluted soil of this once industrial site proved to be too difficult or hazardous to build on. A notable feature of this urban architectural intervention is the connection created between three separate and distinctive sites with a single flowing Z shaped walkable green space. Although the circulation layout of this project is much more directed than the forested landscape used in Rueb's studies it still allows for individuals to move freely from one place to another based on both the architectural forms as well as the experiences created along the movement paths. The project includes an 18,000-square-foot exhibition pavilion with protruding extensions designed to create desired views of the picturesque city of Seattle. "The first stretch crosses a highway, offering views of the Olympic Mountains; the second crosses the train tracks, offering views of the city and port; and the last descends to the water, opening views of the newly created beach. This



pedestrian landform now allows free movement between the city's urban center and the restored beaches at the waterfront."^{iv} It has been proven that art and nature can both be used to help relieve stress in humans all around the world. Therefore the inclusion of both sculptural art as well as a connection to nature allows for the mental and physical reduction of stress from those using this space.

The second project focused on the movement of people and their connection to landscape and architecture is an urban development project named, River Circle, which is located in the city of St. Louis Missouri and designed by architects, Wiess and Manfredi. This particular architectural intervention reconnects the city to the park and the park to the adjacent waterway, while also framing the Mississippi River as its central organizing member. The monumental civic axis of St. Louis is extended over the highway to connect the city to the park. This site is shaped and dissected by the many forms of transportation infrastructure developed over time in this industrial area. However, the designers did not see these barriers created by the existing transportation systems as a complication but rather an opportunity to dynamically form new social, physical and

environmental connections for this iconic city. The development proposed by Weiss and Manfredi, utilize existing and planned trails/greenways as well as a number of varying programs to help enhance the multi faceted identities of the park. A woman named Sara Monther discusses this particular project through saying, "Full Circle creates a linked sequence of public settings that weave together uses to create an expanded park identity. Linked Landmarks create a bold connection from Kiener Plaza and the Old Courthouse across a land bridge and to an expanded Museum of Westward Expansion. Cultural Canopies connects the renewed Memorial Grounds to an active cultural hub and parking garage that links through Eads Bridge to Laclede's Landing."^v The project also manifests a sense of wellness and connection to nature through including a number of recreational amenities, such as, a hub for bicycle rentals, mini golf, basket ball courts, skateboard parks as well as a new man made lake for kayaking. This project's use of urban landscape, nature, recreation and infrastructure as independent yet interconnected members allow this once underused site to become a new building ideology that re-imagines the characteristics and capabilities of a park.

In discussing the interaction between people and their surroundings one must take into account how a particular space performs. A public space should not only perform the basic needs of its users but also change and transform to meet the new ever-changing complexities of the modern world. When creating a public realm that can both respond or cater to the changing needs of the public one cannot over look the new advances in performative public spaces. One project that

dynamically enables the public's interaction with built space is a proposed development for the city of Zaragoza called, The Digital Mile. The authors, Dennis Frenchman and Francisca Rojas described the intent of this project through stating, "This project aims to incorporate digital media into everyday aspects of the public realm, making places that respond to their users, change to accommodate multiple activities, provide stories, information and services, and hopefully, become deeply meaningful to a rich array of people in Zaragoza who will live and learn within them." Although there are already very basic uses of technology in the public realm such as, large screens displaying useful information or even the simple inclusion of a wifi server for public use. However this particular project aims to connect and intertwine multiple levels of technological media and built form in ways never before thought possible. For example, the designers of the Digital Mile wish to create exclusively adaptive spaces that can change with the given time of the day and therefore the particular activities that are planned for these given spaces. Frenchman and Rojas, described such a circumstance by saying, "Thus, for example, on a Saturday afternoon in the summer, strollers and soccer players may use a park for recreation, while in the evening it may be transformed into an outdoor theater with screens and sound. Enabling users to influence, even shape, these changes creates a more dynamic, participatory, "open-source" environment."^{vi} However it takes much more than a flexible, transformative landscape to create a successful public space. There are many layers of social, functional and cultural context

that must be taken into consideration in developing such a space. One must take into account the history and community development of an urban landscape when deciding how to seamlessly knit a project into the existing fabric. The components of a “great” public space were discussed by Rojas and Frenchman when they declared, “Throughout history the public realm has combined physical form with mediums of expression. Great public space is a form of theater that needs a good stage set, that is human scaled and comfortable, surrounded by supportive activities and architectural enclosures. Great public spaces also enable personal and public communications and exchange of goods, information, emotions and ideas—and therefore become imbued with meaning for the people who claim them, and for the cities in which they are located.”^{vii} This project includes multiple forms of passive recreation such as, sports fields, children’s playgrounds, performance/concert venues, a museum, a community center and school. The inclusion of such programs will allow for the public to foster a more in-depth association with the given urban landscape. One of the most fascinating components of this project is the interactive water wall that flows throughout this performative landscape. Like a thousand foot serpent, this wall of water slithers and dives throughout this new urban space. It can display patterns or even messages and also change in form due to its interaction with nearby users.

How can architecture direct movement through space?

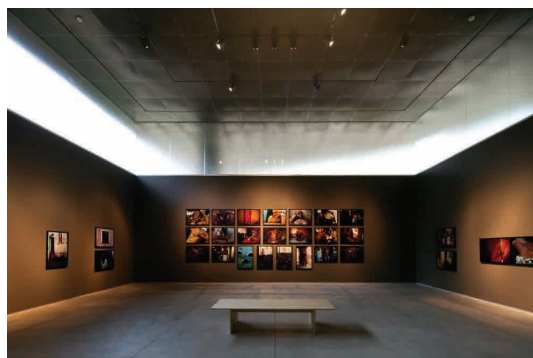
When looking at the many ways architecture can shape movement and spatial

understanding there are several that instantly come to mind. These can be physical signage, compression members like hallways, changes in elevation like ramps and finally changes in illumination. This use of light to shape space is discussed in *Architectural Lighting Design, Third edition*. The author Gary Steefy discussed the design of architectural lighting and its implication on emotions and movement through designed spaces by delineating the “five layers of light”. The first of which and most relevant to my own research is the use of light to choreograph and experience. This architectural use of light is referred to as “phototropism” which is the use of light to lead people, create goals and create subconscious forms of way finding. I see the possibility of using such ideals in reimagining the movement and connection of human in the built environments. The second layer of light is used to define mood and ambience. This can include both the use of lighting level as well as color to manifest certain emotions for the users of the space. In addition, light is used to accent objects to help emphasize importance as well as understanding, to reveal architectural forms and space and finally, light allows users to complete specific tasks. The authors use a number of research methods to help present and analyze the many layers of light and their implications when applied in the creation of environments. It uses both observational studies, animation software as well as several detailed case studies of built projects.

I find great promise in using light to choreograph and shape space and have also found a number of precedences that have

successfully used light to move people as well as create space. One of these projects is The Miguel Rio Branco Gallery in Brazil (2010). The designers Alexandre Brasil, André Luiz Prado, Bruno Santa Cecília, Carlos Alberto Maciel and Paula Zasnicoff, who designed the Miguel Rio Branco Gallery, chose to nestle this dynamic gallery space into the sloping hillside of this mountainous Brazilian landscape. At first glance this structure appears to be a steel wrapped artifact wedged into the historically rich Brazilian sod. However, this gallery pavilion reshapes the topography of the site in such a way as to hide the majority of the building mass from exterior viewers. An entrance area is created in a half level space with the two main exhibition spaces. The interior space of the gallery was treated as a continuation of the exterior surface flowing into the depths of these exhibition spaces. The 5 layers of light are both evident and vital to the movement and success of this space. The entrance uses a low cave like opening with a mainly low level of light. In this case the designers use light to both accents the construction of the space as well as create visual contrast within the space, which help direct users through the space. The author of an article found on the Arqitetos Associados website, discusses this space through saying, "The covered plaza configures a transitional space that organizes flows, houses facilities and allows visual interaction with the underground square room,"^{viii} The disconnection of the ceiling from the wall members allows natural light to filter in around the perimeter of the gallery space, which in this case subconsciously directs the

viewer around the perimeter of this exhibition space, creating a directed experience. The use of this clerestory natural light also created a calming serene mood within the space, which



them selves into the works being exhibited. The designers of this project also decided to reduce the presence of traditional construction features like, doors, walls, roofs and windows, which enforced the flexible characteristic of this carefully formed gallery volume. The use of light as well as art in this project depicts a successful intervention in relieving the stresses of the viewers of this exhibition space. The use of light to create mood in this structure allows for a calming cool environment, which is ideal in relieving stress.

When discussing the connection of the body to its environment humans are limited to five core senses or ways of experiencing and understanding space. These include the sense of touch, sight, smell, hearing and taste. The previously discussed project in Brazil focuses only on the sense of sight through using multiple sources and levels of light to create an emotional experience for the viewer. This differs greatly from how a designer by the name of Olafur Eliasson has been pushing the envelope of the sensory experience to near

breaking point. Eliason is a revolutionary designer who seamlessly fuses forms of art, science and the natural world to create unparalleled sensory experiences for viewers. His works question the conventional forms of viewing and experiencing art through using familiar human experiences such as sounds, smells, textures, moisture, temperature and many imaginative uses of light.

In relation to my research on slowing down the rushed lives of humans to reconnect them to their environment, I found one of Eliason's exhibitions to be especially relevant. His exhibition found at the San Francisco Museum of Modern Art cleverly named, "Take Your Time" is a type of installation art that uses a wide range of medium to create multisensory immersive environments, forcing the viewer to slowdown and truly see and experience their surroundings. The first of these environments is a project titled, "Room for One Color". This particular installation much as the name suggests is a single room space that is cast in its entirety with a warm yellow hue. Eliason describes the intent behind this design through stating, "In my work Room for one color, we actually see only one color. The wavelengths of light from the lamps in the space are in the yellow area of the visible spectrum, resulting in the fact that all colors in this room submit to the yellow domain. Like a black and white image with shades of gray in between, this yellow space would organize a green sweater and purple shoes into the monochrome field of endless shades between yellow and black. As our brain has to handle or digest less visual information due to the lack of other colors, we

feel that we see details more easily than usual. This means that our eyes can detect more shades of gray in a black and white photograph than shades of color in a color image. We have, in other words, in this monochrome space, a sort of hypervision that gives us the feeling of having a particularly sharp detection of the space and people around us."

One of the most energetic pieces in the exhibition and my personal favorite is the *One-way Colour Tunnel (2007)*, this installation concerns movement in the form of a walk-through structure built on the Museum's thirty-eight-foot pedestrian sky bridge. This vibrant rainbow form is constructed with stainless steel, color-effect



acrylic, and acrylic mirrors, which manifest the dream like reflected qualities of this work. A museum curator Madeleine Grynsztejn, discussed her own experience of this project through stating, "These devices contained mirrors and colored objects and when held to the light and turned, an evolving symmetrical pattern would emerge. Within the *One-way Colour Tunnel*, it is as if you have walked into a

kaleidoscope. Ambient light seamlessly meshes with the object, and the pattern alters with your movement. This sensation of natural immersion feels more organic than computer-assisted virtual reality, although no less effective.”^x

Through conducting personal observations of how the public move and navigate through the public realm, I have gained further insight on the distinct movement patterns of humans through both built and natural environments. For my first investigation I chose to observe the public’s movement through a small, slower paced urban context, specifically uptown Oxford, Ohio. To remain somewhat incognito I situated myself at a coffee shop at the intersection of High and Beech Street. After ordering a coffee and settling in, I let the glorified people watching begin. I first focused on how gender could be a determinant in individual’s movement patterns. I quickly found that when traveling unaccompanied, men generally travel at a faster pace than females. However when a man was accompanied by a female companion, the men would manipulate their normal walking speed in order to match the woman’s pace. I also found that when two males walked along side one another they would actually speed up, in an almost competitive fashion. Whereas when two women walked beside one another they seemed to both slow their walking speeds to accommodate for the other. It quickly became apparent that gender does indeed play a roll in the walking speeds and patterns of humans, especially in an urban context. I also found that grouping plays a

major role in how pedestrians travel and navigate public spaces. When beginning my observations I speculated that most pedestrians would be traveling solo or somewhat secluded from others. I quickly realized that this was incorrect and in most cases individuals would be traveling in groups of twos and threes. Even if pedestrians were complete strangers they seemed to form natural groupings often following the same pace and similar paths to the individuals ahead of them. I also found the maneuvers made by individuals to avoid collisions with others as being very important and relevant. I observed that when an individual finds themselves in the same path of another moving in opposite directions, they have three choices. One move to the right, two move to the left and three stop walking altogether and simply move to the side. In almost all circumstances regardless of gender, age or any other variable the individuals would move slightly to



the right and continue walking. This tendency to go right when challenged by another pedestrian could be manifested from many different factors. The individual could have created this preference through the process of trial and error, finding that going right has

created more preferable outcomes than other movement options. Or could social constraints created by the normal traffic rules of the United States subconsciously shape how we navigate even when we are not in an automobile.

After closely observing and analyzing the circulation of pedestrians through urban conditions, I have found that there is a distinct set of patterns in how people navigate and travel through their environments. These patterns are not only vital in understanding the intimacy of human's interaction with their environment, but I feel they can also be used to predict future patterns as well as create form and space to cater to such patterns. One piece of modern technology seems to be especially relevant when it comes to human movement patterns and paths in the public realm, and this is Memory Pavement. Rojas and Frenchman described this technology in their discussion of the Digital Mile through saying, "Memory pavement uses digitally responsive ground surfacing to record footfalls of pedestrians, displaying how pathways are reinforced by multiple trips. Luminescence accretes into lines and spaces: one passage would be invisible; multiple passages would be rewarded, encouraging pedestrians to examine pathways and try new ones." ^x The paths created on this Memory Pavement remind me of the paths I observed during the snowy conditions around Oxford Ohio. In many cases they also serve very similar purposes. The paths created on both snow-covered ground and Memory pavement are created through the desire for a more direct or expedient path. On both surfaces these displayed paths can either urge

pedestrians to stay on the path most frequently traveled or diverge from the path to create new and more exciting circulation lines.

Through the developing process of my research I understand that human movement through space has implications in the creation of an architecture. In turn, architecture can promote natural human movement through various strategies such as light placement, color, and light scale. Within this study, the purpose for specific lighting design is to relieve the stress of the rushed day to day lives of its users. The implementation of what I learned in my personal interviews is without a doubt vital in the advancement of my proposed experiments. The use of both observational studies in existing contexts and 3D modeling software is ideal in creating a well-rounded approach to the analysis of human movement. From the analysis of the selected case studies I have found new possibilities and understandings of the design ideologies of urban public spaces such as parks like that of the River Circle project of St. Louis and Olympic Sculpture park of Seattle. I have also found the importance of using senses other than simply sight for the creation of "great" performative spaces that can truly immerse the viewers to allow them to create more intimate relationships with the spaces they circulate through. The analysis of the installations created by both Teri Rueb and Olafur Eliasson has given me a more conceptual understanding of the process of creating sensory environments and their adverse affects they can have on differing individuals and movement. The use of

technology like that of the Memory Pavement and Water wall creates new unforeseen possibilities for combining technology with the natural elements of water and light to facilitate more human and environmental interaction. The previously stated findings will certainly be vital in the production of an architectural intervention that will utilize the

human senses, built form and the natural environment to both manifest movement while also relaxing the mind of the viewer.

“Stress, when ignored, can lead to dysfunction, malfunction and disease. But, when optimally managed, stress can be the energy that moves us to increased productivity and optimal health.”^{xi}

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(Figure 1.) (Figure 2.)

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(Figure 3.)

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(Figure 4.)

Kuhn, Katharine, (2nd place winner, [BetterPhoto February contest](#)) Sculpture by Richard Serra, titled "Wake", 14' 9" tall

(Figure 5.)

Kottamasu, Rajesh, Memory Pavement, Zaragoza's Digital Mile: Place-Making in a New Public Realm, <http://www.interactivearchitecture.org/zaragoza-digital-mile.html>

(figure 6.)

One way Colour Tunnel, Posted on November 8, 2013, <http://lvaapublic.com/2013/11/08/november-8th-2013-olafur-eliasson-one-way-color-tunnel/>

ⁱ CNRS international Magazine, Stress, the Bane of Modern Life, <http://www2.cnrs.fr/en/1070.htm>

ⁱⁱ Rueb, Teri, Syncopated space – wireless media shaping human movement and social interaction, Vodafone Group, 2004, pg. 2, <http://www.umbc.edu/~rueb>

ⁱⁱⁱ Rueb, Teri, Syncopated space – wireless media shaping human movement and social interaction, Vodafone Group, 2004, pg. 3, <http://www.umbc.edu/~rueb>

^{iv} **Minner, Kelly**. "Olympic Sculpture Park / Weiss Manfredi" 06 Jan 2011. ArchDaily. Accessed 16 Mar 2014. <<http://www.archdaily.com/?p=101836>>

^v **Monther, Sara**, Full Circle: St. Louis City + Arch + River, <http://openbuildings.com/buildings/full-circle-st-louis-city-arch-river-profile-40985>, date accessed, May 1, 2014

^{vi} **Frenchman, Dennis, Rojas, Francisa**, Zaragoza's Digital Mile: Place-Making in a New Public Realm, <http://www.interactivearchitecture.org/zaragoza-digital-mile.html>

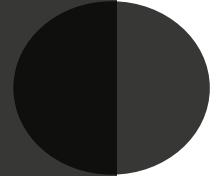
^{vii} **Frenchman, Dennis, Rojas, Francisa**, Zaragoza's Digital Mile: Place-Making in a New Public Realm, <http://www.interactivearchitecture.org/zaragoza-digital-mile.html>

^{viii} Miguel Rio Branco Gallery / Arquitectos Asociados" 25 Oct 2011. ArchDaily. Accessed 17 Mar 2014. <<http://www.archdaily.com/?p=178359>>

^{ix} **Grynsztejn, Madeleine**, Curator, San Francisco Museum of Modern Art Exhibition, Catalogue, edited by Madeleine Grynsztejn, Thames & Hudson, London, 2007, 272 pp., illus. 200 col. Trade: \$50, ISBN:10: 0500093407, ISBN:13: 978-0500093405.

^x **Frenchman, Dennis, Rojas, Francisa**, Zaragoza's Digital Mile: Place-Making in a New Public Realm, <http://www.interactivearchitecture.org/zaragoza-digital-mile.html>

^{xi} **The Chicago Stress Relief Center Inc.**, Are You Stressed?, <http://stressreliefcenter.com/csrc/are-you-stressed/>



POST FALL PRESENTATION COMMENTS

After completion of my fall Written thesis presentation, all comments recieved were positive, helpful and vital to the development of my my thesis design proposal. The oThe jurors seemed to be truthfully excited in how sensory spaces as well as a number of other architectural principles can be utilized to create visceral and interactive environments. With the feed-back received from the supportive group of joururs, I fostered the tools necessary to push my theoretical architectural intervention into the endearing and dynamic world of architectural form.

SITE ANALYSIS

After choosing the downtown urban context of Indianapolis, IN as the ideal site for my proposed architectural intervention I began to carefully analyze the alleyway systems found in this urban context. Each alley quickly presented its own particular character, or personality there for they must treated as such. I found particular interest in a series of alleyways that frame the very center of the downtown context. Due to a necessity of utility and vehicle travel I selected three particular alleyways for the interactive architecture I had been researching.

Design Process

After distinguishing the particular alleyways I planed to develop, I began to use their particular character and experience to develop thoughtful environments that would help reconnect

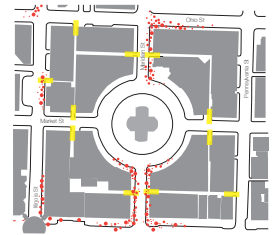
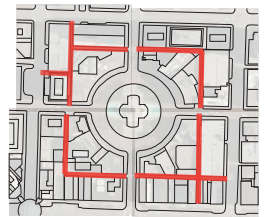
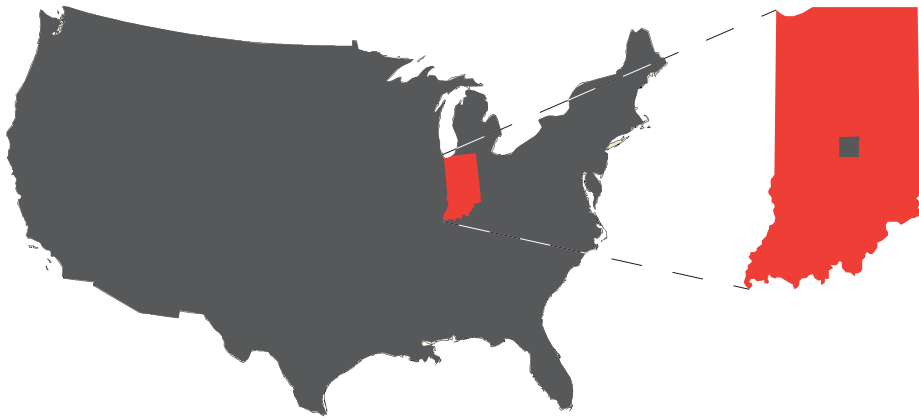
society to the built environment. I then proceeded to develop a wide array of design iterations, all focused on connecting and uplifting viewers. The First alley named the Alley of light, served as an ideal laboratory for testing ways of using light to connect and move people, due to its existing almost magical light conditions. After further development and a number of both physical and digital models, I began to create spaces that were thoughtful in their manifestation and experience. The second alley was termed the Alley of Meditation, once again due to the inherent characteristics of this particular alley. I continued to mold the changing environments of these three proposed alleys to near breaking point, leading to the designs proposed by my research, design process, and dreams.

SITE ANALYSIS



The development of my graduate thesis has led me to the Beautiful city of Indianapolis. Although Indianapolis is somewhat small when compared to urban giants like that of Chicago or New York, it still serves as rushed, stressful place to live. This can be due to a number of factors such as, Cost of living (its Expensive), Heavy traffic created by all the commuters due effects of (urban sprawl), homelessness (job security), and high crime rates.

Due to the placement of the existing public nodes as well as concentration of the business district, I have now moved to the heart of the city where the true stress lies. I will nestle my stress relieving architecture directly into the chaotic urban landscape using the once dark, grungy alleys as places of refuge.

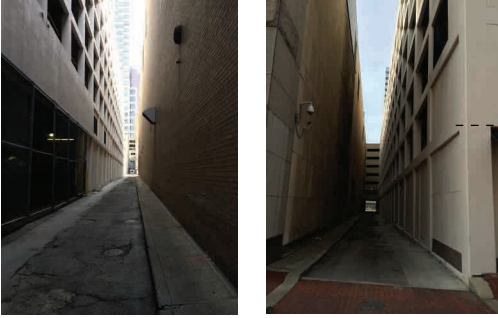


Proposed Issue

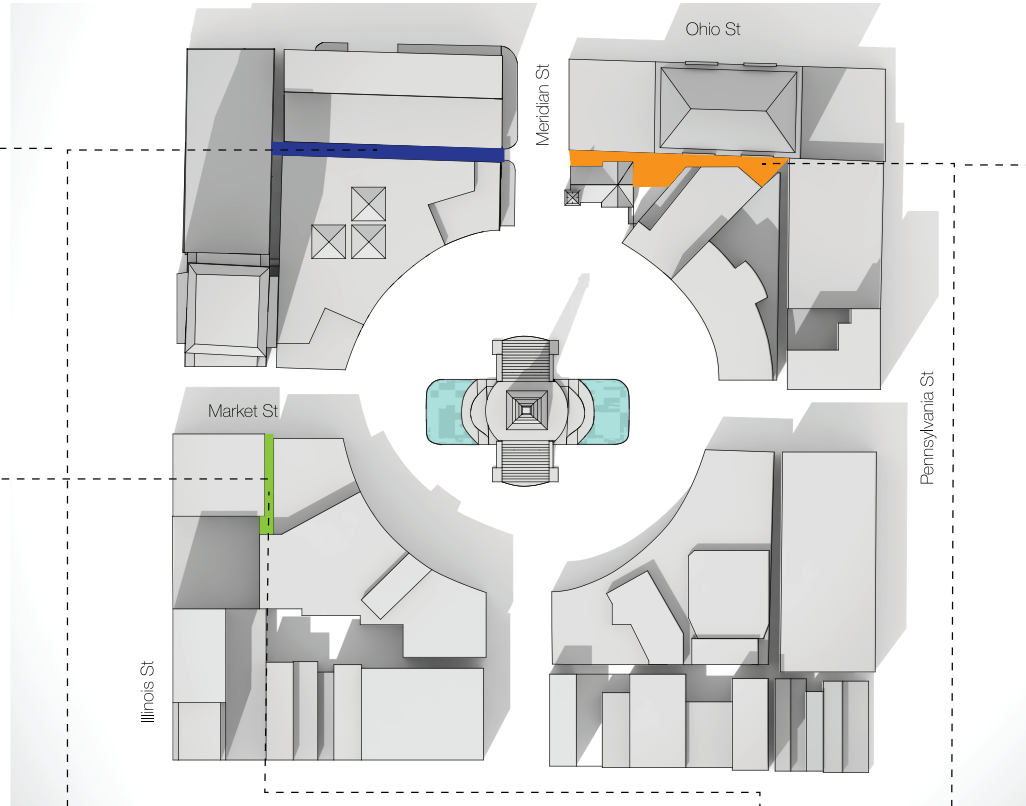
Humans are now able to move from place to place faster and more efficient than ever before. Although this rapid form of movement is ideal for the function of businesses and corporations it can cause multiple levels of **disconnection** from the built and social environment.



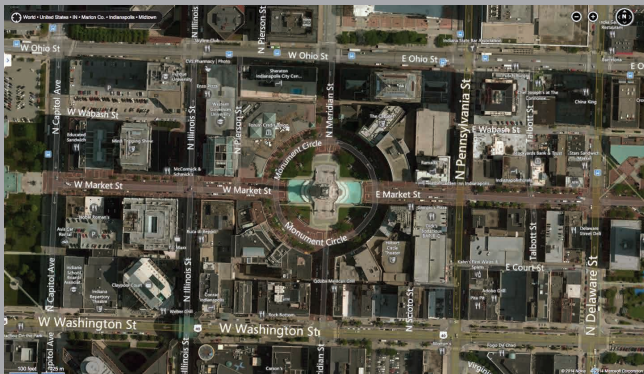
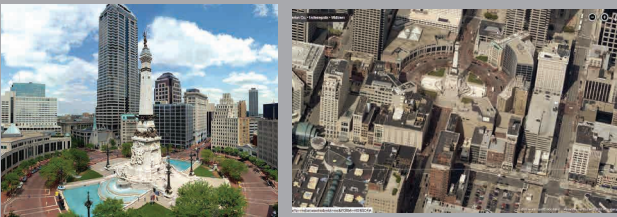
3. Alley of Senses



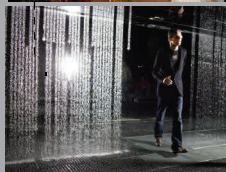
2. Alley of Meditation



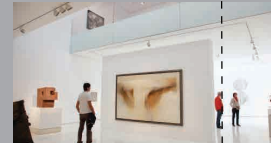
Views Of Down Town Indianapolis



Alley of Senses



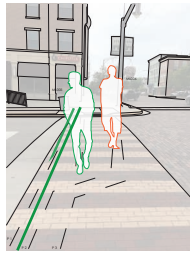
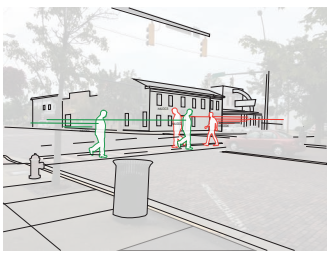
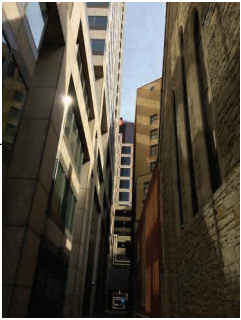
Alley of Light



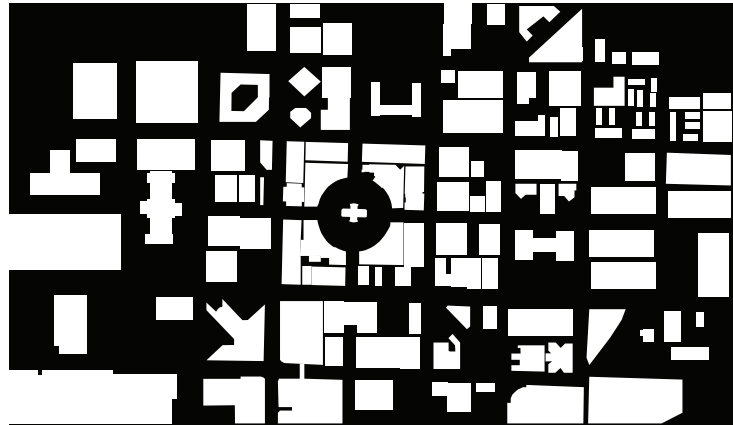
Alley of Meditation



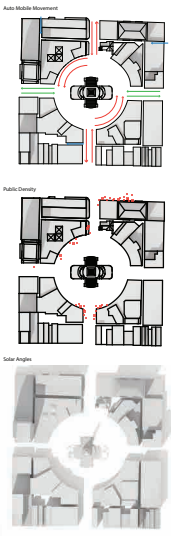
Alley of Light



Site Map



Site Diagrams



Indianapolis Farmers Market

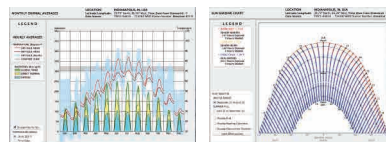
The Original Farmers' Market

Perfectly situated in the heart of the Midwest, Indianapolis is ripe with farmers offering outstanding produce, dairy products, meats and more! And we bring them straight to you with the Original Farmers' Market at the Indianapolis City Market.

From fruits and vegetables and meats and cheeses, to baked goods and unique spices and herbs, you can find in-season, fresh foods that have been selected at their peak. As you fill your basket with good-tasting, healthy foods, you'll support the local growers dedicated to providing you with the freshest foods available.



Negative Space

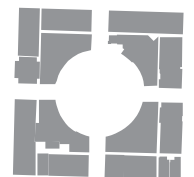
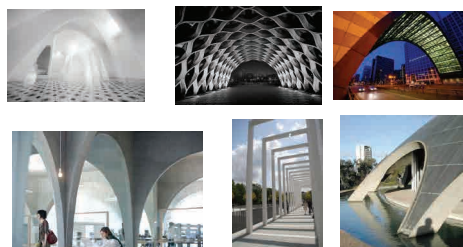


FF ART TOUR EVENTS & MAP

The IDADA First Friday Art Tour is constantly changing and expanding. It is a self-guided tour around the Indianapolis downtown area that is free and open to the public. Most venues open their doors around 6:00pm and close around 9:00pm, or later in some locations. There is no specific start location or end location—people are free to roam to whichever galleries/studios they want to visit!



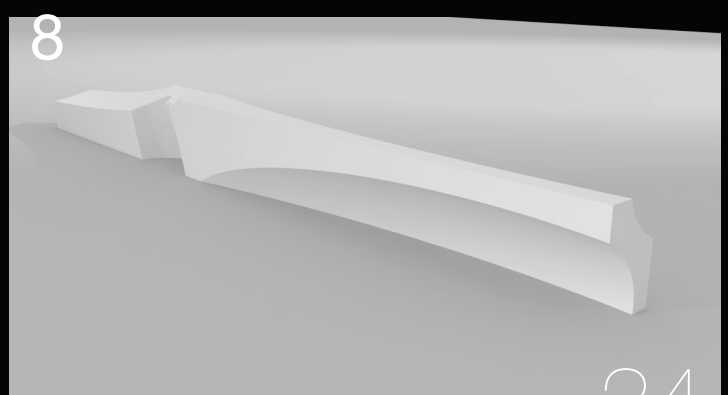
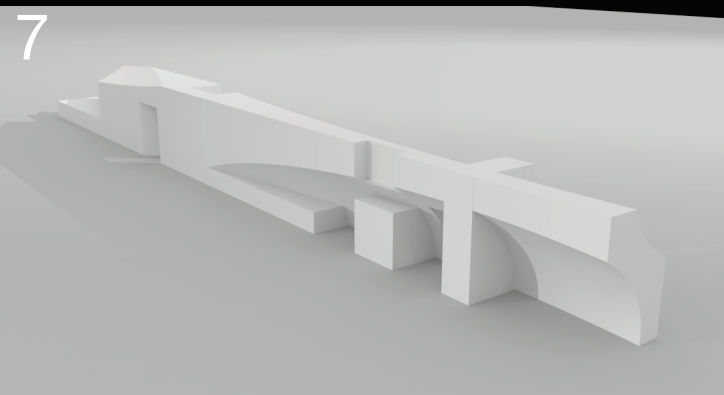
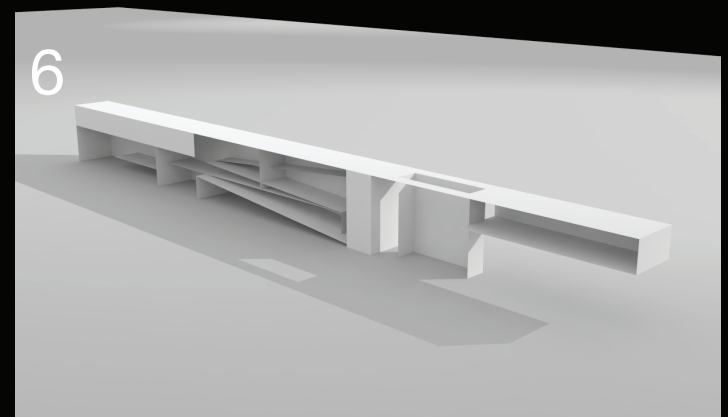
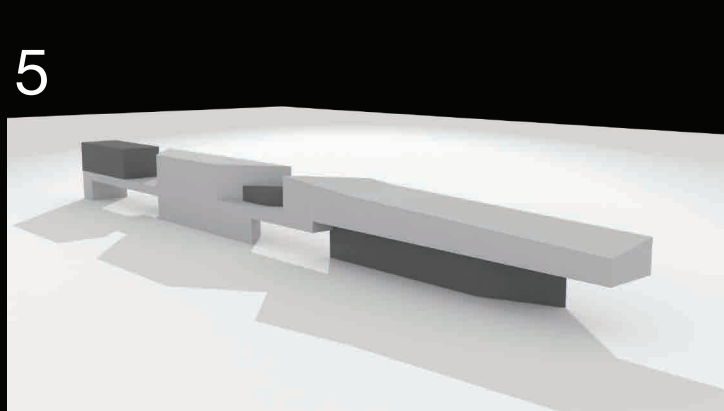
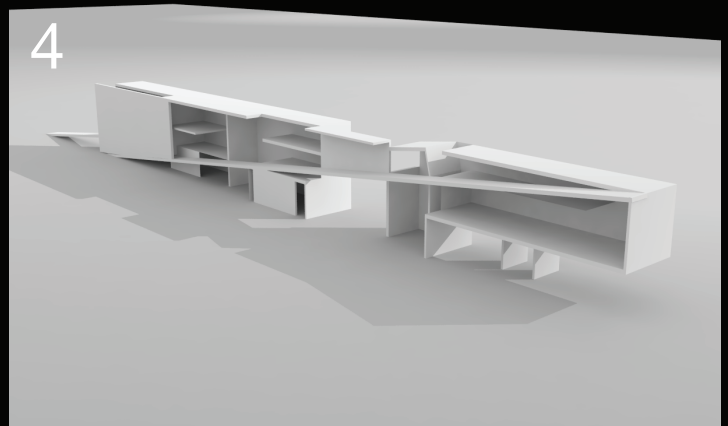
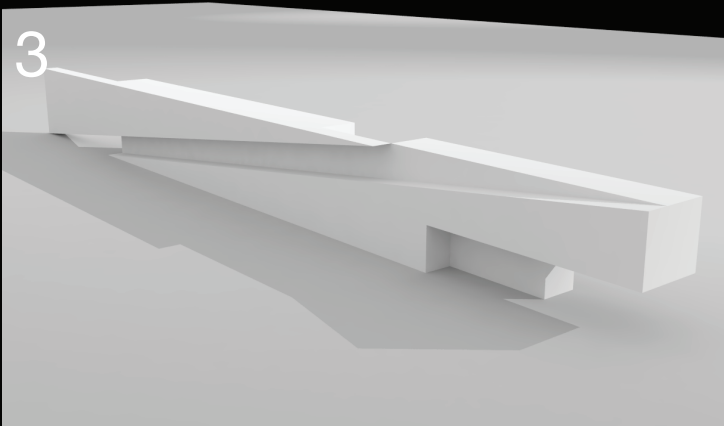
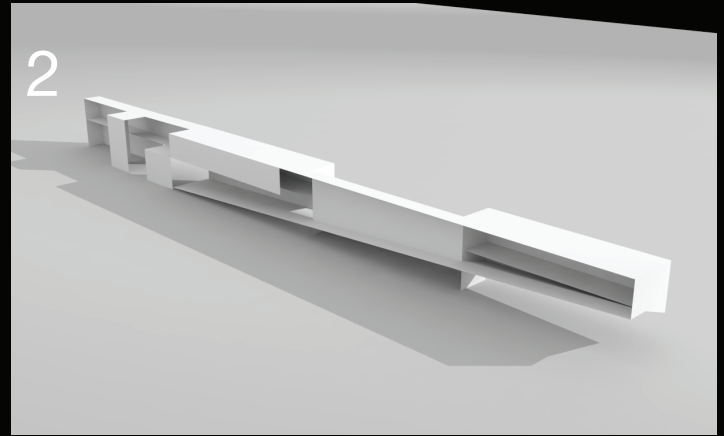
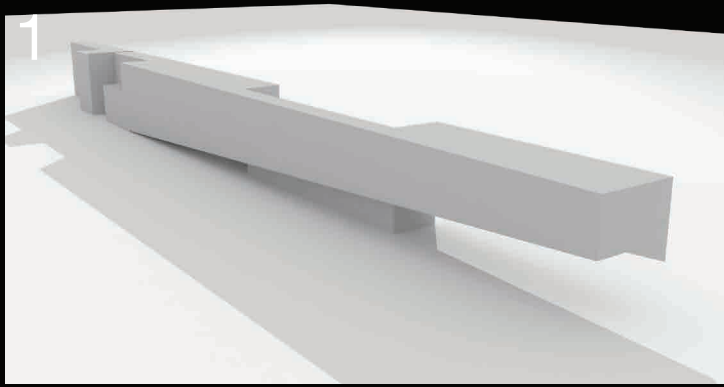
Entry Elements



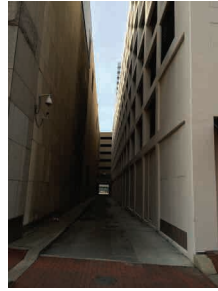
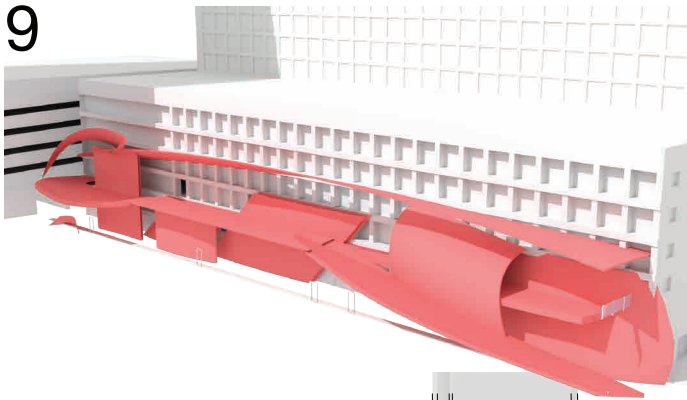
+ SITE PHOTOS



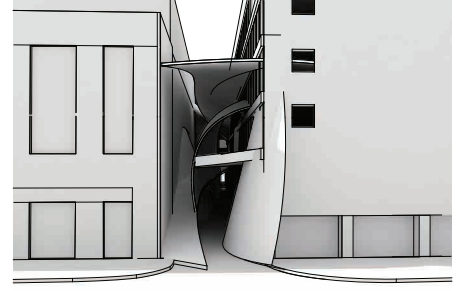




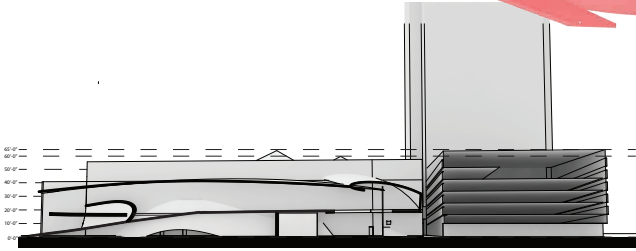
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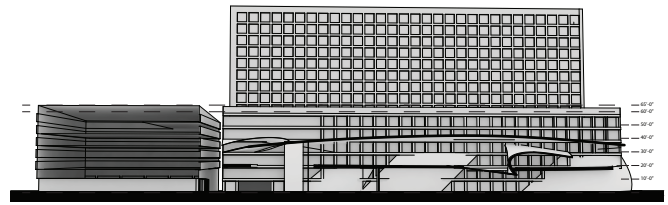
Alleyway 001: Existing context



Iteration 2.0 Elevation



Iteration 1: Section 1



Iteration 1: Section 2

Process Diagrams

1.



2.



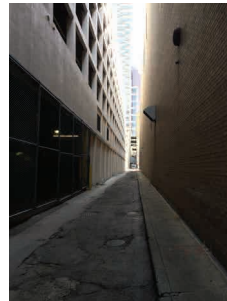
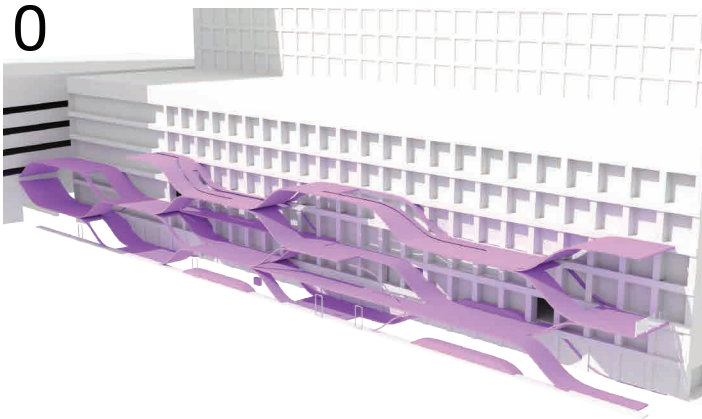
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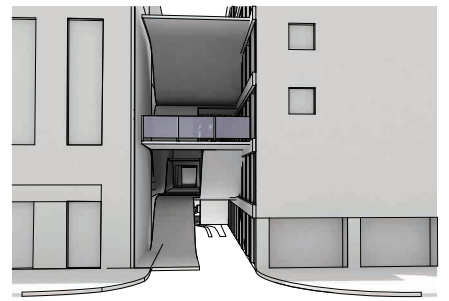
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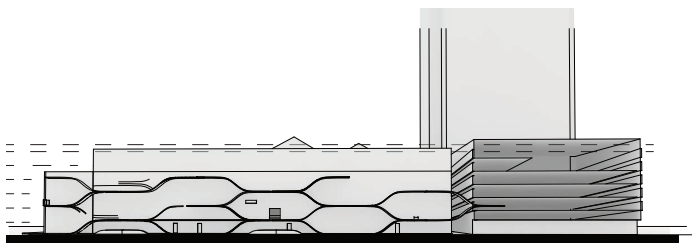
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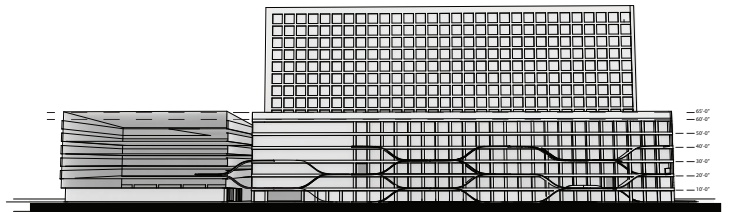
Alleyway 001: Existing context



Iteration 2 Elevation

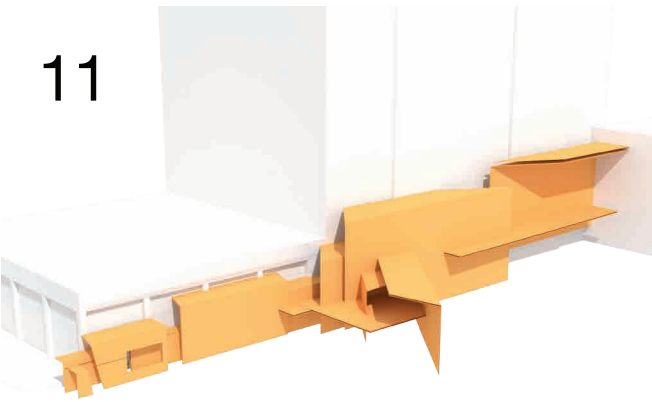


Iteration 2: Section 1

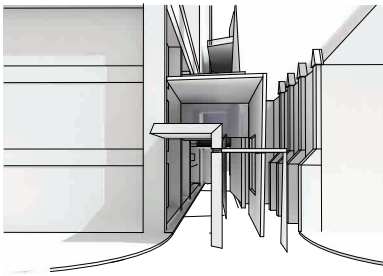
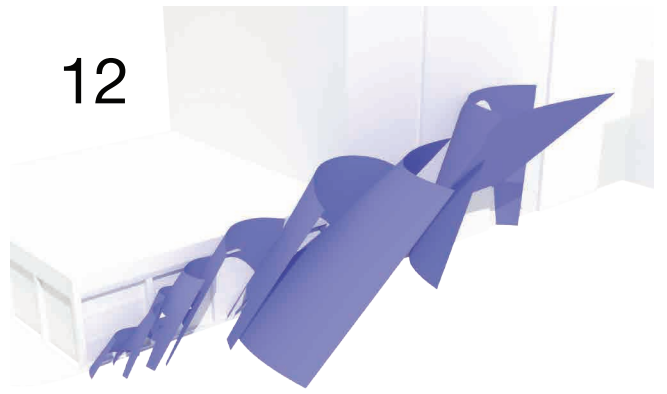


Iteration 2: Section 2

11

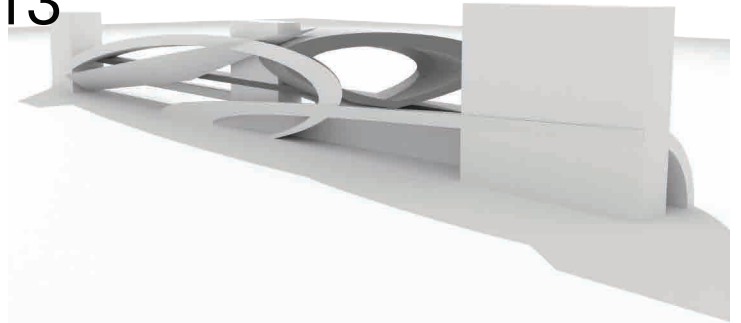


12

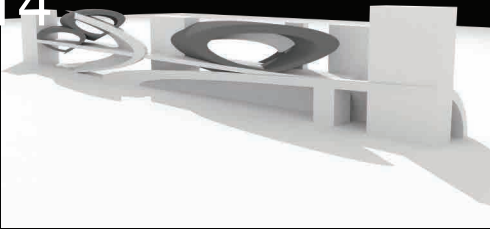


Iteration 2 Elevation

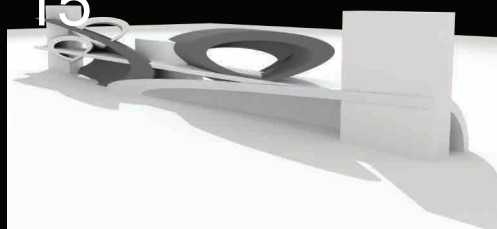
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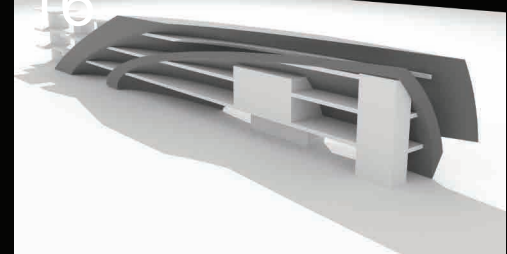
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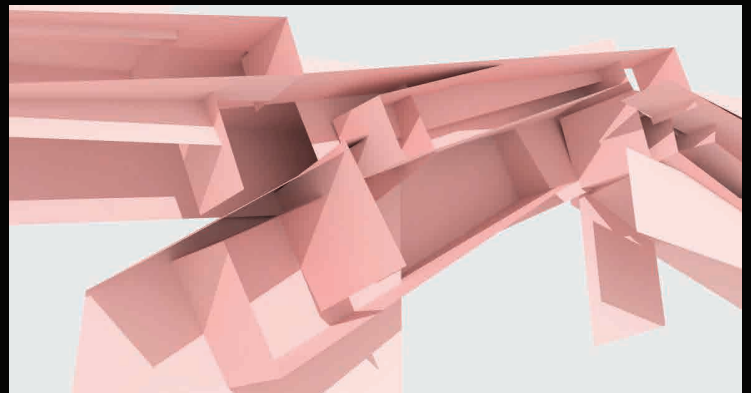
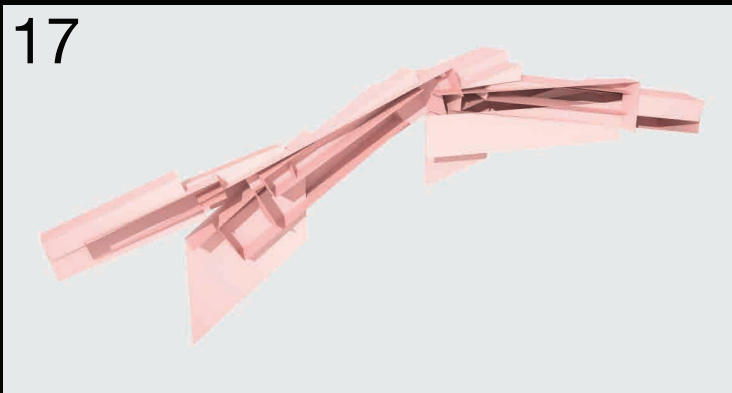
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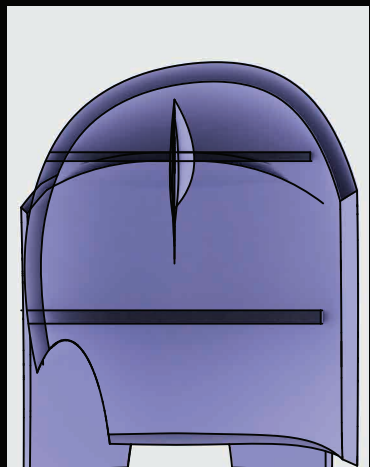
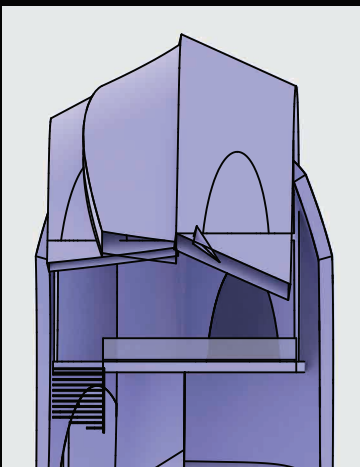
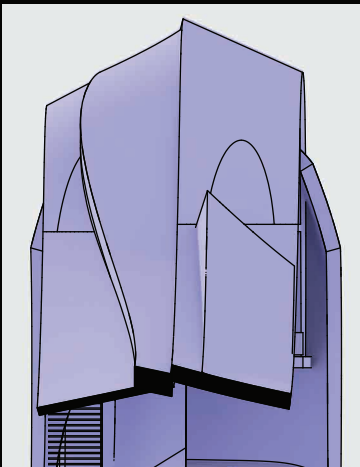
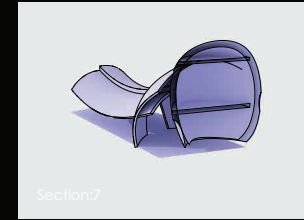
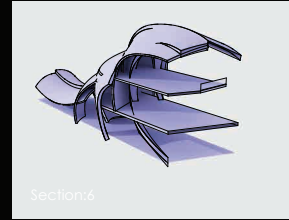
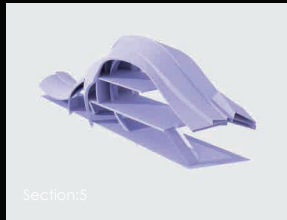
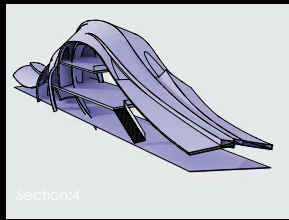
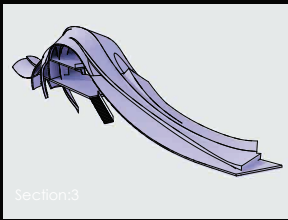
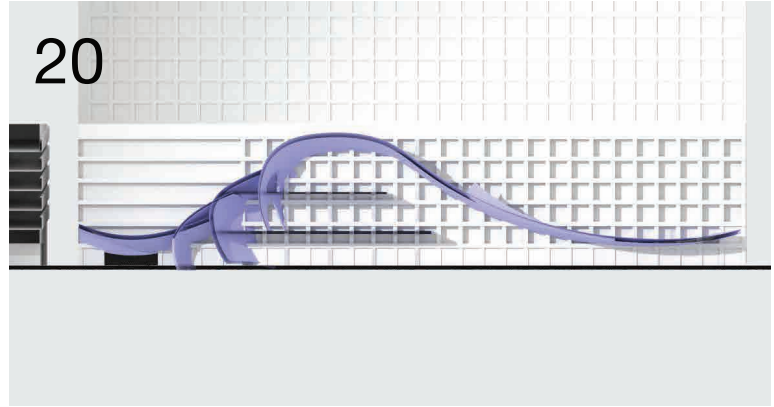
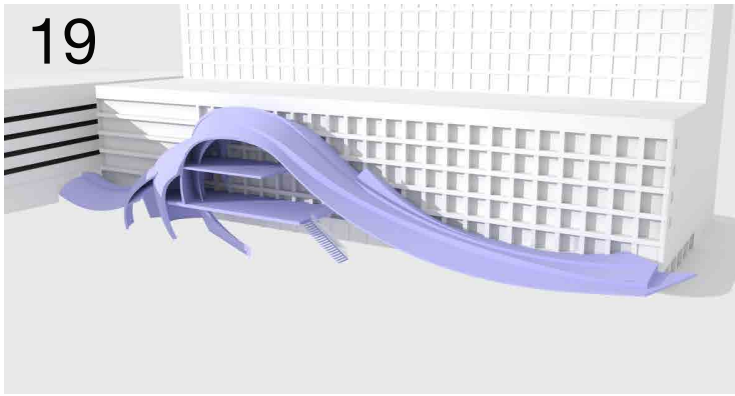
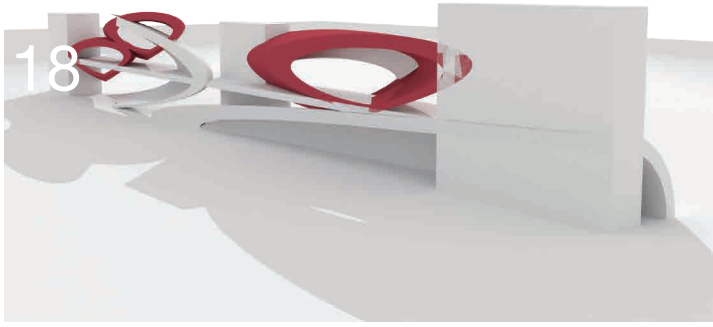


16



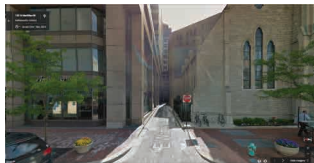
17





Phototropism :

The use of light to choreograph and experience. This architectural use of light is referred to as "phototropism" which is the use of light to lead people, create goals and create subconscious forms of way finding. I see the possibility of using such ideals in reimagining the movement and connection of human in the built environments.

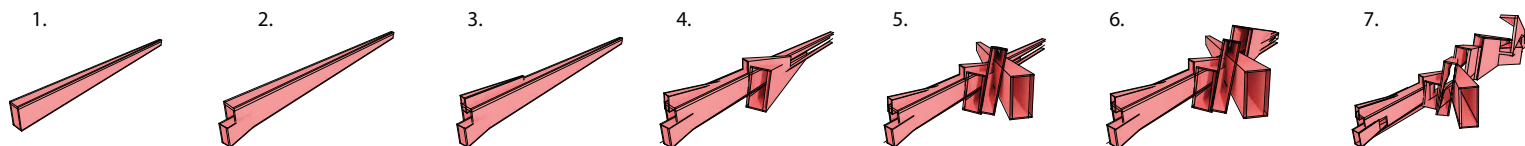


Placemaking:

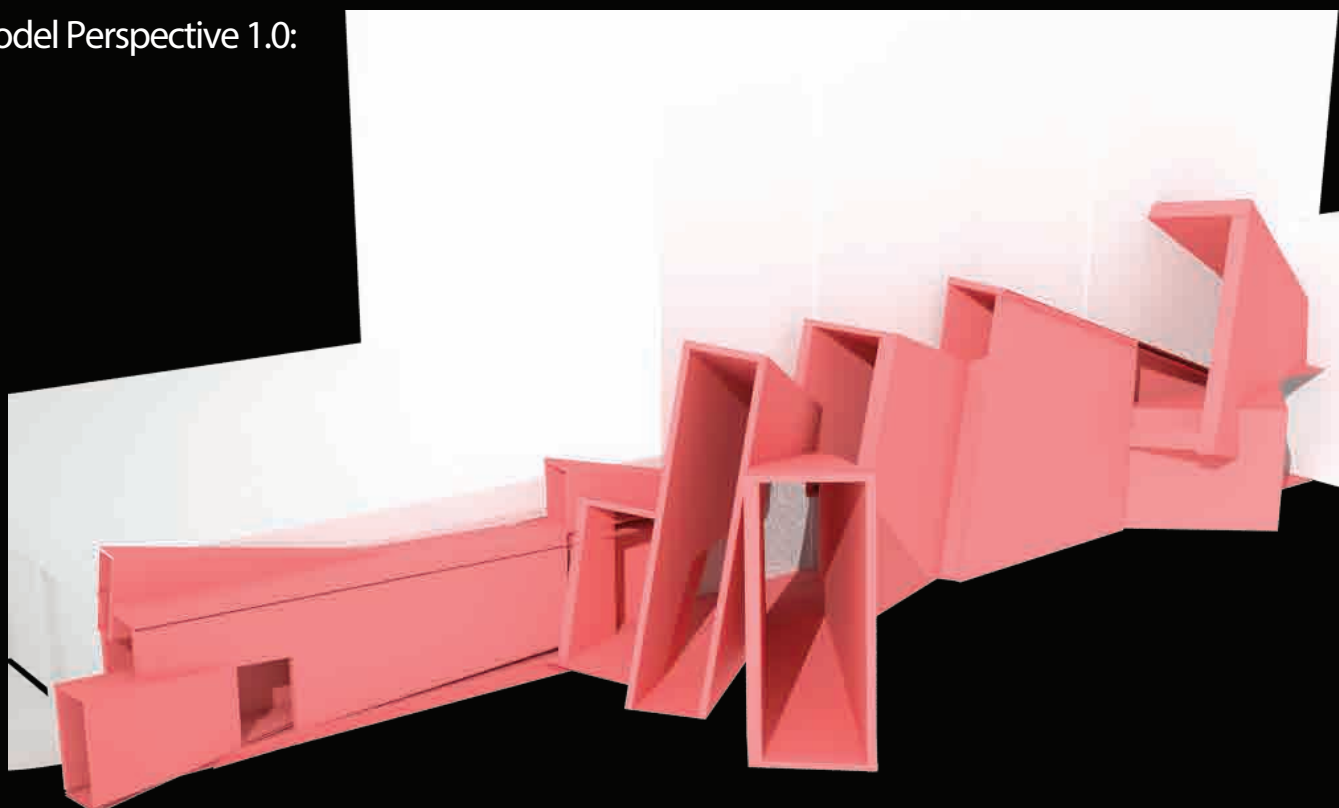
Placemaking is a multi-faceted approach to the planning, design and management of public spaces. Placemaking capitalizes on a local community's assets, inspiration, and potential, with the intention of creating public spaces that promote people's health, happiness, and well being. It is political due to the nature of place identity. Placemaking is both a process and a philosophy.



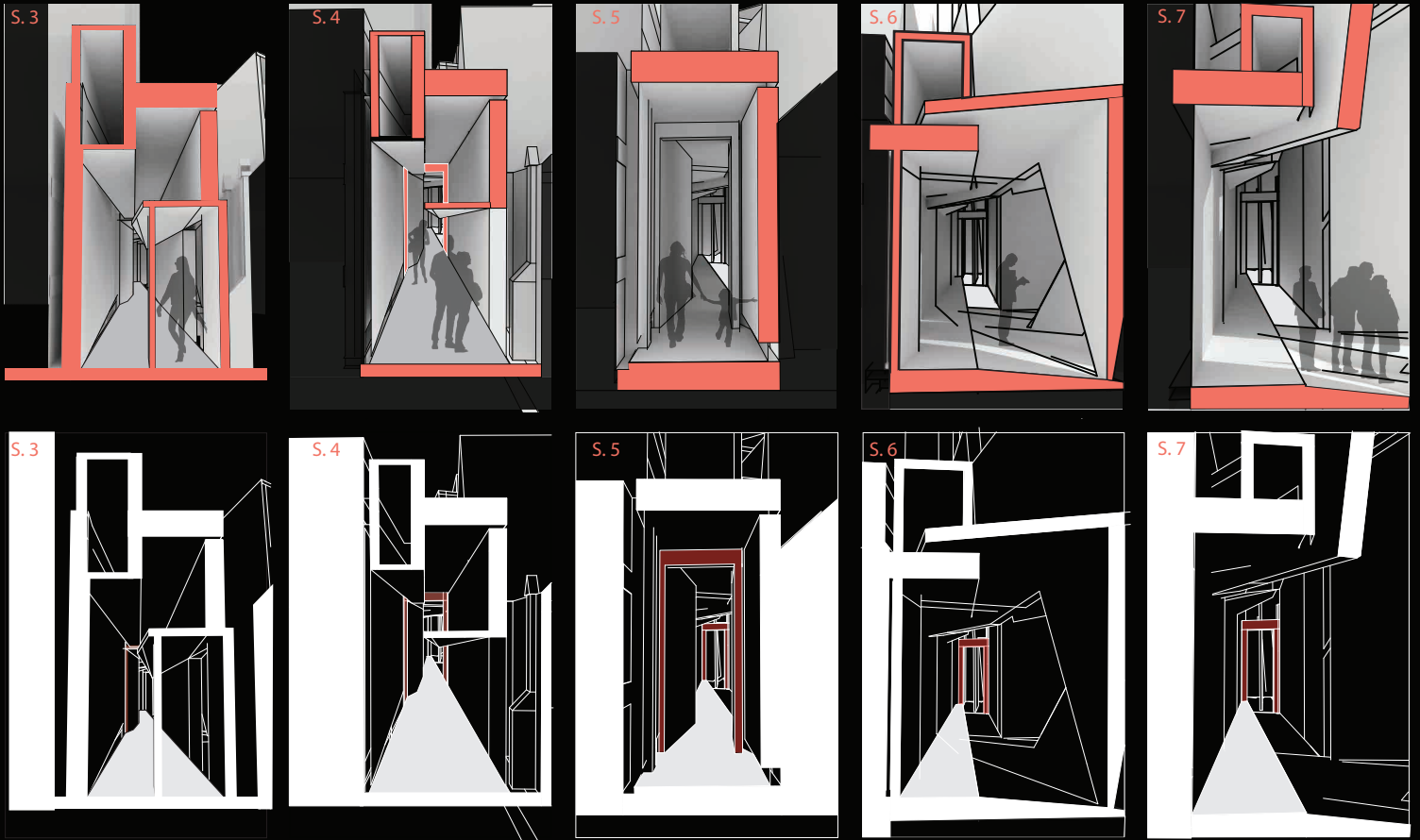
Process Diagrams



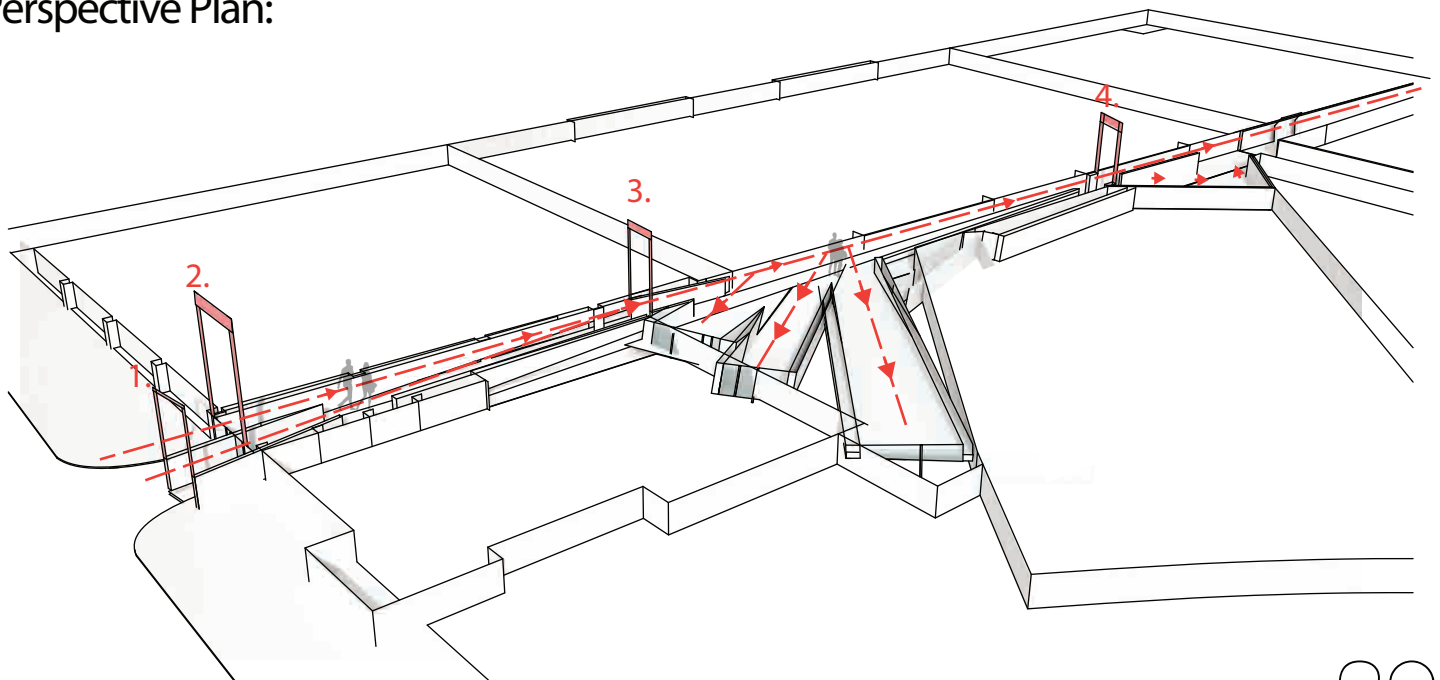
Model Perspective 1.0:



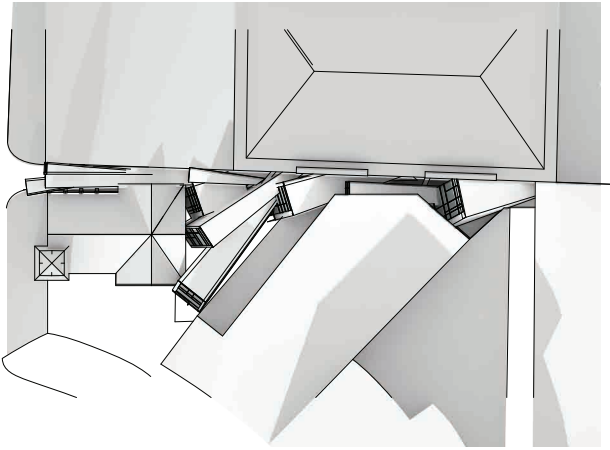
+ SECTION DRAWINGS



Perspective Plan:



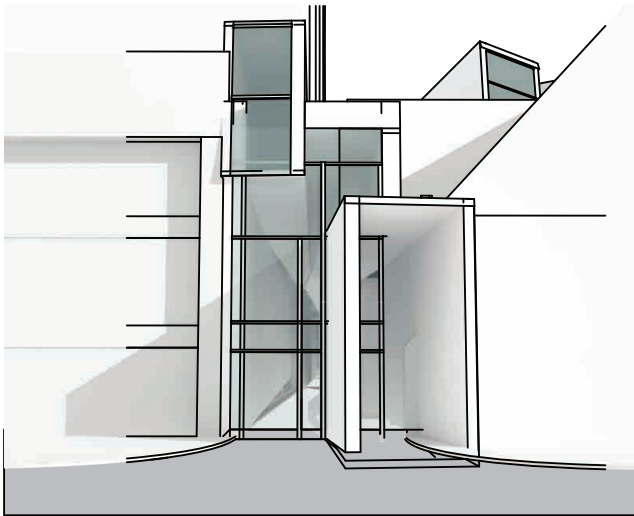
Site Plan:



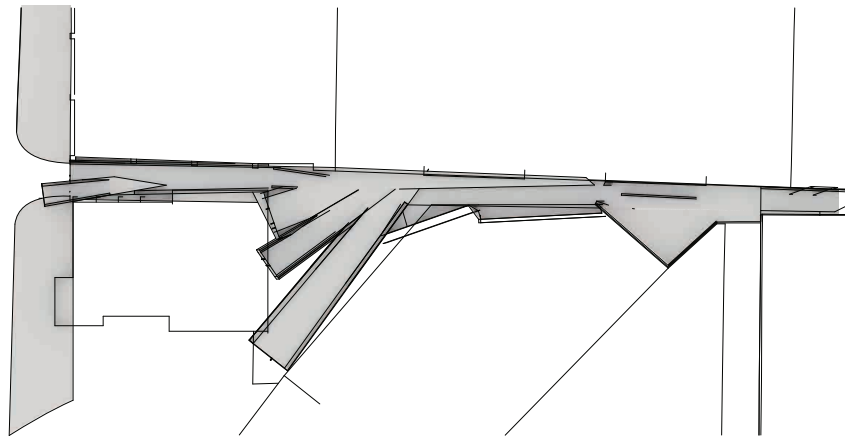
Model Perspective 2.0:



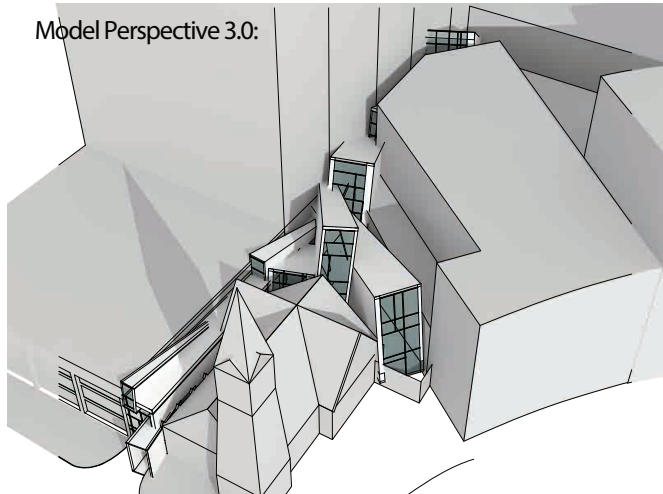
Elevation Drawing:



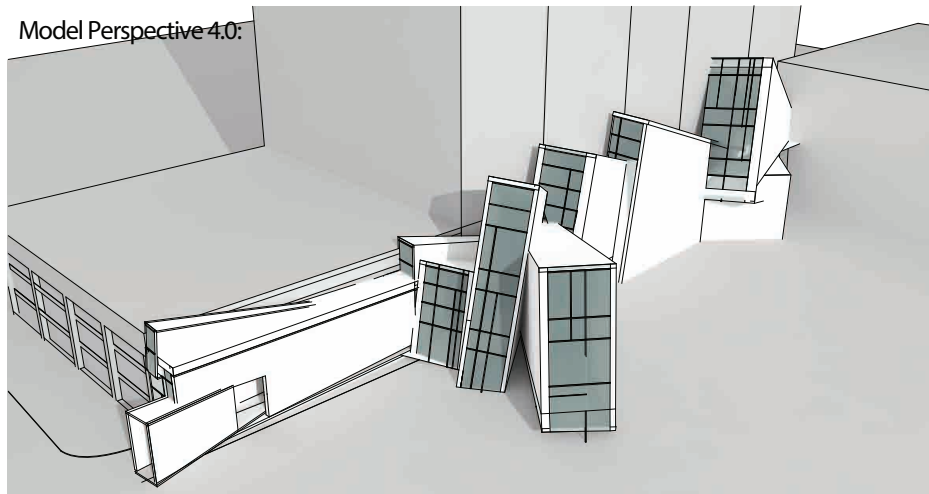
Plan Drawing

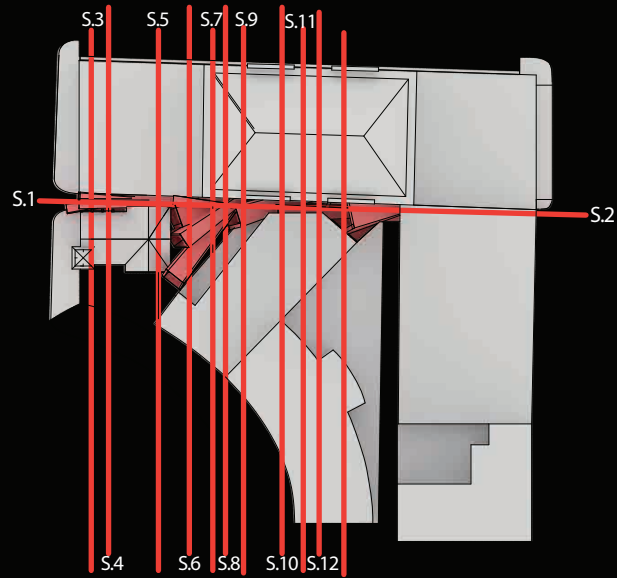


Model Perspective 3.0:

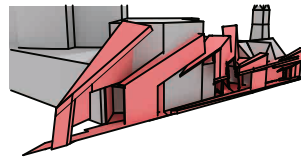


Model Perspective 4.0:

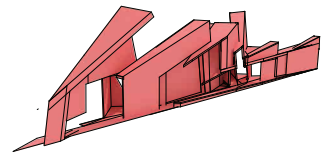




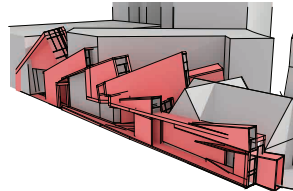
Model Perspective 5.0:



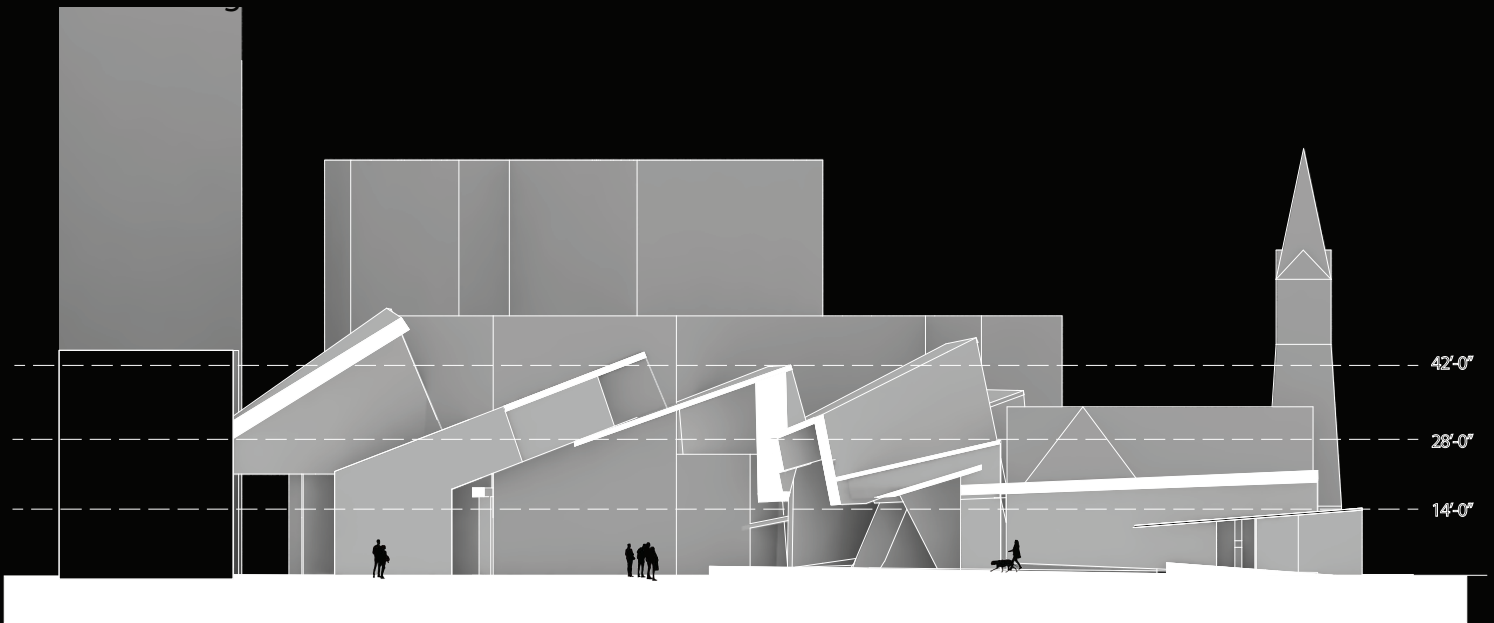
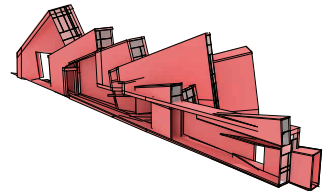
Model Perspective 6.0:



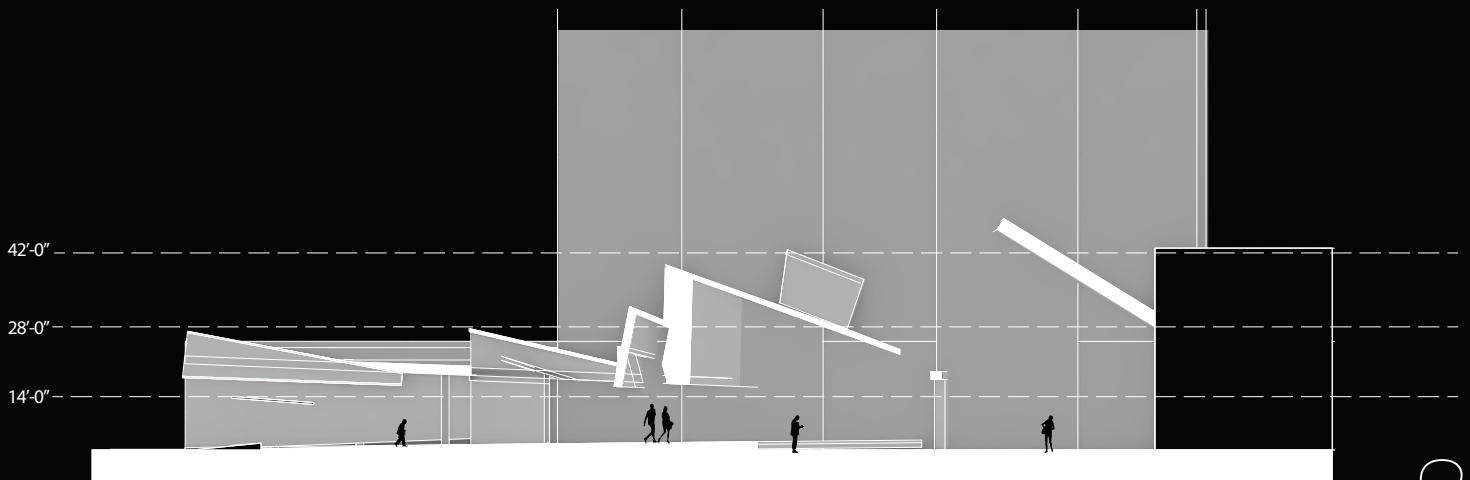
Model Perspective 7.0:



Model Perspective 8.0:

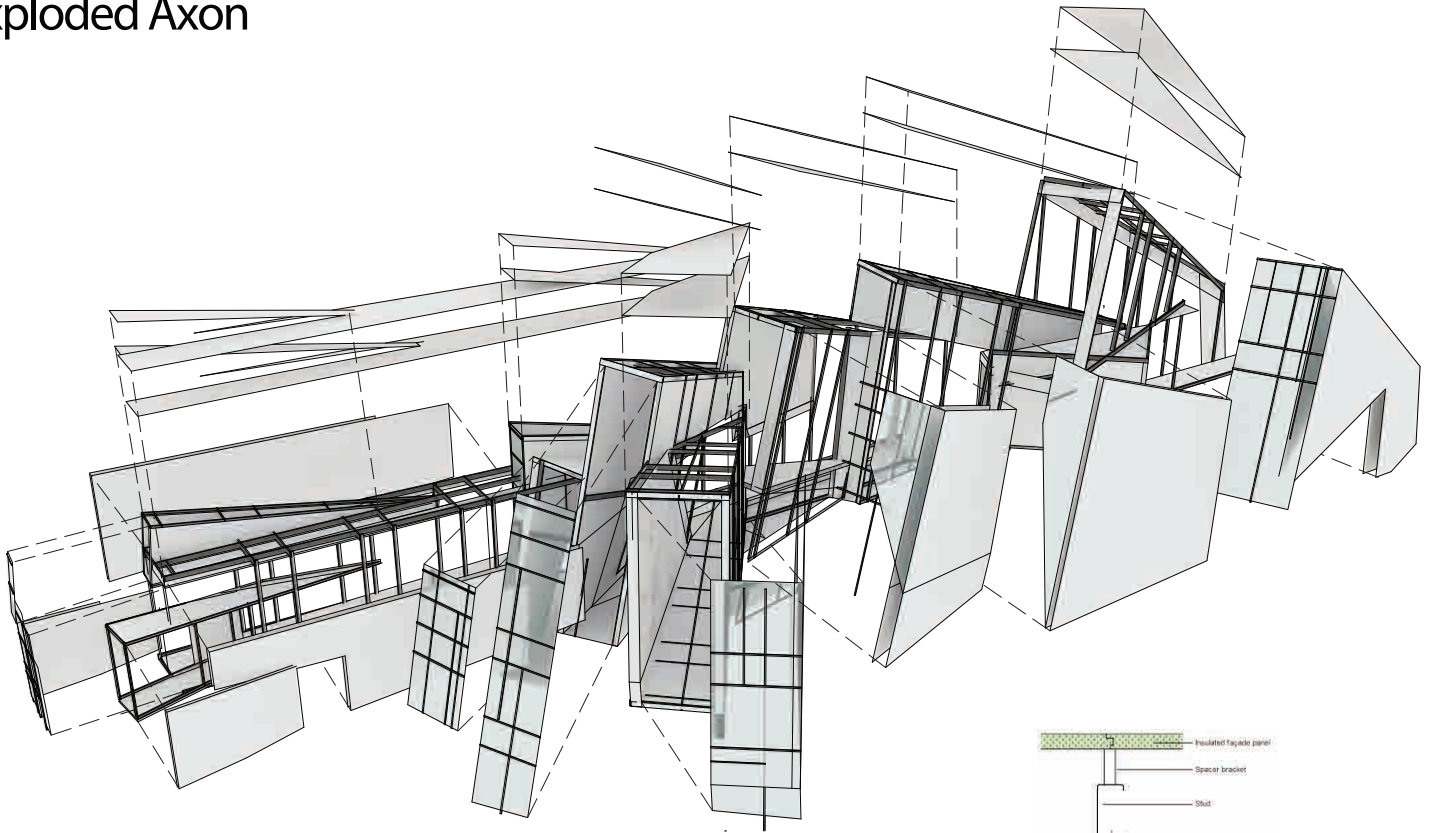


Sections 1.0

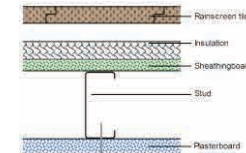
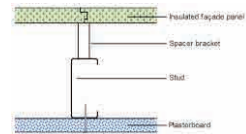
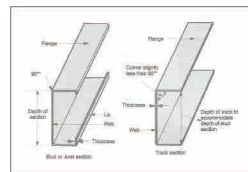
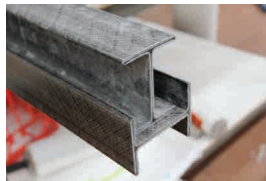
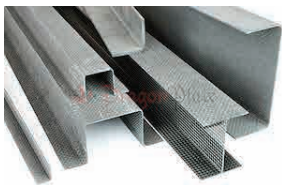
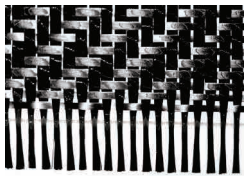


Sections 2.0

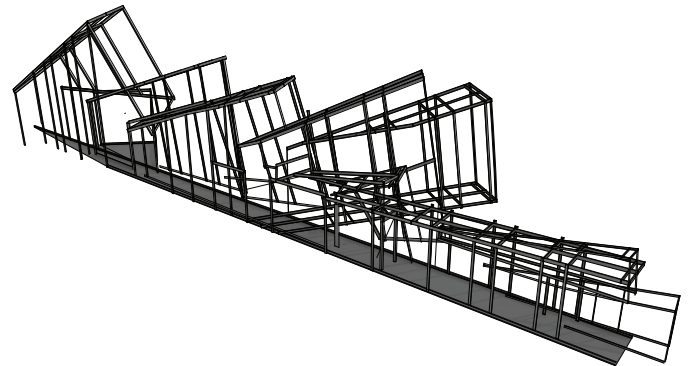
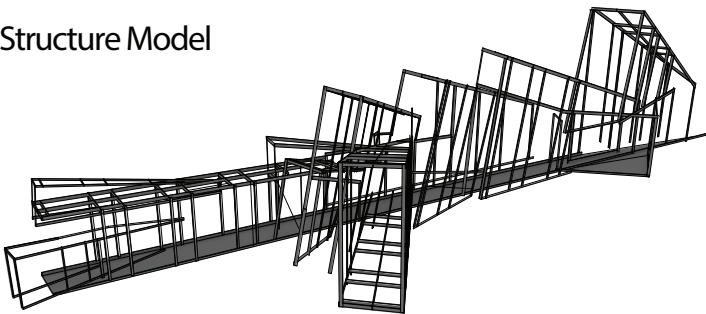
Exploded Axon



Carbon Fiber Structural Components

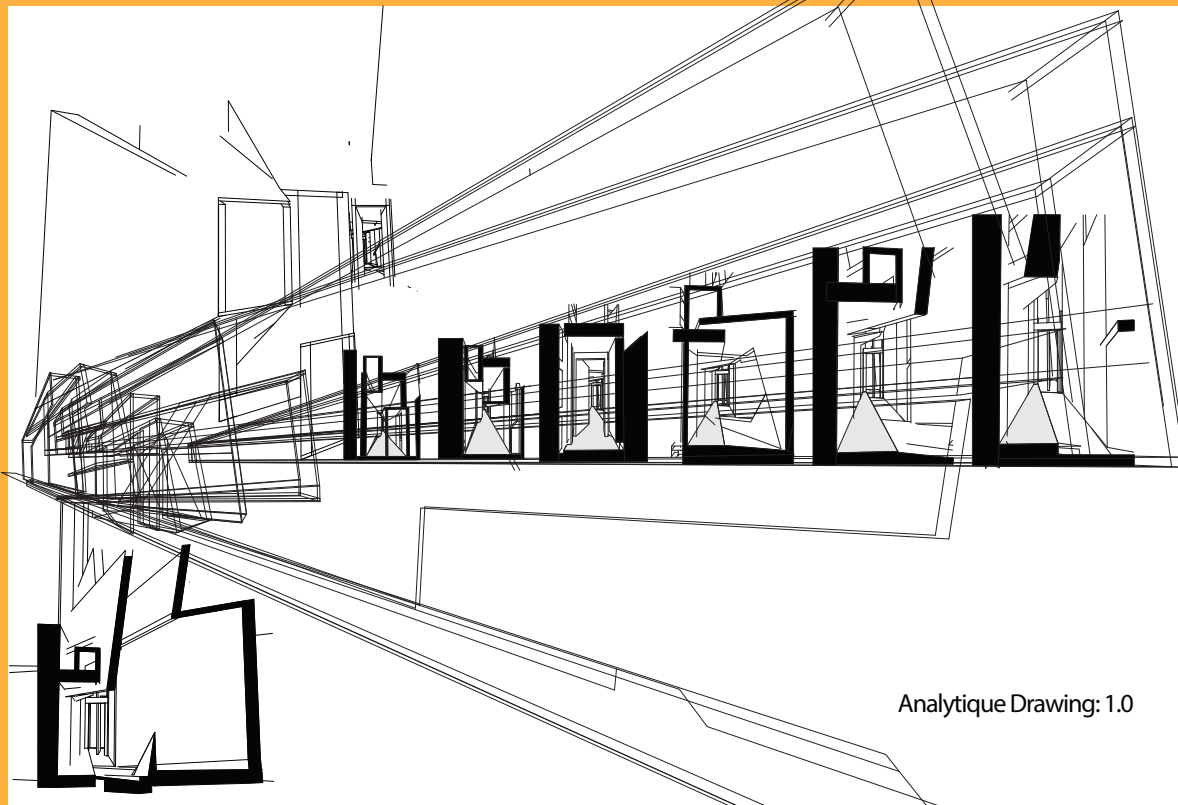


Structure Model



Carbon Fiber Structural Components

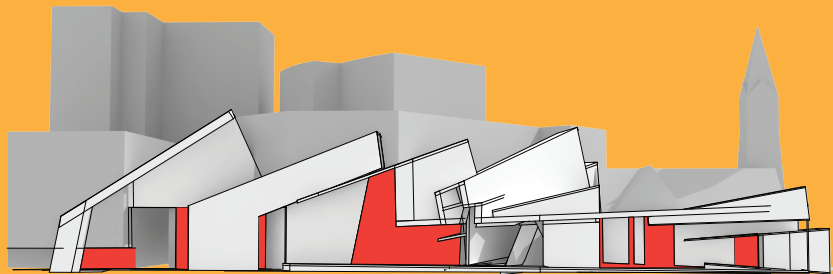
Carbon fiber composites provide an alternative to conventional materials, for example steel, aluminum, and fiberglass, for the construction of lightweight trusses and frame structures. Element 6 Composites has developed two methods for building carbon fiber tubular frames: one with high strength, robustness, and customizability, and the other with extremely low weight



Analytique Drawing: 1.0

Proposed Experience:

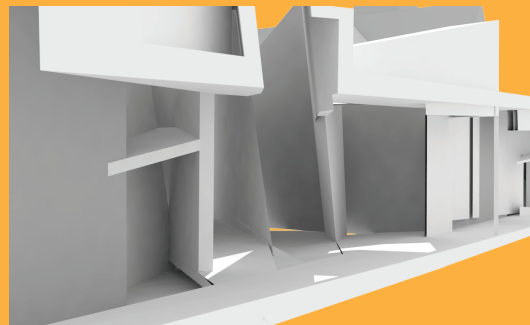
Interior Surface Diagram:



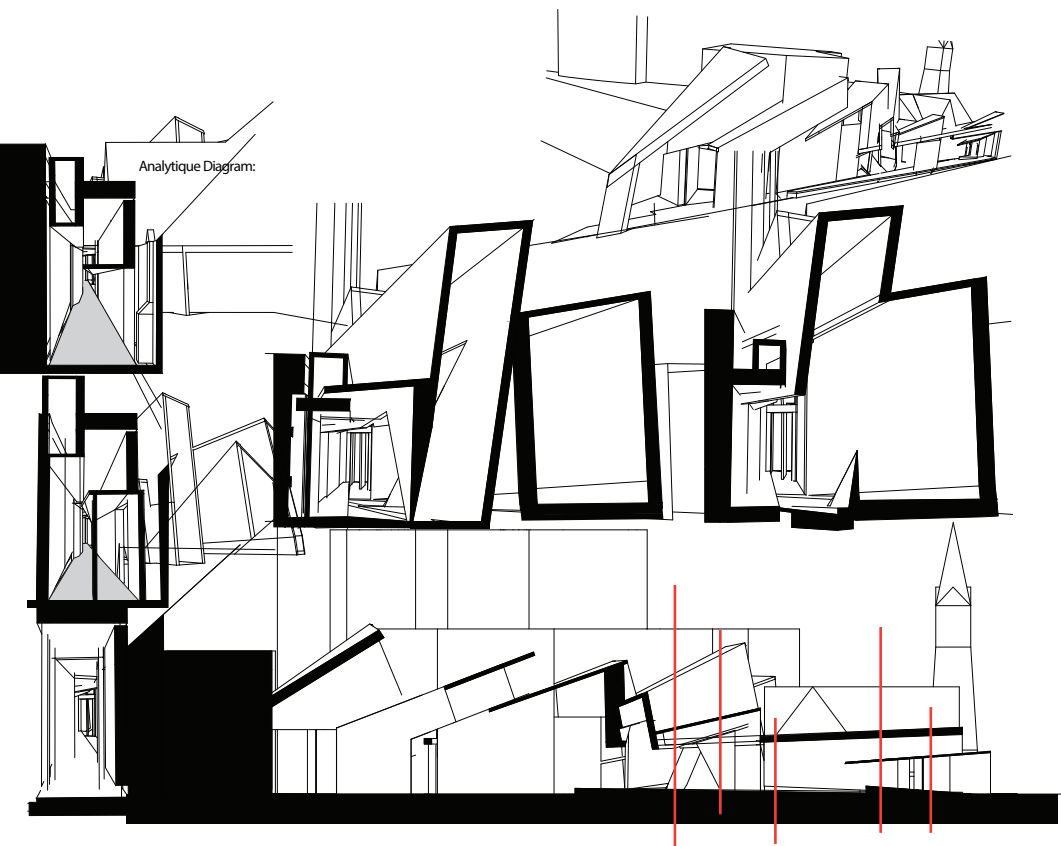
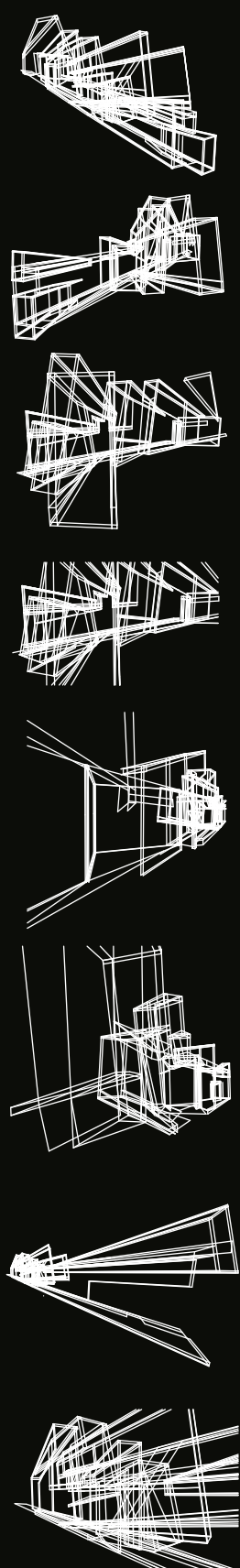
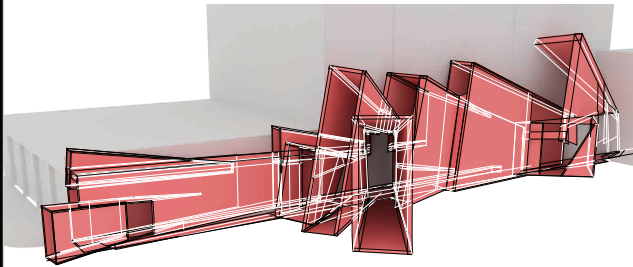
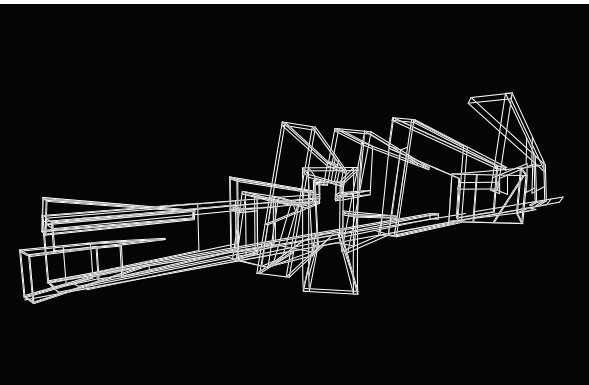
Existing Facade Treatment ■

Proposed Facade Treatment ■

Perspective views



Hidden Line Diagram



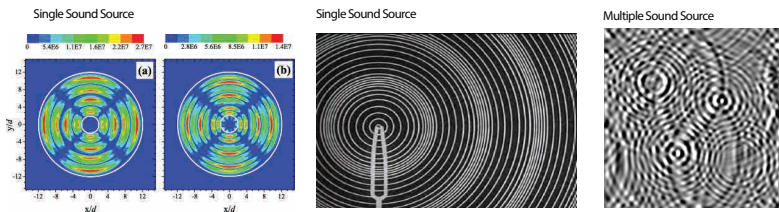
Interior Renderings



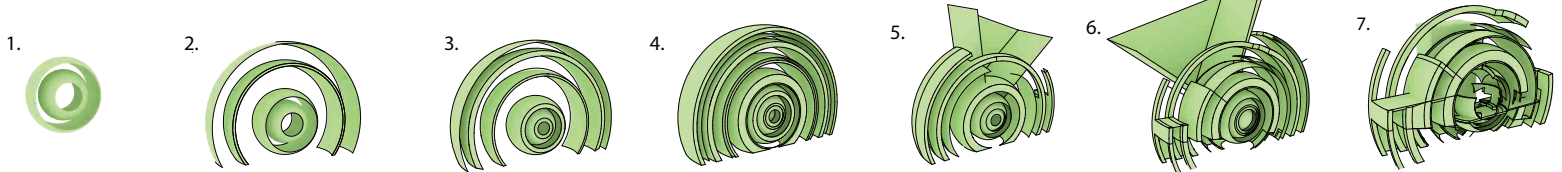


Monopole Sound Source

A monopole is a source which radiates sound equally well in all directions. The simplest example of a monopole source would be a sphere whose radius alternately expands and contracts sinusoidally. The monopole source creates a sound wave by alternately introducing and removing fluid into the surrounding area.



Process Diagrams



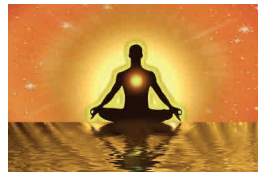
Meditation

The term meditation refers to a broad variety of practices that includes techniques designed to promote relaxation, build internal energy or life force and develop compassion, love, patience, generosity and forgiveness. A particularly ambitious form of meditation aims at effortlessly sustained single-pointed concentration meant to enable its practitioner to enjoy an indestructible sense of well-being while engaging in any life activity.

Finding your Center

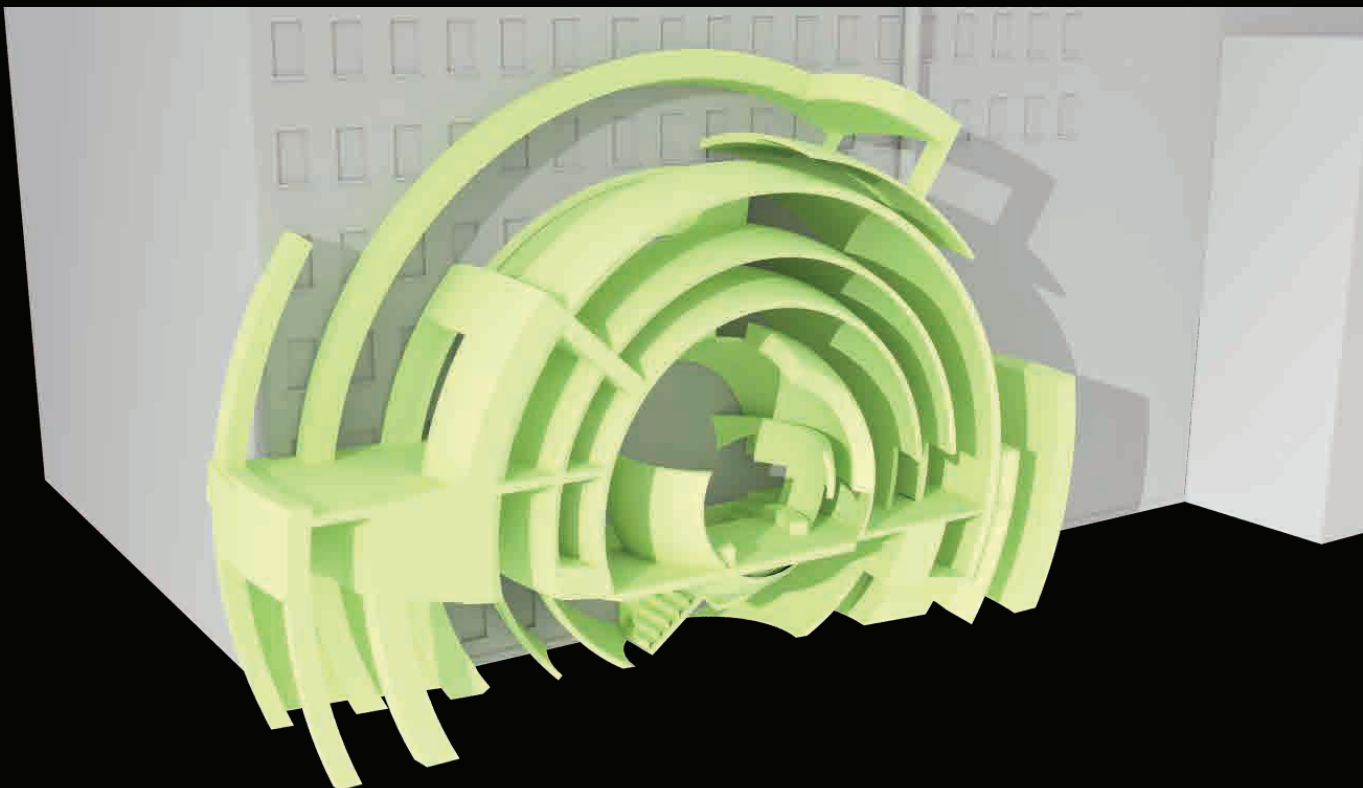


Chakra

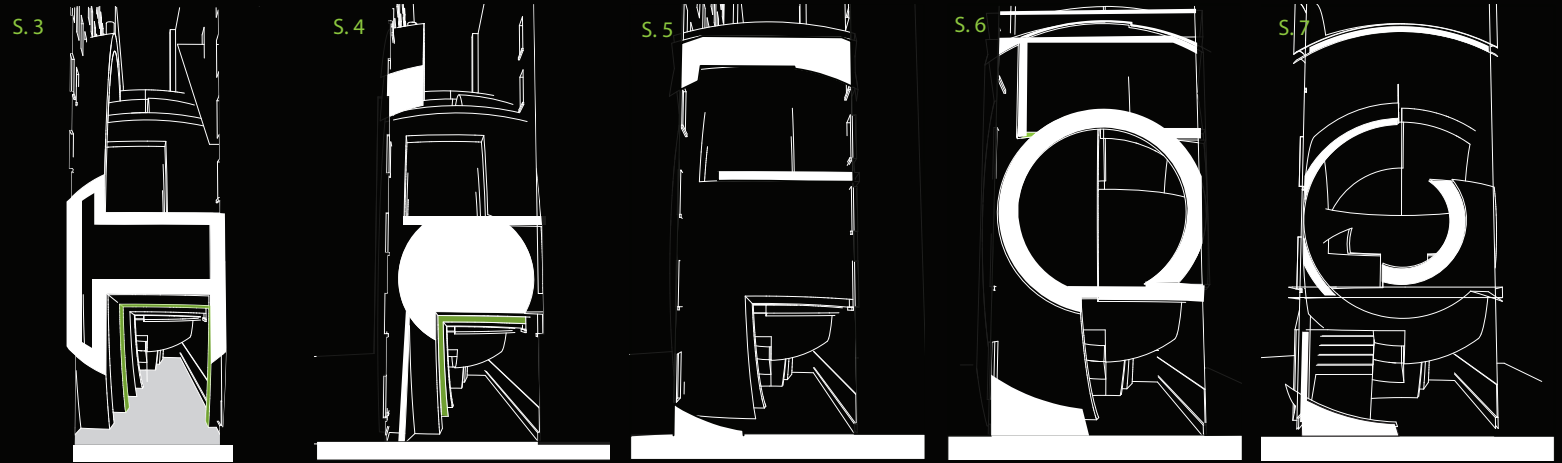
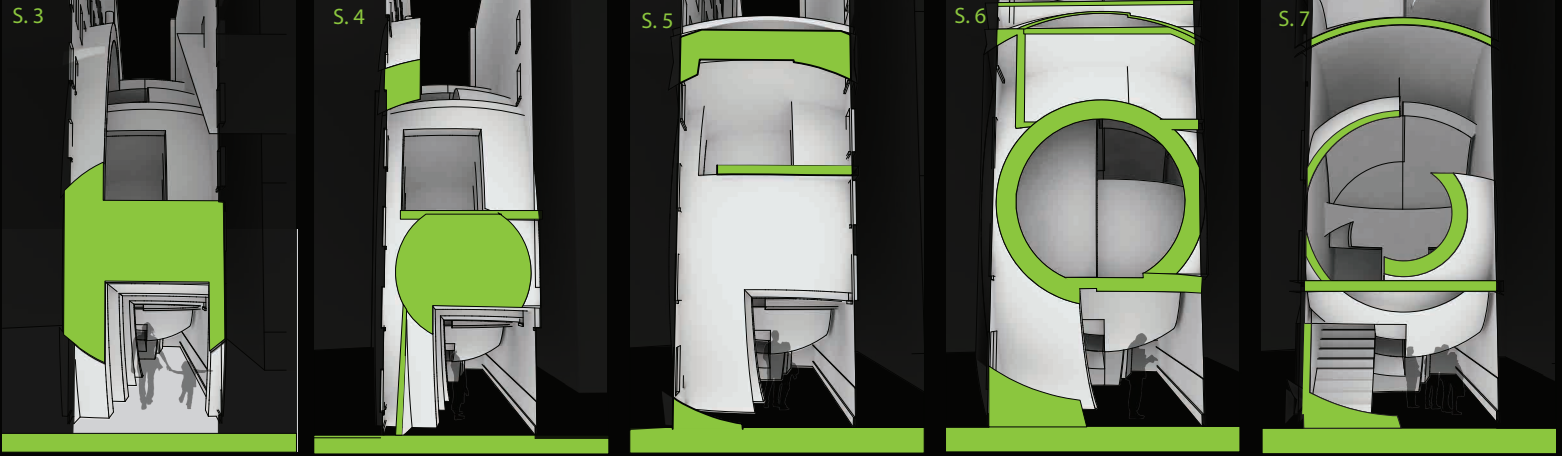


Balance

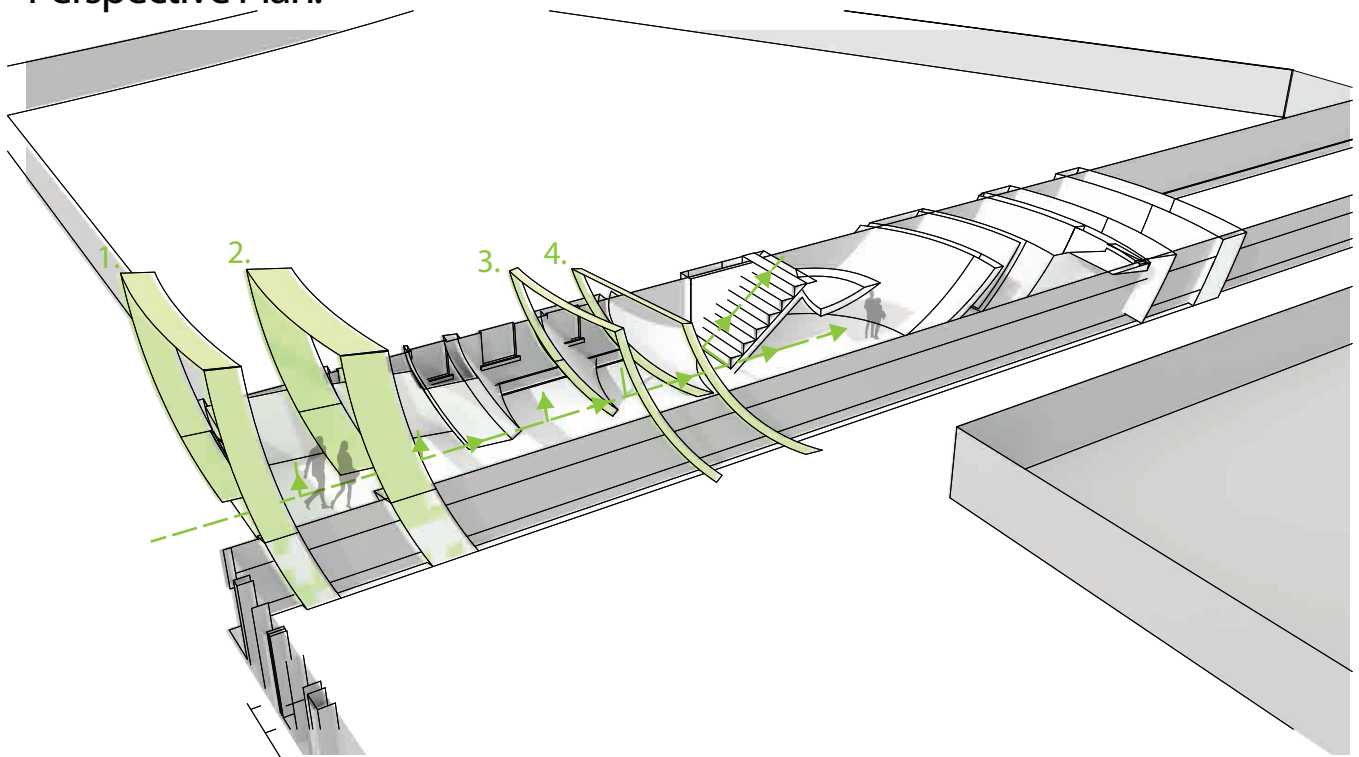
Model Perspective 1.0:



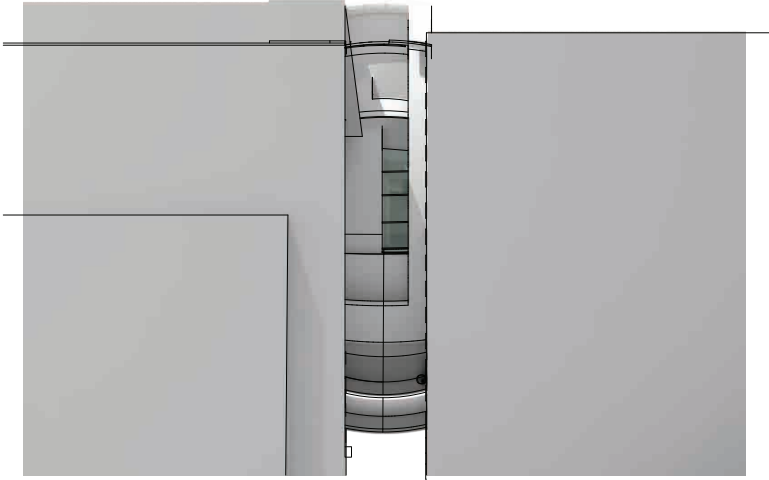
+ SECTION DRAWINGS



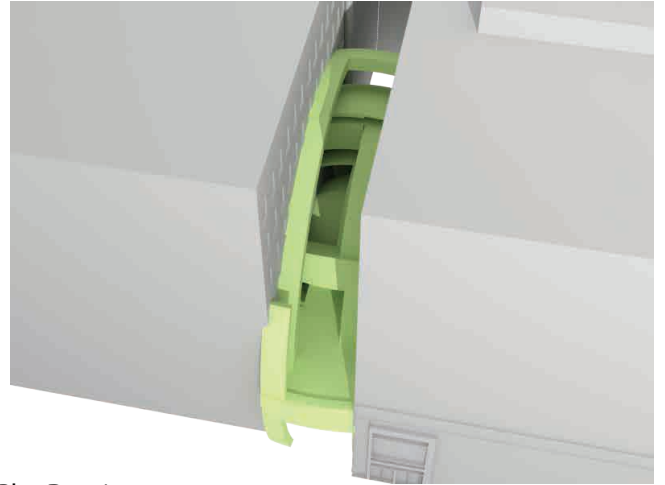
Perspective Plan:



Roof Plan:



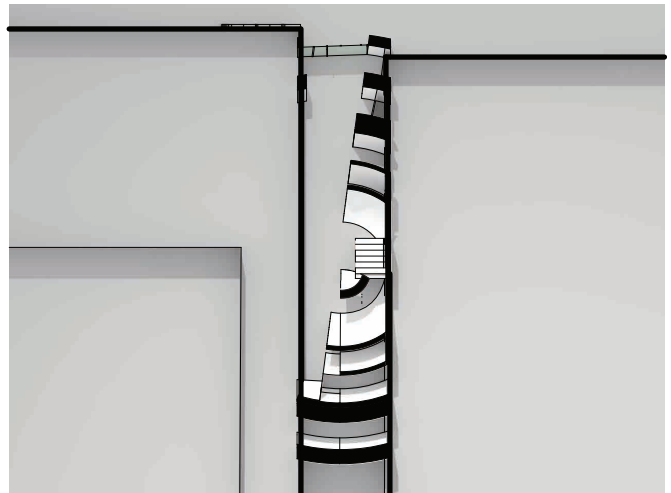
Model Perspective 2.0:



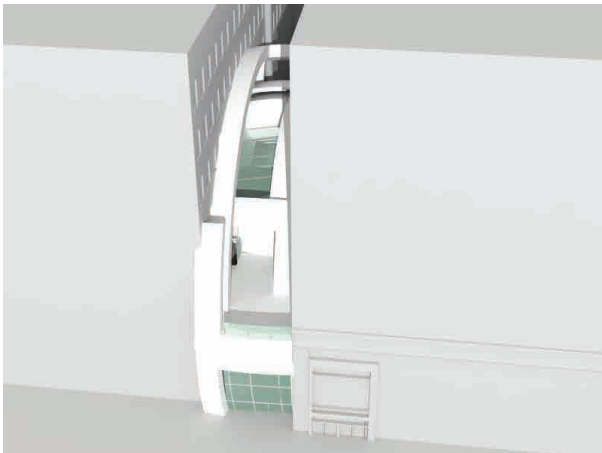
Elevation Drawing:



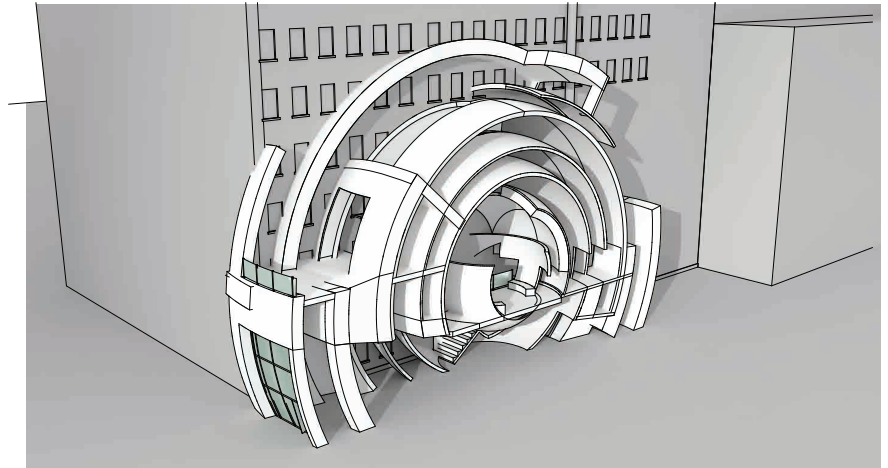
Plan Drawing



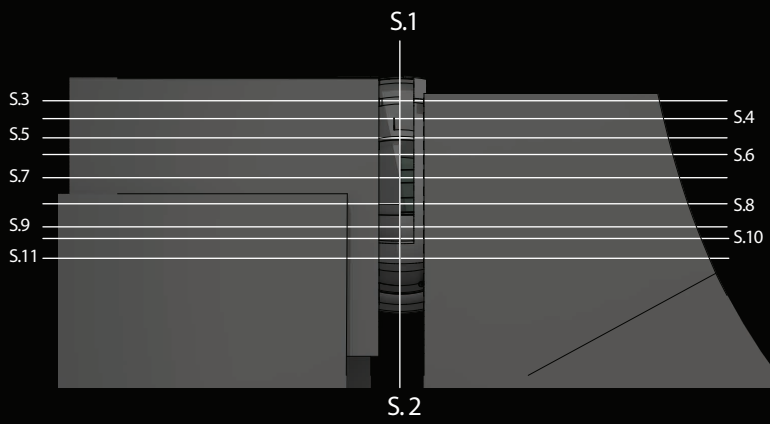
Model Perspective 3.0:



Model Perspective 4.0:

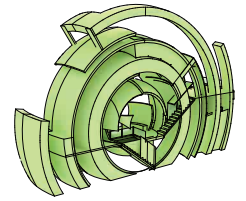
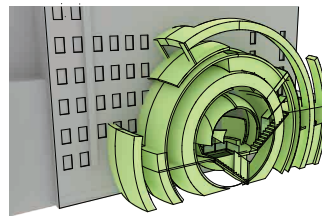


Plan with section Lines:



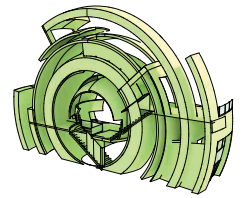
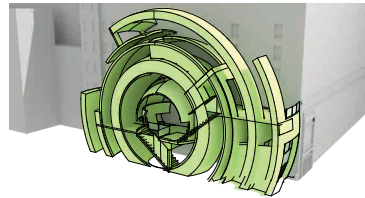
Model Perspective 5.0

Model Perspective 6.0

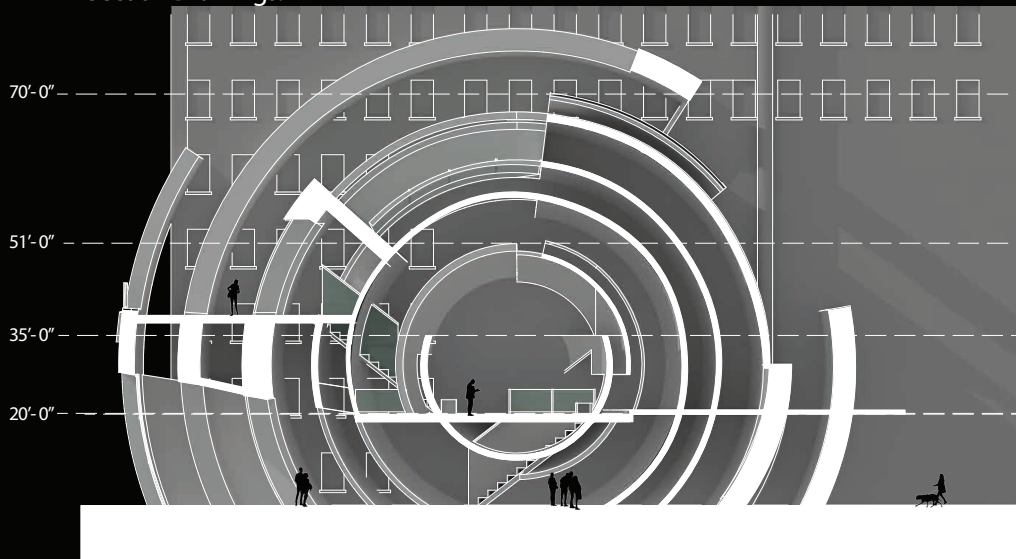


Model Perspective 7.0

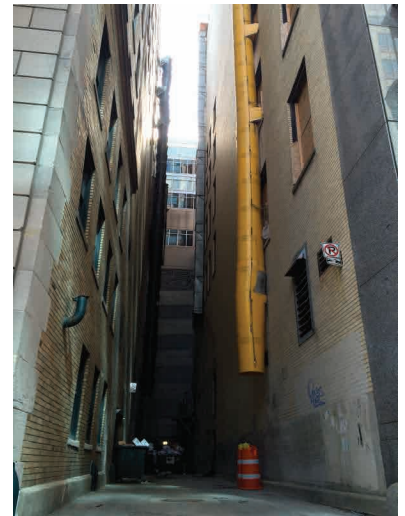
Model Perspective 8.0



Section Drawings:

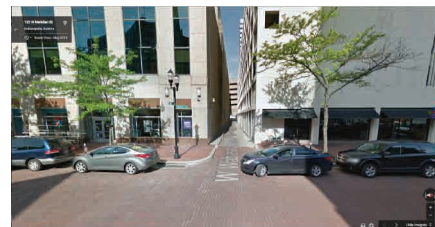
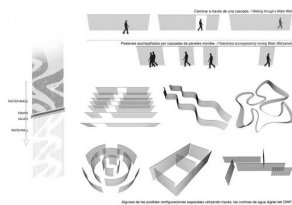
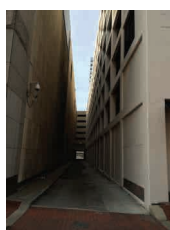
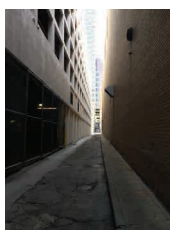
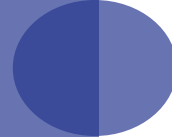


Site Internet:

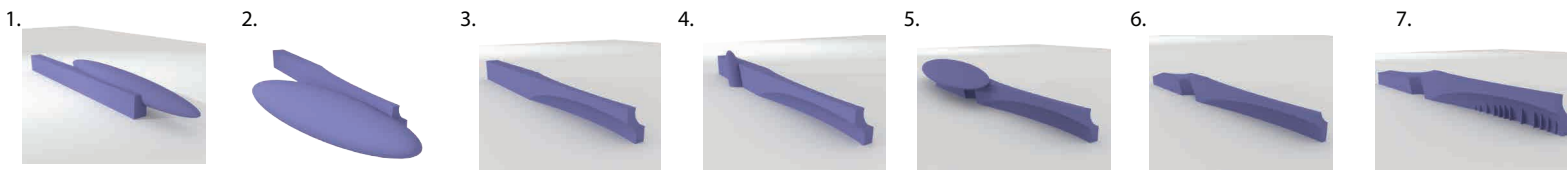


Sections 2.0

Scale: 1' = 1/32"



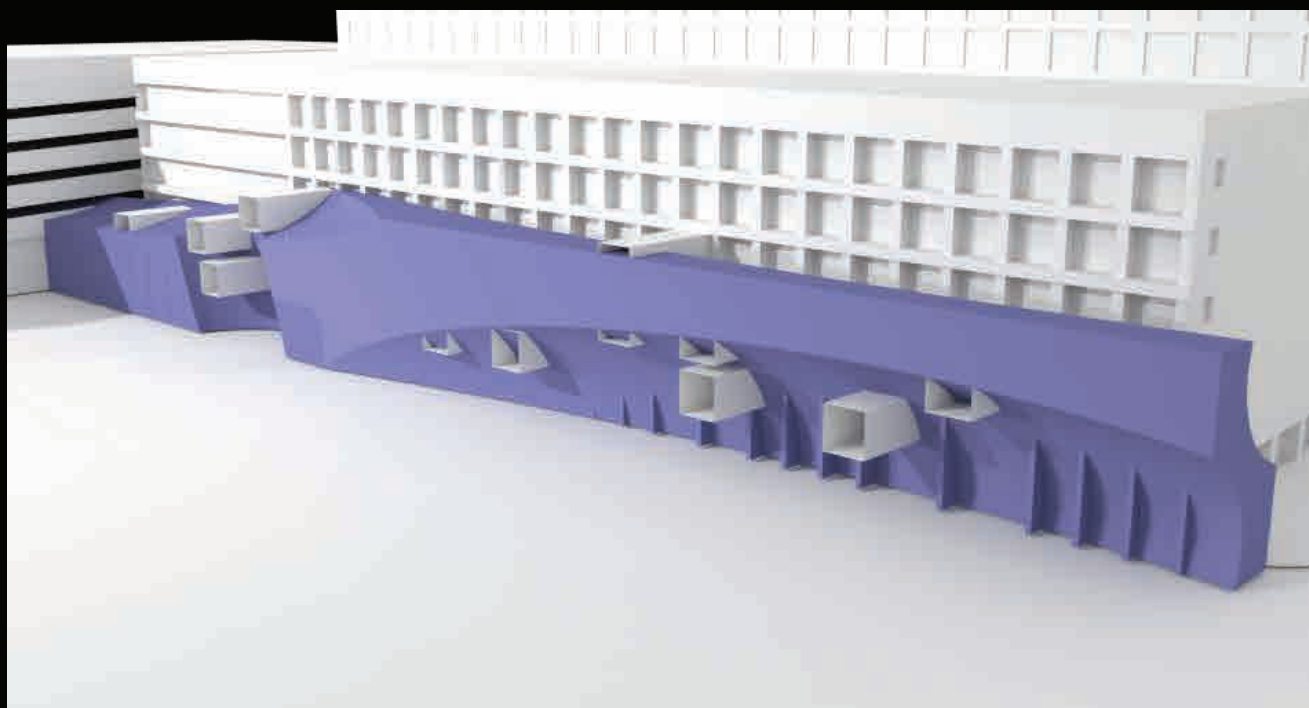
Process Diagrams



Proposed Experience



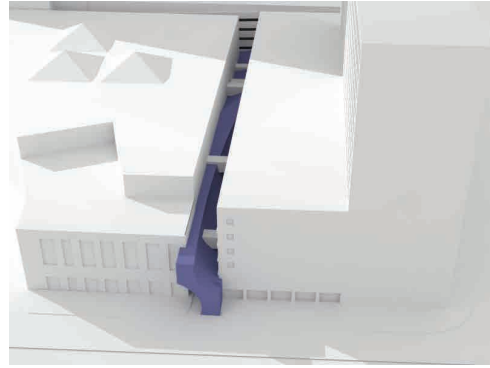
Model Perspective 1.0:



Site Plan:



Model Perspective 2.0:



Model Perspective 3.0:

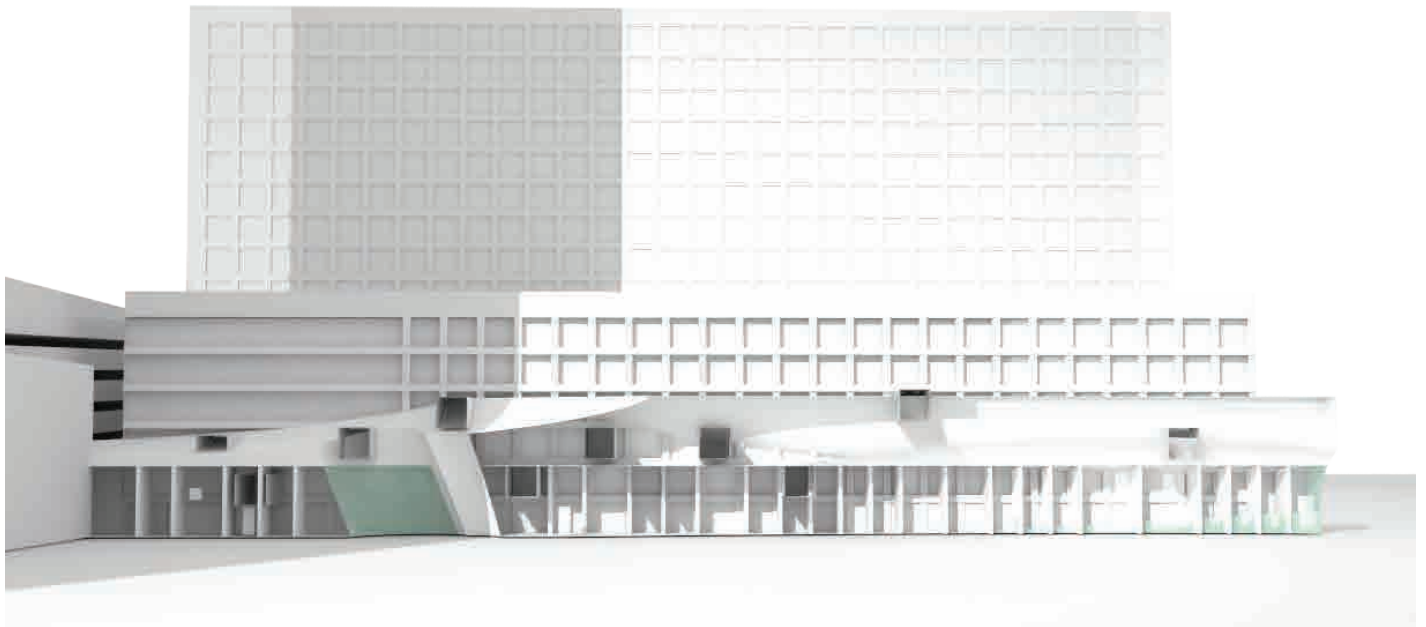
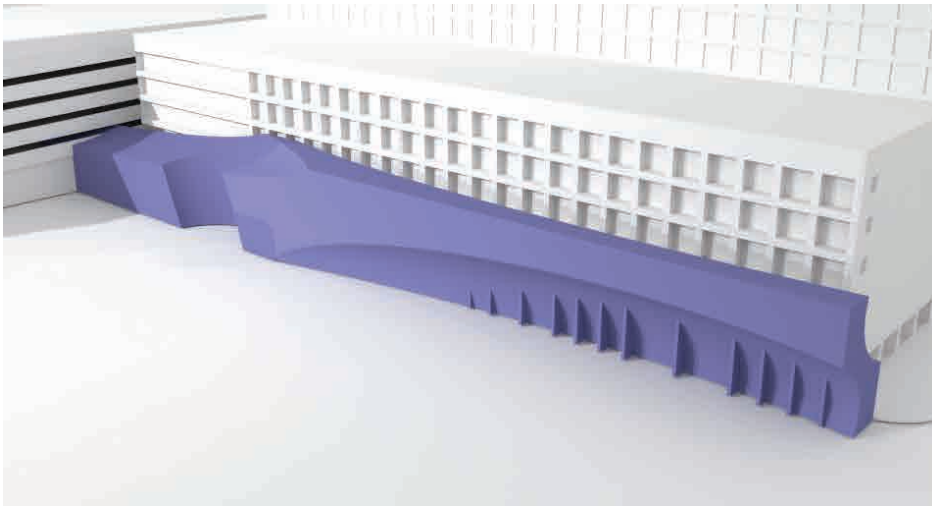


IMAGE SOURCES

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