



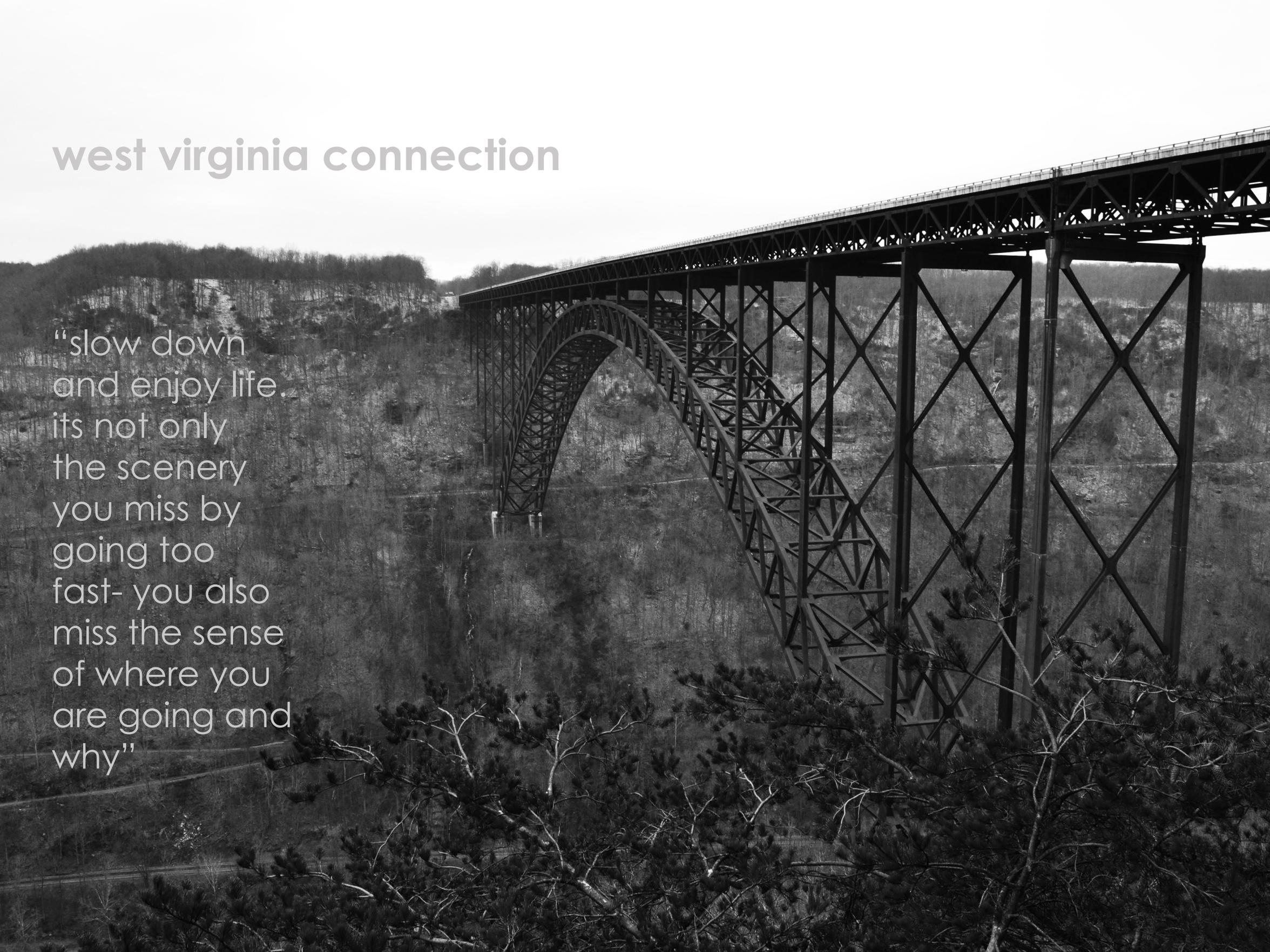
**west virginia**  
**connection**

**west virginia connection**

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April 2013

# west virginia connection



“slow down  
and enjoy life.  
its not only  
the scenery  
you miss by  
going too  
fast- you also  
miss the sense  
of where you  
are going and  
why”

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## Introduction |

### Culture

Personally, I have been to this region of West Virginia many times which has given me a strong emotional connection with the people and the landscape. I have been there not only on mission related work trips but also on multiple recreational trips. While being in the area I have had first hand experience in working with coal mining families and seeing the importance that the role of coal mining plays not only to the family but also the entire town and community. In these towns the people are all about helping those in the community even if they personally do not have much. It was really easy to see how grateful these people were even when we were just doing simple odds and ends for them.

Recreation is a huge influence as to why some of the towns survive today. Fayetteville used to rely on the mining industry but now it relies almost fully on the tourism industry. I along with my family have been to Fayetteville multiple times having the opportunity to raft on some of the best white water in the United States on both the New River and the Gauley River. I have been able to see the landscape through multiple seasons and each is just as amazing as the other. Summer, Fall, and Winter each offer different elements to the landscape that are unseen during the opposing seasons.

**abstract |****Mine, Nature, Town**

While much of the United States is moving at an extreme pace West Virginia lies in the middle of the Appalachian Mountains and appears to be stagnant. That is only to those who have never been there. The Appalachian Mountains have an enormous effect on the economic status of the state. The mountains make it almost impossible to have a normal town let alone a thriving metropolis. The mountains present a problem that the people of West Virginia have learned to live with on a day-to-day basis. West Virginia is currently and has always been one of the leading coal producers in the United States. The state has mines that range from large to small, from surface to underground, and from abandoned to active. Whether they are still in production or not, the mines add to the rich history of the state. Because of the way a mine works there are towns that crop up and disappear with the blink of an eye. These towns rely purely on the existence and prosperity of the mine. If the mine dies the town generally dies with it. However, in Nicholas and Fayette County West Virginia some of the historic mine towns still manage to survive even though the mines have since closed down.

The towns rely heavily on the natural resources that are so prevalent in the region. The Appalachian Mountains provide the towns with active rivers, large lakes, diverse wildlife, and much more. The nature of the area is currently becoming one of the major attractions for tourism in this region. Fayette and Nicholas County are seeing a shift from the heavy reliance of the mining industry to a reliance on the tourism industry. Tourism fully relies on the nature, which allows for world-class white water rafting in the Gauley River and New River, hiking trails for both novice and advanced, rock climbing, mountain biking and many more activities.

**Proposal**

The goal of this thesis is to educate not

only the people of West Virginia and visitors but also draw more tourism into the area using three characters the region has to offer; the mine, the town, and the nature. The thesis will explain the way in which all three are different from each other and also show how they are tightly intertwined with each other. Creating a connection through existing roadways, existing trails, and proposed trails, with architectural interventions at the stops along the connection.

## West Virginia Connection

The pace that people move today is at such an extreme rate that rarely does anyone really take the time to enjoy what is around them. Everything is designed to be most efficient, the most profitable, the most productive and the list can go on and on. People want to get from A to B in the quickest possible way, however, in some places there are roads that allow people to really engage in their surroundings and not just worry about their schedule and job but enjoy the rich history, character and beauty of any particular areas.

## Introduction

The cities and towns of West Virginia all have such a rich history. West Virginia is not only one of the United States largest producers in coal but also one of the major producers and suppliers for the world. Mining is a way of life for many families and small towns that are scattered through the Appalachian Mountains. Mines in this region can really range a great deal from large to small, surface to underground, and active to abandoned. The mining in the region has a great impact on the population and the pattern of settlement for people. Historically, when there was a new mine that was established generally there would be a new town that would pop up because of the distance that the mine was from any other major town or city. The town would thrive as long as the mine was doing well and producing. In many cases the towns were actually constructed completely by the mining company that was in charge. The coal company would generally provide all of the essential needs for the miners and their families in this town. The towns would have inexpensive homes, a company store, a church and often a recreation facility for the miners and families. These company stores ran on a simple bookkeeping system. Instead of having money in these towns the store would run on a coal scrip (tokens) and these would be used to

purchase all of the daily necessities. The use of this scrip eliminated the need for the coal company to keep a large amount of U.S. currency on hand. (Eggleston) However when the mines would start to dwindle and die off the towns would generally follow in the same fashion. As a result of many of the historic mines becoming abandoned, there are many very small almost non-existent towns that scatter throughout the region. In some cases when the mines would close many of the homes would be sold off to the people that lived there and they would try to find work at the next closest mine. In other cases the town would simple become abandoned and deteriorate.

### Town

Many of these historic towns have simply become abandoned or fallen to the wayside over the years. However, a select few have been able to survive for other reasons. Fayetteville is a town that used to rely heavily on the Kaymoor mine which was abandoned in 1952 and further destroyed in 1960 by a fire. The town was established in 1873, just prior to the opening of the Kaymoor Mine, but the property for the mine was also purchased in 1873 in preparation for the coal production. For the duration of the Kaymoor mine, the town fully relied not only on the production of coal but also the people and business that the mine brought with it.

Today, Fayetteville no longer relies on the Kaymoor mine for production of coal. Many of the towns that have survived the closing or abandonment of a mine have done so by converting from the reliance on coal, to the reliance of some other amenity that they have or are able to produce. Currently, Fayetteville almost relies fully on the tourism industry. The opportunities for tourism are endless in this area. "When you visit Fayetteville, you'll find a small town with a lot going on. It's a great place to visit, on business or vacation friendly folks, small town atmosphere, and world class thrills, right next door to the New

River Gorge National River." (Fayetteville WV) [1]  
In Fayetteville, you will find historic downtown shopping centers, cabin rentals, hunting, fishing, hiking, New River Gorge Bridge, rock climbing, white water rafting, the activities that a visitor can do is almost endless. Fayetteville is just one of the historic towns that has really shown its success in shifting its reliance from coal production to the tourism industry.

### Mine

The mining of coal has undergone many changes in just the last century in some specifics but in many ways the actual process has remained the same. Historically, much of the mining that was done was surface mining by farmers and their slaves, they would walk through the fields using picks and shovels to remove the overburden then the coal would be gathered and carried out in baskets and sacks. Later things like sleds, wheelbarrows and carts came into use in deep mining, hauled by oxen, mules, goats, and sometimes men. The progression from animal to mechanization was slow because the operators of the coal companies did not want to pay for the expensive equipment. Around the 1890s some of the mines had made a shift to the electric coal cutting, loading, and more of the hauling machines came into use. It was not until the 1940s when the entire mining process went to the mechanized approach. This included shuttle cars, long trains, conveyor belts, and other large-scale machinery used in both movement of coal and extraction of coal from the mountains. Surface mining however did not receive much attention until around 1915; this was when the development of huge shovels and draglines made it possible to remove much of the overburden that before was not possible. (Eggleston)

Today many of the mining techniques that were used back in the early 1900s are still used today. What makes them different is the actual machinery and technology that has

advanced over the years. The early surface mines, which were originally dug out by hand and placed in baskets and sacks, now this mining could be done with massive machinery such as the Bagger 288 and Caterpillar 797 dump truck. The Bagger 288 is one of the worlds largest land vehicles and it can reach up to 720 ft. in length and upwards of 315 ft. tall, this machine is built for removing the overburden similar to what the farmers and slaves did with picks and shovels prior to the technology, but the Bagger 288 is able to excavate the equivalent of a football field 100 ft. deep in one day. The Caterpillar 797 makes it possible to move all of that rock and coal round. It is the world's largest dump truck that is 49 ft. in length and 51 ft. in height and can carry a load up to 360 tons. The technology makes the process of extracting coal today much more effective. The technology has advanced so much that the production and employment numbers have changed dramatically through the years. In 1915 when surface mining was just beginning to make its large gain in production there were 81,328 employees that produced 71,812,917 tons of coal. In 2010 there were 22,599 employees that produced 143,247,932 tons of coal, more that double the production with just around a quarter of the total number of employees. (West Virginia Coal Association)

## Nature

West Virginia is located in the middle of the Appalachian Mountains, which provides them with many unique natural environments. No matter where one looks you will see beauty surrounding you. Even Charleston, West Virginia's capital city lies in the valley between mountains with the New River running right through the middle of it. The nature has not changed all that much throughout the history of the state. One of the real impacts on nature has been the development of surface mining. Historically, this changed the topography of the mountains and valleys nearby the mountain because much the excess debris that was

removed from the top of the mountains would simply be placed in a nearby valley for the ease of removal. However now there are many laws and restrictions that force the coal companies to make the mountain topography back to what it was before the mining started. Surface mines now follow what is called Approximate Original Contour (APO), which required surface mines to recreate the mountains to their original characteristics. Similar to this there are multiple acts such as the Post-Mining Land Use Act (PMLA) and Surface Mining Control and Reclamation Act (SMCRA) that regulate the after use of the surface mines. (West Virginia Coal Association)

There is much more to the nature of West Virginia than just the physical aspects that both underground and surface mines play. The physical nature has a huge impact on the lives of everyone that comes into contact with West Virginia. For those that live there nature not only provides a living for many mines but also provides a life style. Many people rely on the nature to hunt and fish, some for survival and some for entertainment. Nature also allows for many activities to be popular in the area. Many tourists come to this area and the big draw for them is the amount of outdoor activities that are available, and the only reason any of these activities are possible is because of the nature. West Virginia is known for it's great white water rafting. It has some of the best most advanced and technical rapids in the United States. The New River Gorge creates the New River at the bottom and the rock formations that have since fallen from the gorge walls create all of the top class rapids in the water. Not only is there great rafting but the Appalachian Mountains make it excellent for mountain biking, snowboarding, hiking, geocaching, zip lines, mountain climbing and more. The nature that is so readily available to this area is a real draw to visitors and also a way of life for the people of West Virginia. (Adventures on the Gorge)

## Proposal

The town, the mine, and the nature of West Virginia are all connected with each other. Where one of these features is present there is generally one or both of the others that is not located too far away. The concept of this thesis is to explore a way to express the connection between the mine, the nature, and the town while providing a positive catalyst for the region of West Virginia. Norway has a particular project that was of interest to me because of the way it dealt with large scale planning and also the way it chose sites and architectural elements. The Norway Tourist Route is essentially a highway system that travels down the coast of West Norway that has eighteen different locations that express the character, the history of a town, or the natural scenery present there. The idea for this project is to get people to experience the beauty that Norway has to offer even in the most rural locations. At each of the eighteen locations on the route there are spectacular viewpoints, some with service buildings, car parks, furniture, paths, or art. Each of the locations is different but can still be recognized as part of the Norway Tourist Route. (Nasjonale Turistveger)

The process began with a selection of a specific region of West Virginia and then applying similar ideas and concepts from the Norway Tourist to this region. The region that I have selected falls onto the boarder to two counties. Nichols and Fayette County are two of the fifty-five counties that are in West Virginia. I chose this area for a site because it has much to offer in terms of nature, town, and mine. The area around Fayetteville and Summersville relies heavily on tourism, which made it a good place to start because of the already existing tourism market that can be utilized. The master plan of the area highlights different features all being nature, town, or mine. The master plan of the loop starts in the town of Fayetteville and travels to the northwest going through both active and abandoned surface mines, through national

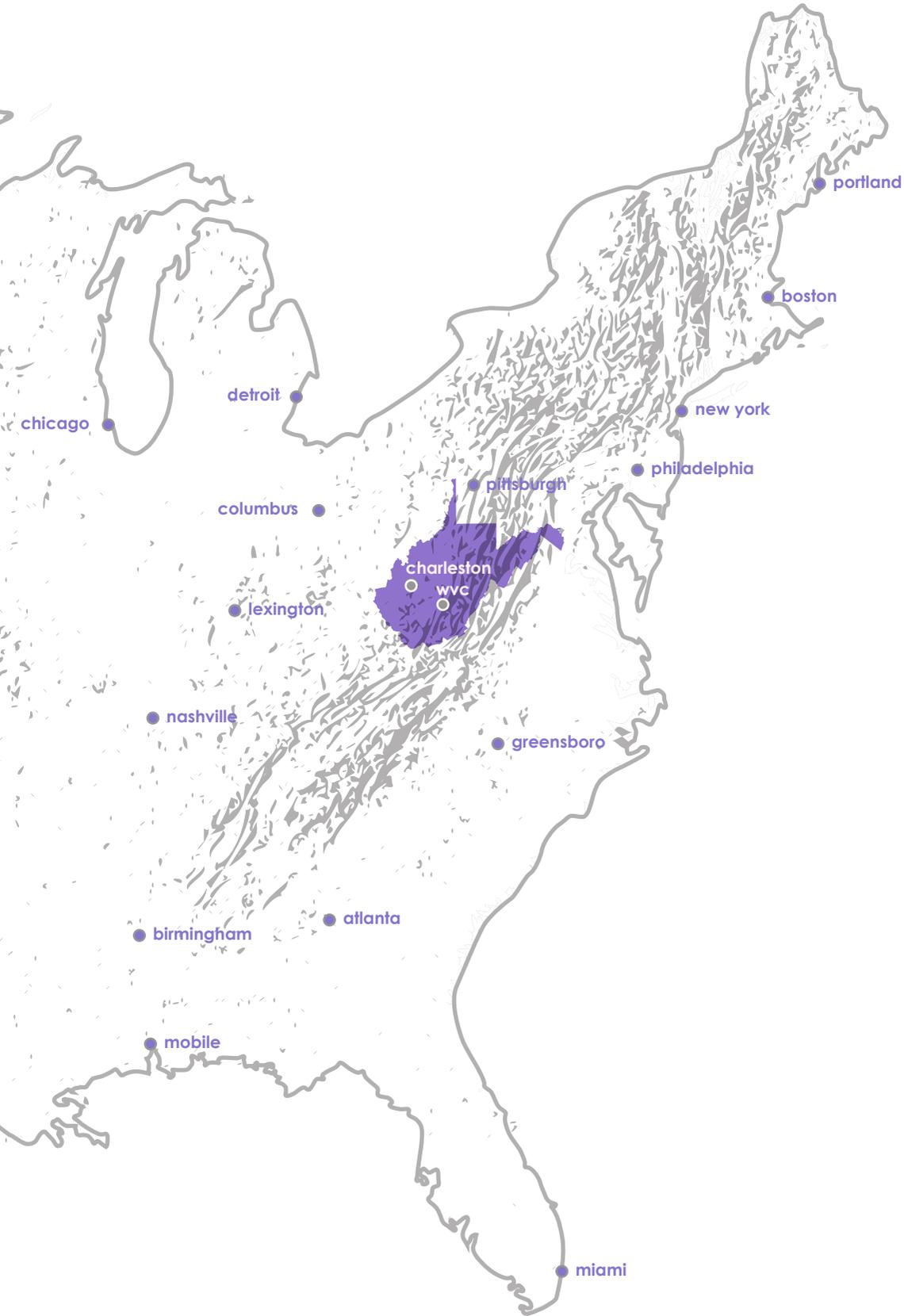
forests and recreations area, and through small towns such as Summersville, Brownsville, and Gauley Bridge. The West Virginia Connection (WVC) is not only on the main road systems but there are portion that take the visitor off the main roads and have them walk out to certain scenic lookout points. Other portions of the WVC take the visitor off the beaten path and have them on the New River. The idea is that the WVC takes on different means and ways of travel.

What makes this project unique is that it can be forever changing. What I have master planned out now could be completely different in ten, twenty, or fifty years. What I have set aside as the twenty-seven main features now is just the first phase of the WVC. If different areas of interest come about they could be another extension of the main system, so it is able to continue to grow and expand.

At each of the twenty-seven featured locations there will be some sort of designed intervention. In some locations it may be as simple as a designed bench or walkway, in others it could be a structure, pavilion, or rest area for the visitor. Most of the interventions will have a scenic overlooks incorporated into the design that can look into or over the mine or nature. The program and scale of the interventions will vary in each location. No matter the program or scale of the project the projects will all appear different yet unified through the WVC. The projects are not meant to look the same but goal of the overall concept is to have them be noticeable part of the WVC.

The driving concept behind this WVC is that it will bring both local and national visitors to the region. The project should appeal to visitors who already come to this region of West Virginia and also should draw a new group of visitors with the different style of tourism that is created with the West Virginia Connection.

l o c a t i o n



f e a t u r e s



# Mine

## commerce

**“West Virginia is fortunate to have been blessed with enormous reserves of energy rich bituminous coal. Underlying the topography of the state are sixty-two individual seams of coal considered economically minable.”[1]** Mining was recorded to have started as early as 1810 in West Virginia but the primary push of the coal industry began with the completion of the major rail lines in the early 1880s. The production of coal has been increasing at a fast rate since then.

The production and mining of coal began as simple surface mining but primarily has been taken from underground mines through most of the history. The idea of surface mining took off with the development of the dragline and other large shovels made it possible to remove the overburden material on the surface of the mountains. The production has made West Virginia one of the leading producers of coal in the United States second only to Wyoming. The state can produce up to 150 million tons to coal annually which is responsible for more than \$3.5 billion in gross state product.

Mining is a critical component of West Virginia's economy. Not only do the people of West Virginia rely on this but also people in the United States and other foreign countries rely on this. The coal produced here provides more than half of the electricity consumed by the United States and nearly 98 percent of the electricity for West Virginia. Mining produces electricity but also provides jobs for the long term for those living in the state. The mining also fuels other jobs for the area. **“Coal mining creates an economic cycle of good jobs and opportunity that benefits families and strengthens communities.” [2]**



# Nature

## beauty

West Virginia is located in the middle of the Appalachian Mountains which give the state some unique features that are not common in other parts of the country. The New River Gorge **“encompasses over 70,000 acres of land along 53 miles of the New River from Bluestone Dam to Hawk’s Nest Lake. A rugged whitewater river flowing northward through deep and spectacular canyons.”**[3] The New River has carved and it continues to carve the deepest gorge in the Appalachian Mountains. However, the impact of this area is much more than just the beautiful scenery. The forests found here contain some of the most varied ecosystems in the world that are home for endangered mammals and rare birds and amphibians. Not only is this area home for many species of animals but it is also a place to find many different plant species. **“This area is a globally significant forest containing the most diverse flora of any river gorge in the south and central Appalachian Mountains.”**[4] Here the nature is a crucial part of the way of life with locals and visitors utilizing this almost every day. **“Hiking along the many park trails, rafting the river, or biking along an old railroad grade, the visitor will be confronted with spectacular scenery.”**[5]



# Town

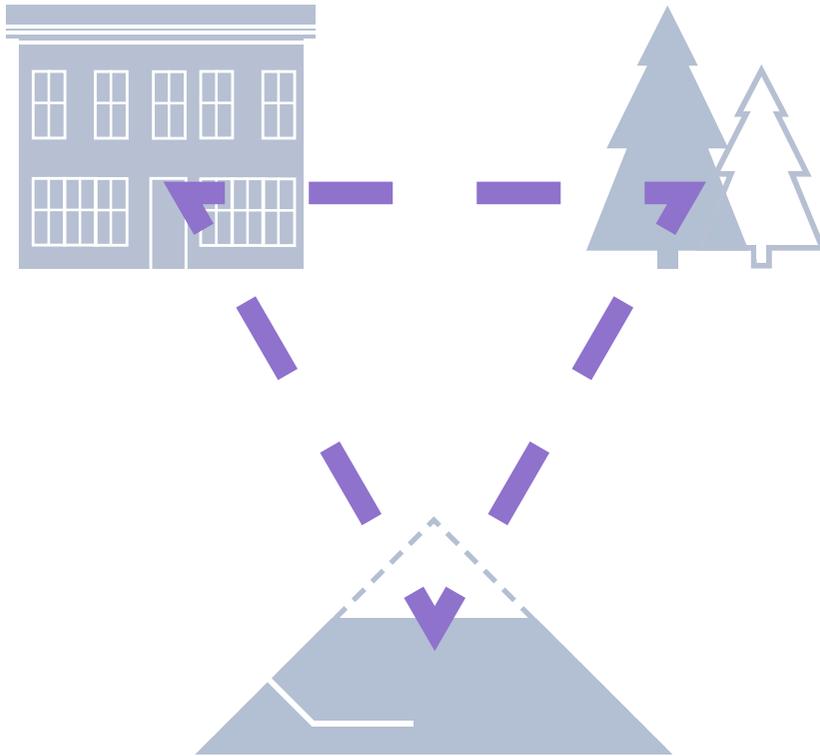
## culture

**“With a thriving outdoor tourism industry, Fayetteville is an interesting mix of old and new.”**<sup>[6]</sup> Like many of the towns in the surrounding region of West Virginia, Fayetteville is centered around the historic downtown core of shopping and other types of commerce. As one gets directed further from that center the streets remain in a grid like pattern that lead to the larger more commercial businesses and finally one would get to the residential areas which are tight but start to follow the contours of the landscape. Eventually homes would become spaced at a much further distance.

In these towns there is a great sense of community. Most of the businesses in the area are small family owned places that the people of the community support. Along with those small businesses there are the major industries like mining, which have a large historic presence as well as a presence today. Fayetteville and other towns once relied heavily on the industry of coal but are now finding more support by the tourism industry. **“The history that once made this town what it is today, is now being a main draw to the area.”**<sup>[7]</sup>

# Connection

## mine nature town



Town, Nature, and Mine are three key features that can be found all across the state of West Virginia. When one feature is present it is inevitable to find another if not both of the others tied right into the first. Mining has a direct correlation with nature because it is one of the main natural resources of West Virginia. It has been taken from the earth since the eighteen hundreds and continued to grow in amount to this day. With a mine comes men to work the mine along with their families and because many of the mines that were founded were in very remote areas a town usually came with it. These towns would continue to grow as long as the mine continued to produce high tonnage to pure bituminous coal. Today many of these towns have gone away but there are still some that are still in use. When the mines would close many of the men would find work in neighboring mines, which meant moving their families thus having the mining town fade away. The connection of Town, Nature and Mine has been present since the beginning of mining in West Virginia.

The nature of West Virginia can be seen everywhere throughout the state. Nature affects the town greatly. Because West Virginia is located in the Appalachian Mountains the terrain is extremely rugged. Which makes finding the location for a town difficult. Many of the towns in this area choose to locate in a few different locations. The first is a location that is at a low elevation in the valleys of the mountains. This places the town usually on a river with an ideal location for the railroad to come through. The second location is a rather small flat spot at a higher elevation, which places them at a better location to avoid flooding from mountain runoff. When looking at many different towns throughout West Virginia they are spread out over all different locations but they all take into account the terrain and other geological features of the region.

p l a n n i n g

# emascher park

Ruhr district in Germany historically was one of the most polluted and environmentally devastated regions of the world. However with the "International Building Exhibition" or IBA that has taken place at Emscher Park the entire Ruhr District in Germany is seeing a transformation of the old run-down and abandoned landmarks into new recreational uses still maintaining the area's rich history.

The Ruhr district is historically known as one of the leading producers of steel and coal in Europe. Over the last few decades the industries has been restructured resulting in the abandonment of many industrial facilities. **"In the face of this abandonment and decay, the State Government of NorthRhine-Westphalia created a regional redevelopment plan"**[1] The plan started in 1989 and over the course of a ten year period Emscher Park has been able to:

- **"give the region a greener image and breathe life into the old industrial plants"** [2]
- **"promote redevelopment called "Project Ruhn" which focuses on cleaning up the Emscher River"** [3]

**"The master plan for the region specifically targeted industrial sites so as to improve the quality of the undeveloped areas surrounding them and to save money by making use of the existing infrastructure."**[4] The project has given the area of Ruhr lasting improvements in living and working conditions by upgrading the ecological and aesthetic quality of their countryside. The project stretches over 115 square miles with many cities that lie between.

**"The redevelopment has given the region a greener image, created a more cohesive community and maintained the area's identity."** [5]

images courtesy of  
top | M:AI | Landschaftspark Buisburg  
middle | M:AI | Zollverein World Heritage  
bottom | M:AI | Gasometer Oberhausen



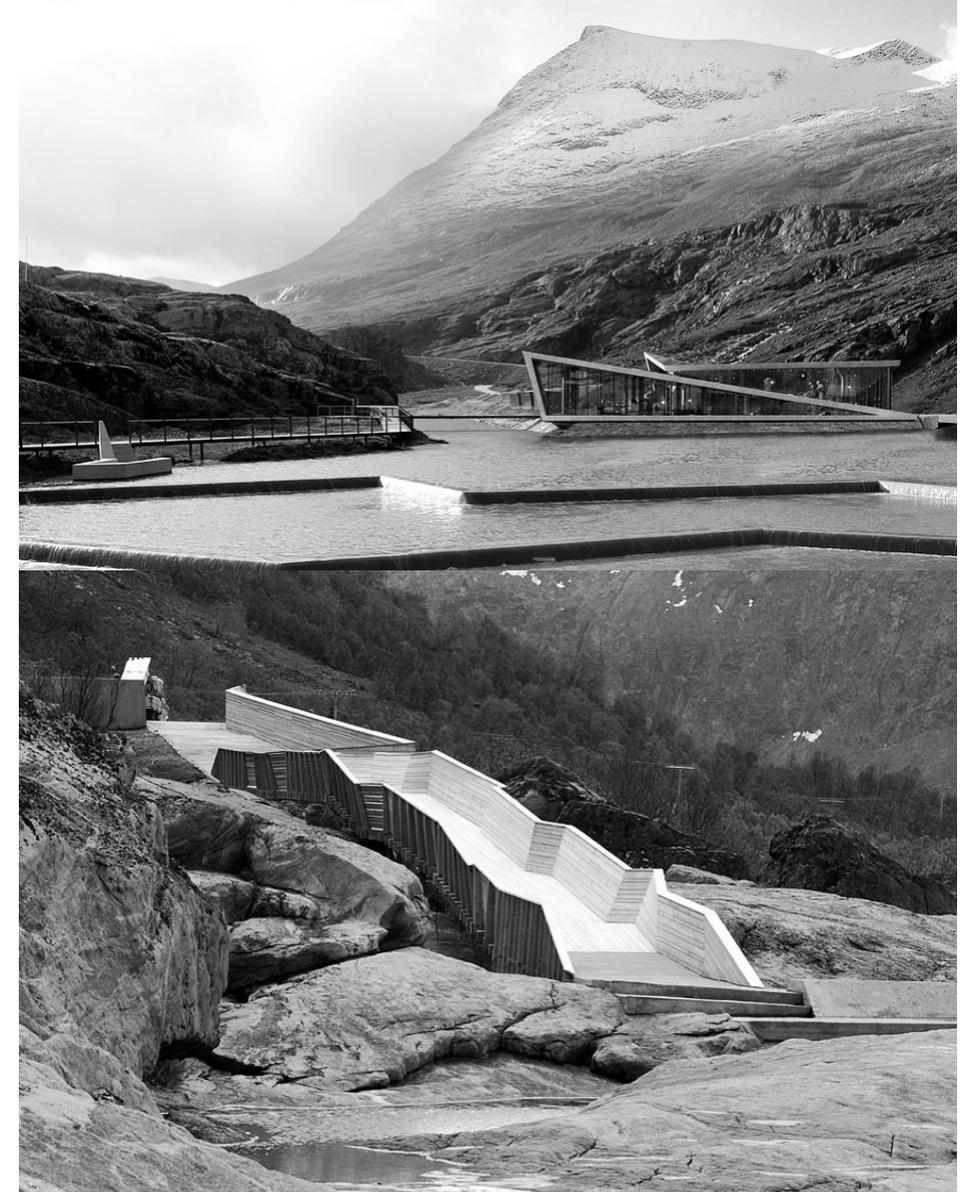
# norway tourist route

**“Scenic roads for exploring Norway’s breathtaking landscapes” [6]**

The concept of the National Tourist Routes in Norway is to express the character and history of the country and communities that the routes travel through. The route covers over 1,150 miles that runs the full length of the west coast of Norway.

Throughout the National Tourist Route there are eighteen different routes that have been chosen by the Norwegian Public Road Administration. At these locations there are things such as resting places, scenic overlooks, and restaurants. The aim was that with these architectural improvements would not only draw visitors but also enhance the experience of the visitor. Most of the projects are conducted by Norwegian architects but also involved in this project are popular architects such as Peter Zumthor and Louis Borgeois.

**“Our job is to make sure the routes are adapted to travellers’ needs. We do so by building spectacular viewpoints with service building, car parks, furniture, paths and art.” [7]**



# natchez trace

The Natchez Trace or “Old Natchez Trace”, is a path that travels over 440 miles from Nashville, Tennessee to Natchez, Mississippi. The trace was created by animals following the salt licks of Tennessee to the grazing land of Mississippi. Historically used by the Native Americans, “Kaintacks,”[8] to follow the bison and other large animals. The trace later became a relatively well known path with other European settlers.

Today the Natchez Trace Parkway is a portion of the National Park Service that remembers the original “Old Natchez Trace”, and preserves different portions of the original trace. The main portion of the trail is a two-lane parkway that travels along the original route. The parkway has regulations to keep the flow and density of traffic down. Commercial traffic is not allowed and has a speed limit of 50 mph.

The parkway is known for the scenic beauty that the area has to offer. The trace has many highlights that range from historic mounds, abandoned towns, scenic overlooks, swamps, and trails.

**“The Natchez Trace Parkway is a 444-mile drive through exceptional scenery and 10,000 years of North American history.”[9] | national park service**



004  
west virginia connection

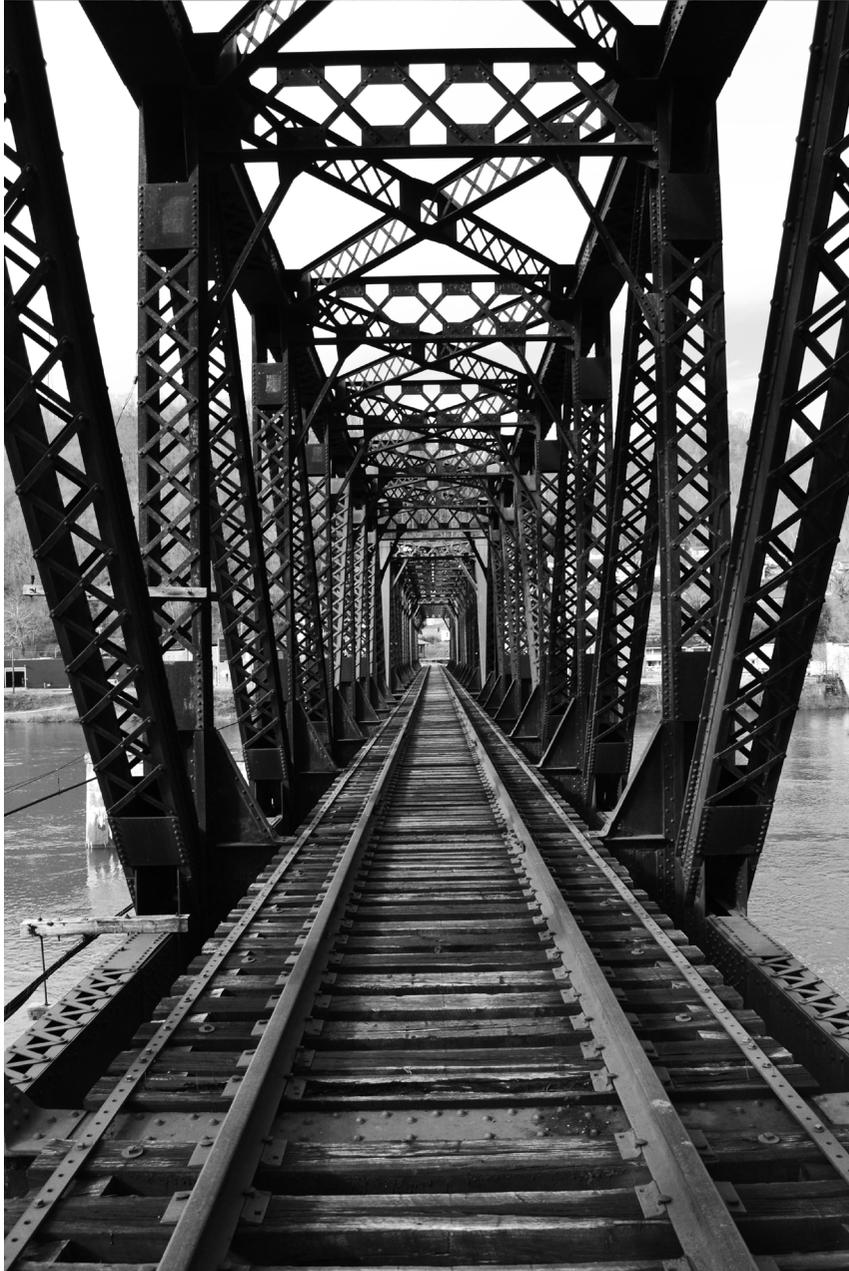
# Planning Statement

## West Virginia Connection

The planning of the area took much influence from the second planning precedent, the Norway Tourist Route. Like in the Norway Tourist Route, the West Virginia Connection (WVC) highlights existing features; mines, nature, and towns. The WVC travels roughly 85 miles through Nicholas and Fayette County utilizing existing roadways for the majority of the travel. The route also uses hiking trails, abandoned and active mining tracks and portions of the New River for extensions off the main trail system.

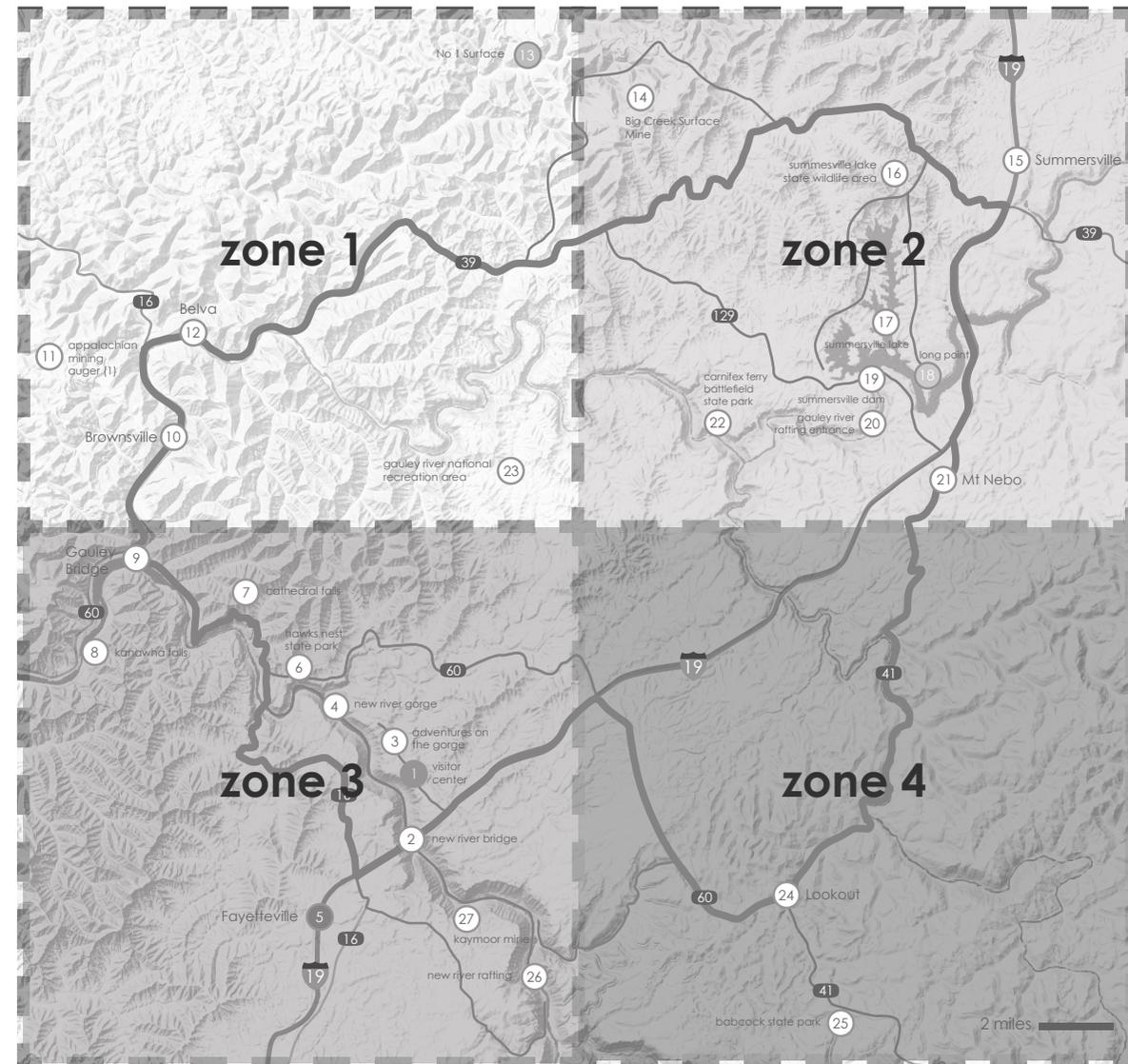
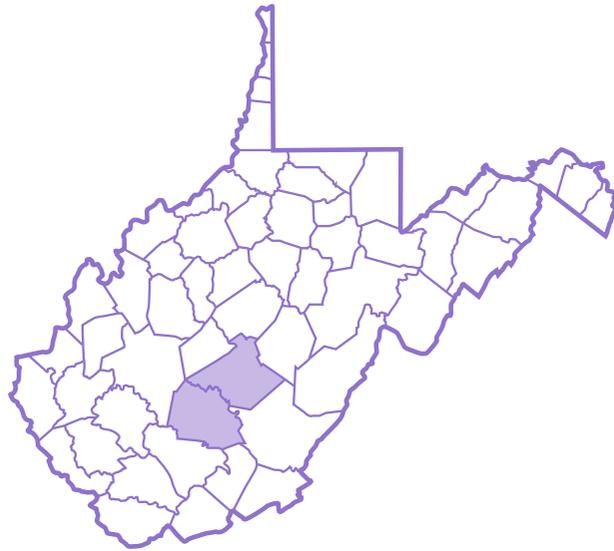
I chose to make the planning of the West Virginia Connection a circuit, unlike the straight north to south line of the Norway Tourist Route, for a couple different reasons. The first being the scale of this project, the scale of the WVC is much smaller, the smaller circuit will allow for easy travel around the entirety for any tourist or local. The second being that I believed that this circuit would allow for people to stay in this specific area for a longer period of time allowing for this area to benefit even more from the tourism industry.

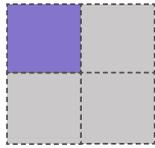
The whole concept or goal for the WVC planning was to allow for an increase in tourism in the rural areas in which the WVC passes through.



# West Virginia Connection

master plan

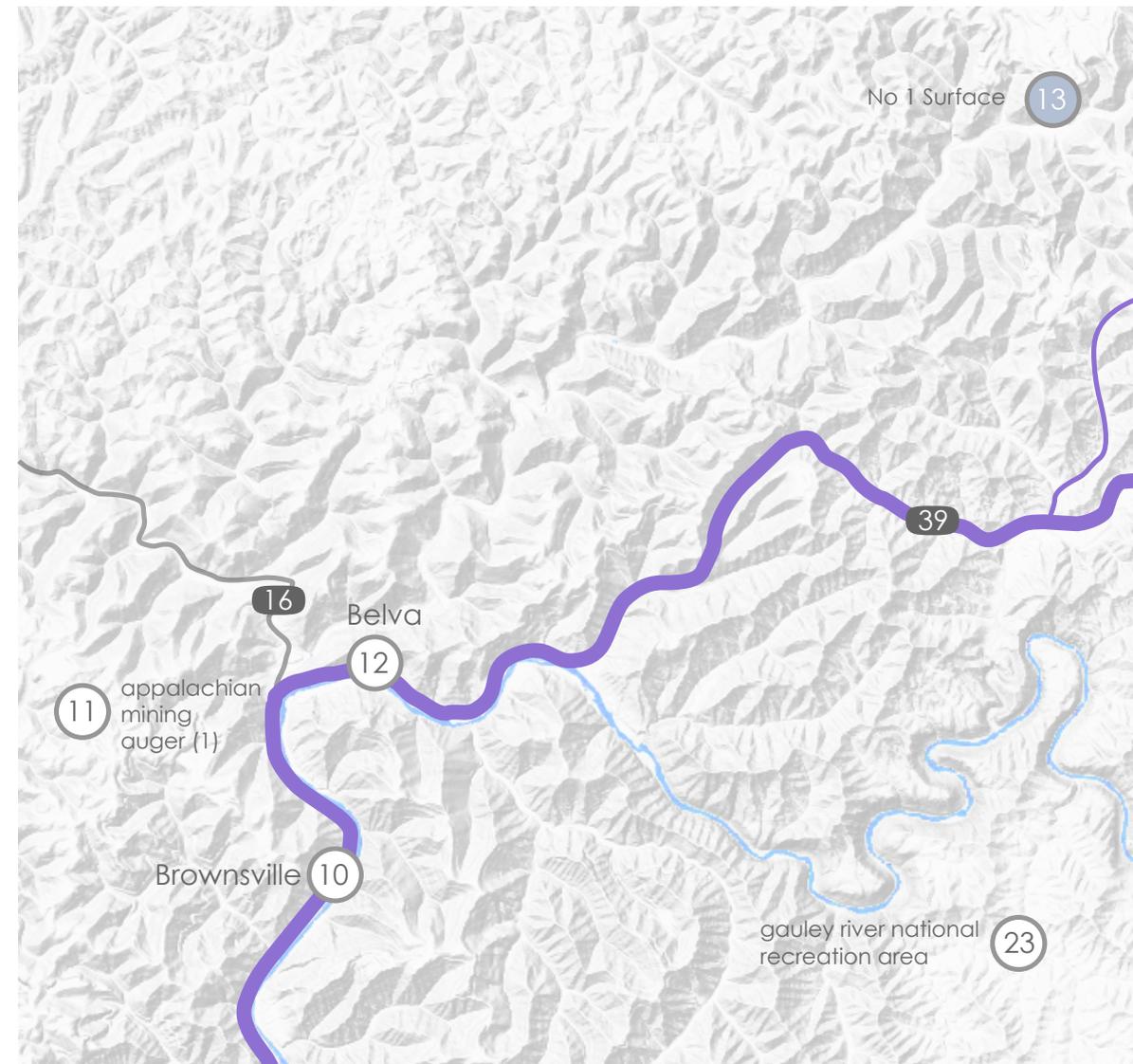




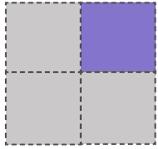
# West Virginia Connection

## zone 1

WVC Highlights	Key #
Brownsville	10
Appalachian Mining Auger (1)	11
Belva	12
No 1 Surface	13
Gauley River National Recreation Area	23



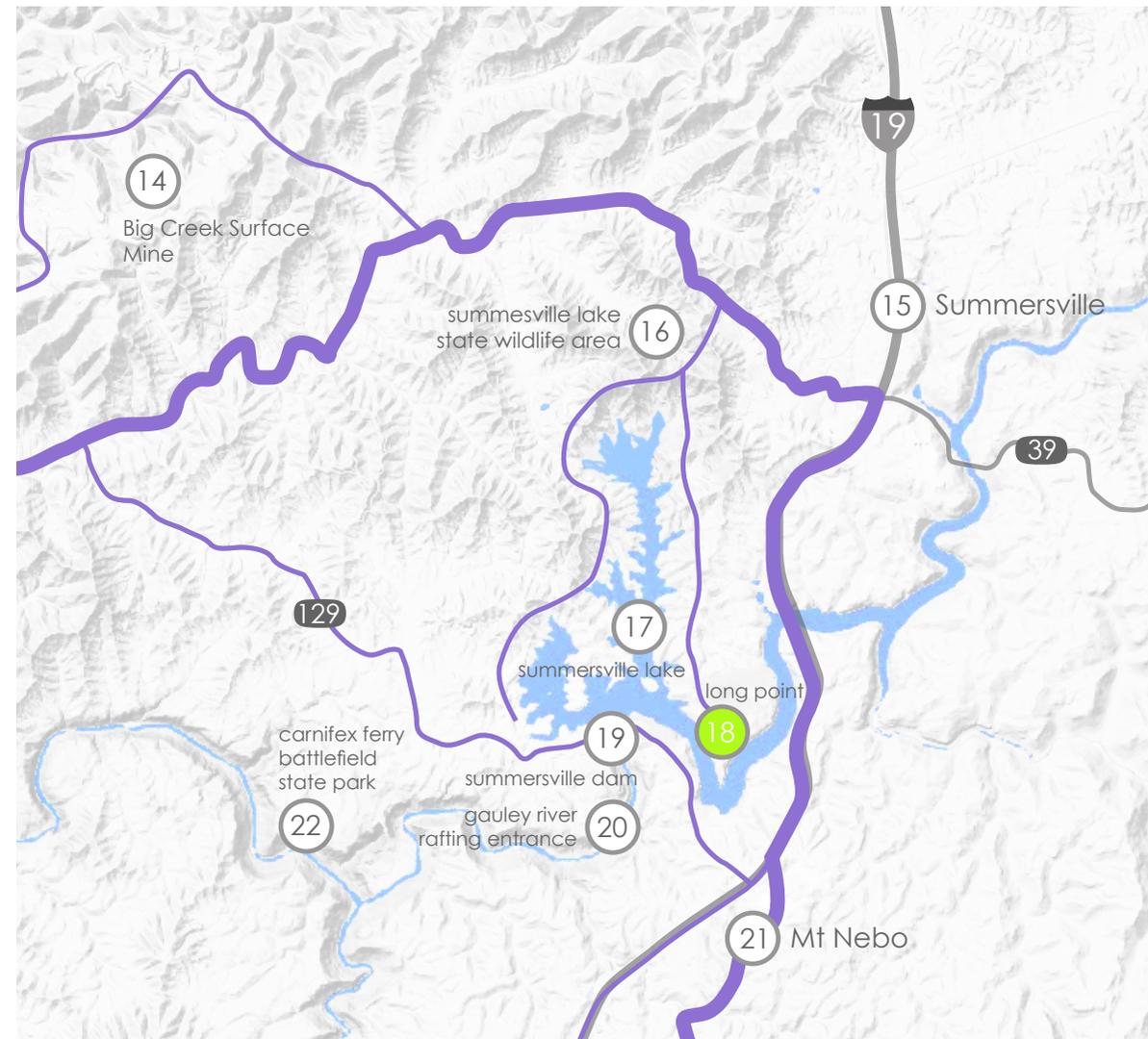
2 miles

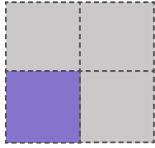


# West Virginia Connection

## zone 2

WVC Highlights	Key #
Big Creek Surface Mine	14
Summersville	15
Summersville Lake State Wildlife Area	16
Summersville Lake	17
Long Point	18
Summersville Dam	19
Gauley River Rafting Entrance	20
Mt. Nebo	21
Carnifex Ferry Battlefield State Park	22

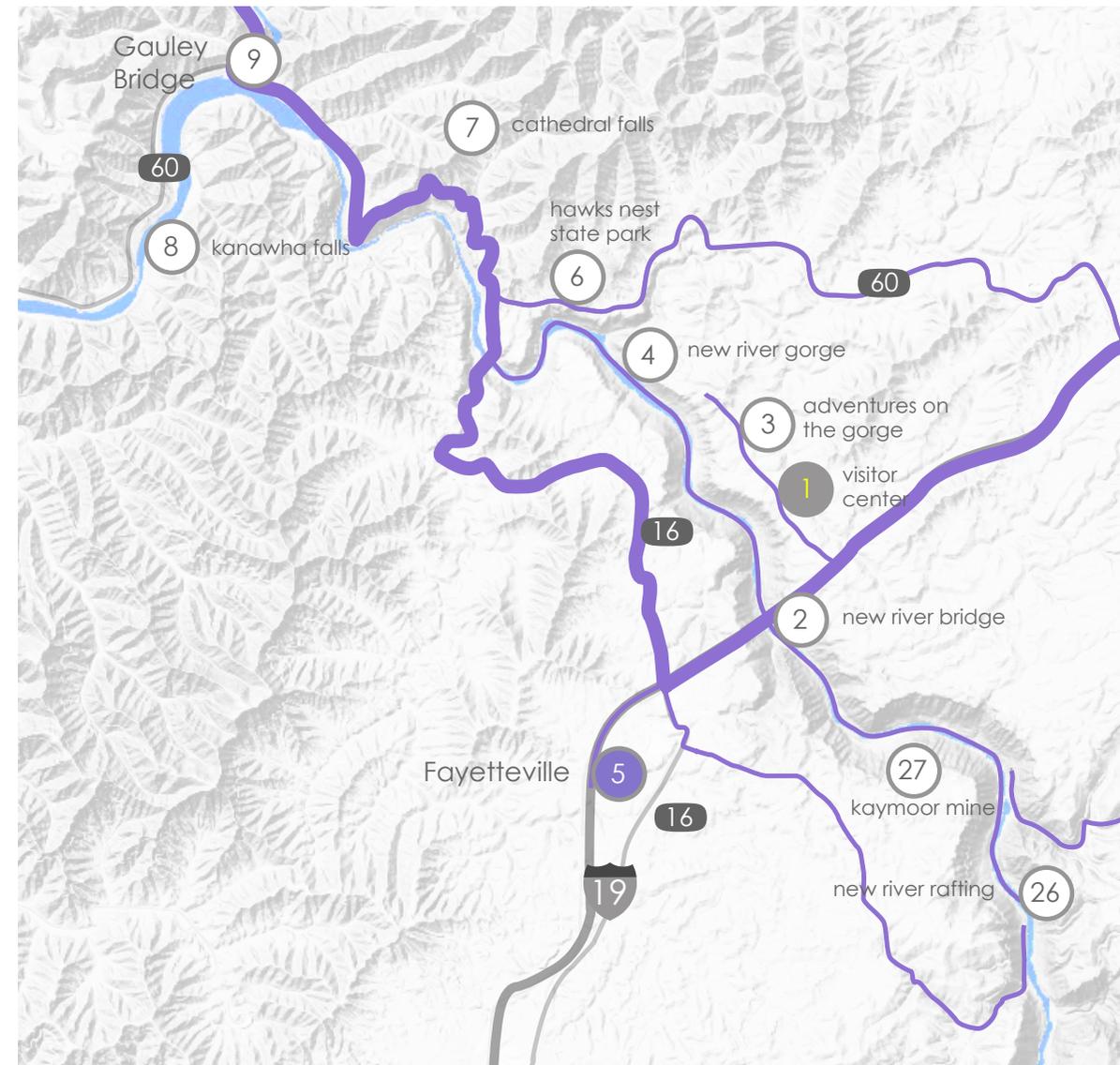




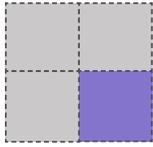
# West Virginia Connection

## zone 3

WVC Highlights	Key #
Gauley Bridge	9
Kanawha Falls	8
Cathedral Falls	7
Hawks Nest State Park	6
Fayetteville	5
New River Gorge	4
Adventures on the Gorge	3
New River Bridge	2
WVC Visitor's Center	1
Kaymoor Mine	27
New River Rafting Entrance	26



2 miles



WVC Highlights

Key #

Lookout

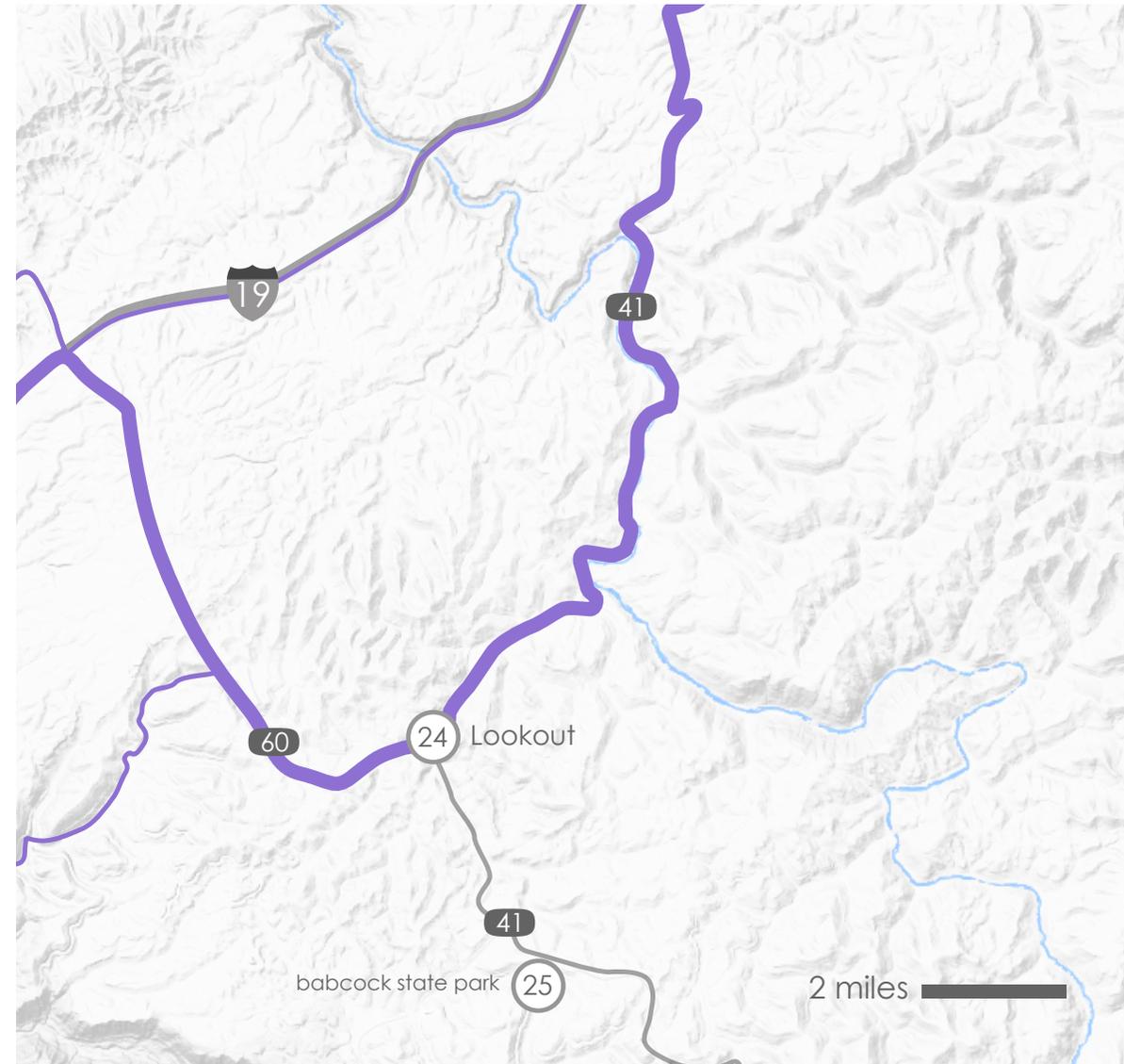
24

Babcock State Park

25

# West Virginia Connection

zone 4



2 miles

2 miles

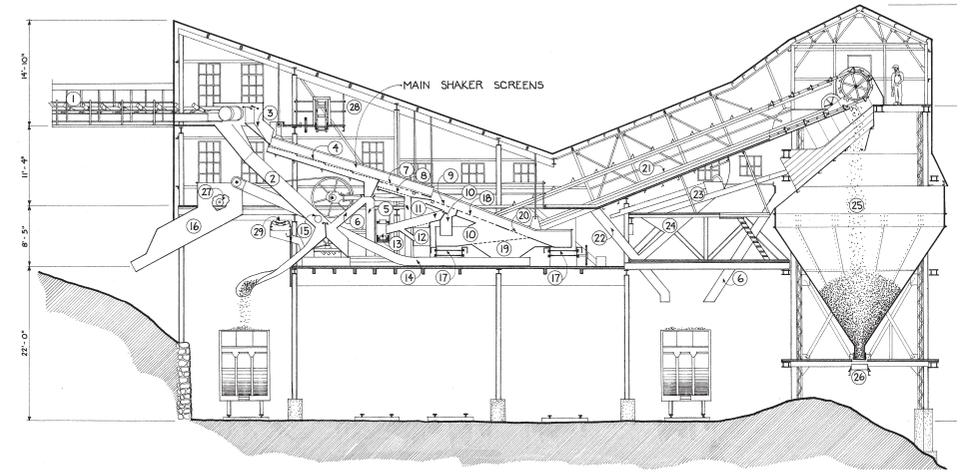
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a r c h i t e c t u r a l

# kaymoor mine

The Kaymoor Mine is a precedent because architecturally it speaks to the vernacular of the area. The Kaymoor Mine is currently an abandoned underground that was established in 1899 by the Low Moor Iron Co. However currently the mine consists of a collection of mining machinery, coke ovens, mining buildings, and entrances that have been taken over by time and nature.

The Kaymoor Mine utilized extremely simple design principles that can be seen across the region. Because many of the structures on the mine site were simply just to protect the equipment from the elements there is no need to complex shapes or materials. The design was based on shedding snow, rain, and other elements in the correct direction and blocking wind. In keeping the form simple the structures on the mine were able to have the form follow the function. Allowing the building roof line to adjust where the equipment raised and dropped. The structures on the site also utilized modest materials. From the head house at the top of the mine using wood construction, to the processing plant at the bottom using wood construction with corrugated steel for siding and roof material.

The Kaymoor Mine structures also utilize the topography in different ways. The head house, which is located at the top of the mine, sits on columns and follows the contour of the gorge. The processing plant, which sites near the bottom of the gorge, carves out a portion of the gorge to create a flat area to sit on. There are also a few smaller structures at the top and bottom that simply site on flat portions. Topography is a key element everywhere in West Virginia so it was important to see how different structures utilize or take advantage of this.



images courtesy of  
top | Historic American Building Survey | Kaymoor Mine Section Processing Plant  
middle | Ramon Avina | Existing Kaymoor Mine Condition Processing Plant  
bottom | Ramon Avina | Existing Kaymoor Mine Entrance

# boat house

The Boathouse by TYIN tegnestue, used to be a Traditional Norwegian Boathouse that was located in More og Romsdale, Norway. However many of these traditional buildings are currently being renovated into rustic summer recreational structures.

For this particular structure the original was torn down but TYIN tegnestue re-used many of the materials for things such as formwork for the concrete walls and footings or internal wall paneling. Even though the original was torn down the **“simple shape, sensible placement and honest use of materials inspired the new building.”** [1] Similarly to the Kaymoor Mine, the Boathouse is a structure that emphasizes the simple structure and material. The structure utilizes two main materials, a local Norwegian Pine and a corrugated steel panel.

The site placement and adaptability was highly thought out. The structure partially sits on live rock, which creates a portion of the exterior wall. The placement takes into account scenic views with raise able panels and doors to take in the view and allow for boats to come in and out stilling the function of the boathouse.



images courtesy of

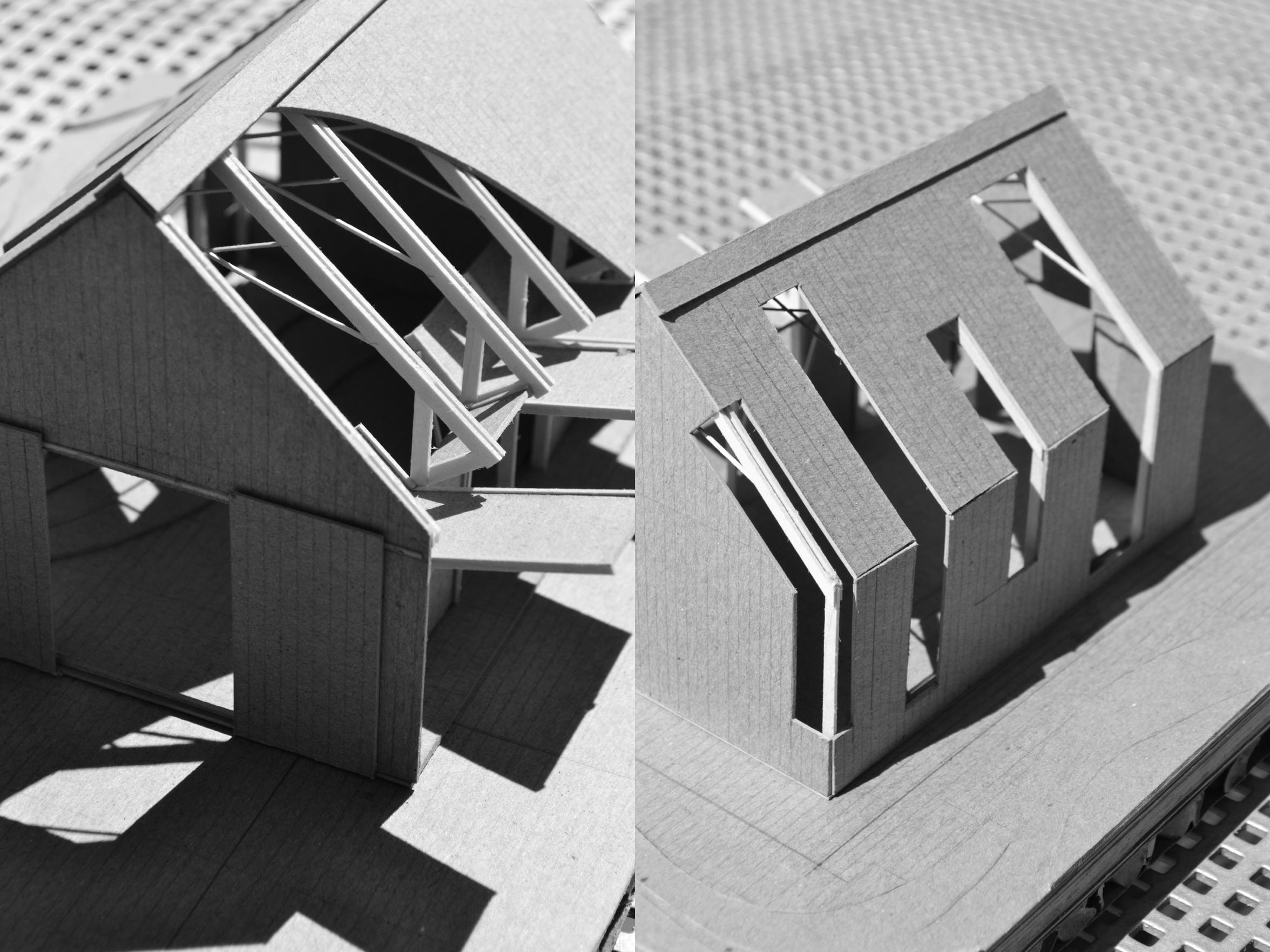
top | Pasi Aalto | Boathouse TYIN Tegnestue  
middle | Pasi Aalto | Boathouse TYIN Tegnestue  
bottom | Pasi Aalto | Boathouse TYIN Tegnestue

# boat house

case study model







# 006 conceptual designs

# Long Point

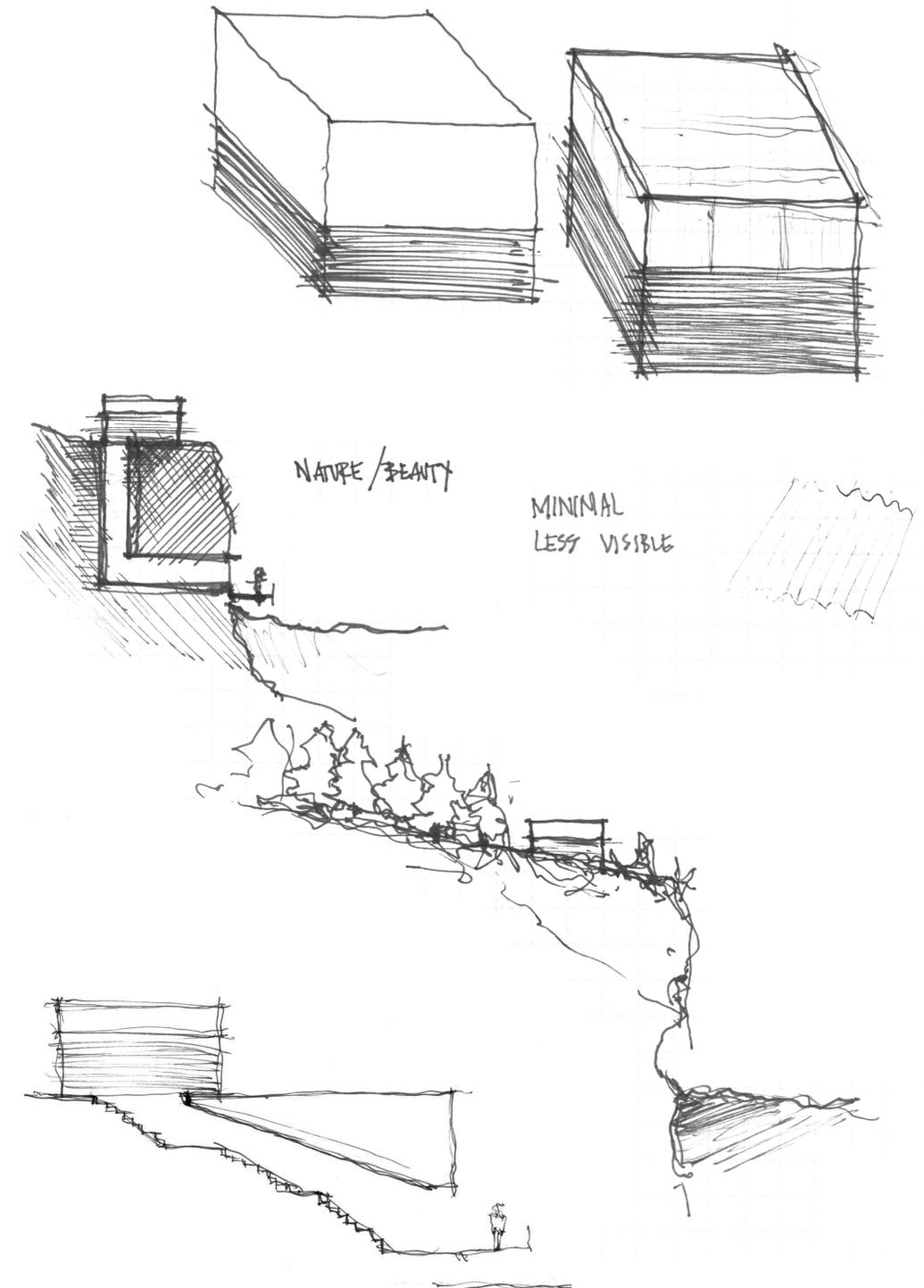
rest area | viewing platform

The Long Point is at the end of an existing trailhead that travels out to a point in Summersville Lake. The conceptual design for the Long Point site was to create a structure that would not destroy the natural beauty of the point but still allow for people to be drawn to the site.

The structure is placed on the top of the point 57 ft. above the average summer water height. Because Summersville Lake is created by the retention of mountain runoff water by the Summersville Dam that water level fluctuates in the Spring and Fall when the dam is opened. The concept is based around the summer water level because that is when the tourism season is the highest.

The program of the structure is a viewing platform and also a rest area for people using the trail. The structure as the top of the point would be a stone box that would support a wood frame system that would connect the corrugated plastic sides to the top of the stone base. On the roof of the structure there will be solar panels that would power LED lights to illuminate the upper portion of the box allowing the structure to glow at night. Inside the structure there is a set of stairs mined out of the stone that would lead to a small viewing platform right above the water level. Creating a platform for great views but one that also does not disturb the view onto Long Point.

conceptual sketches

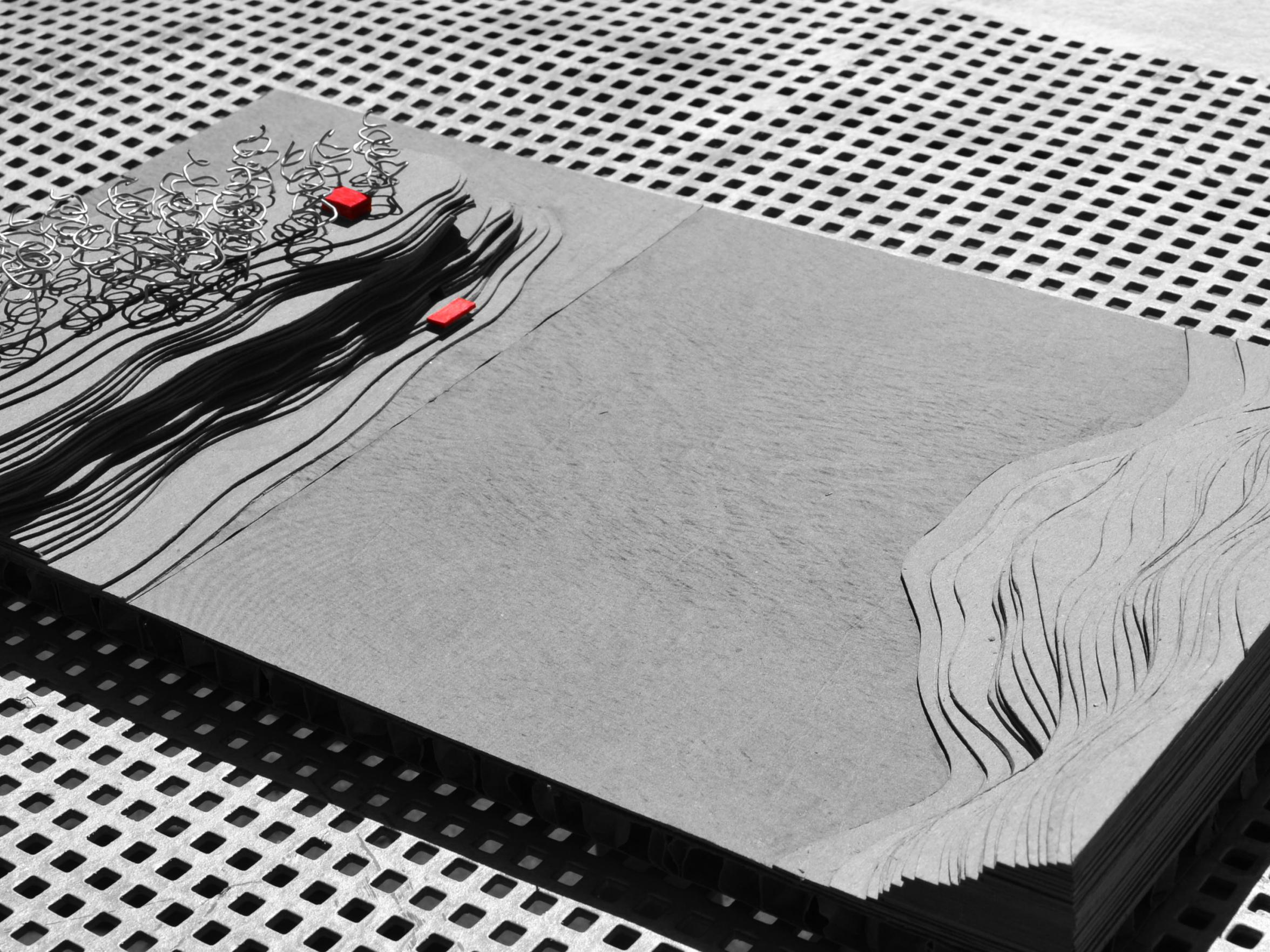


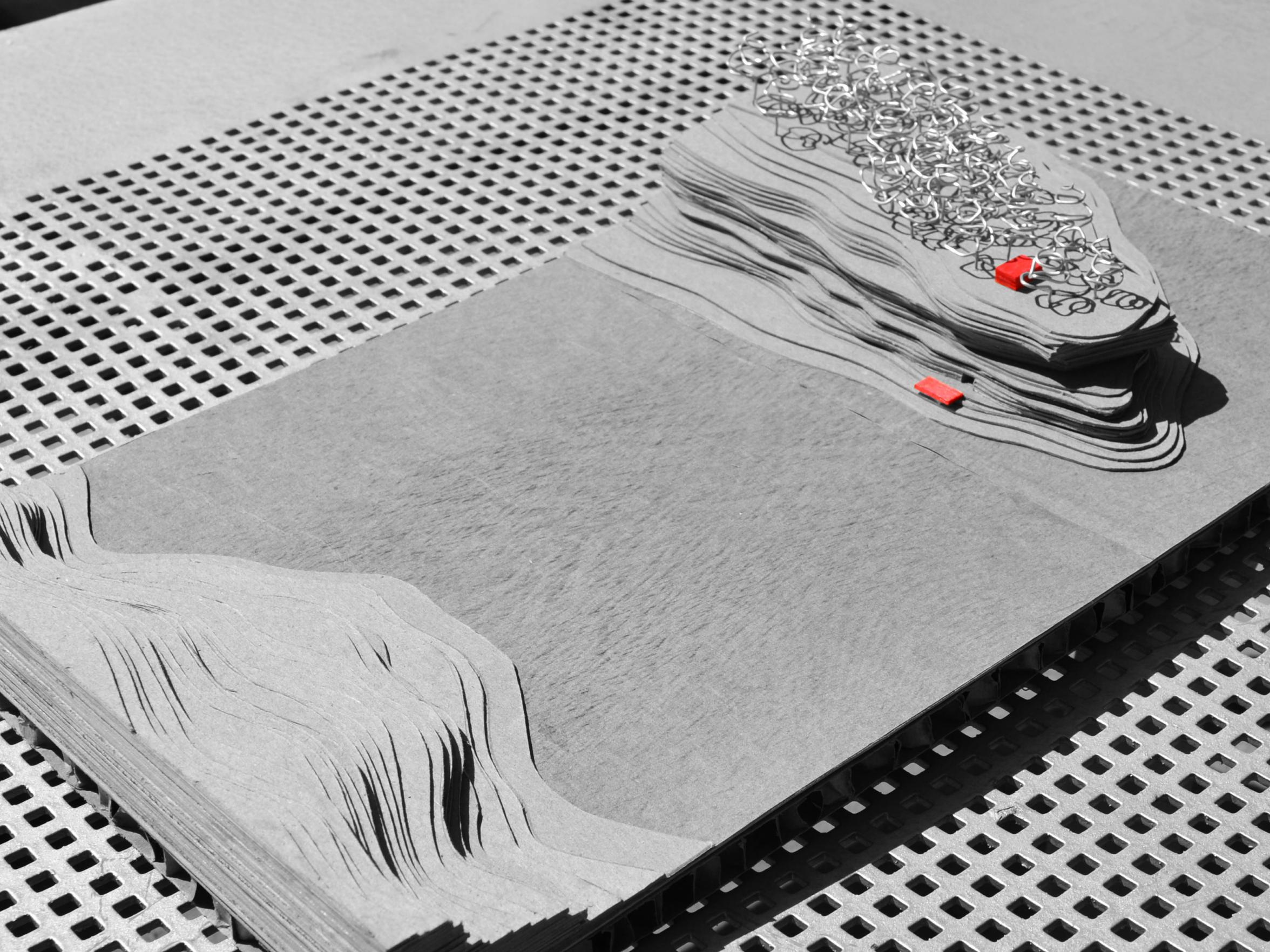
Long Point aerial

250'









# No 1 Surface

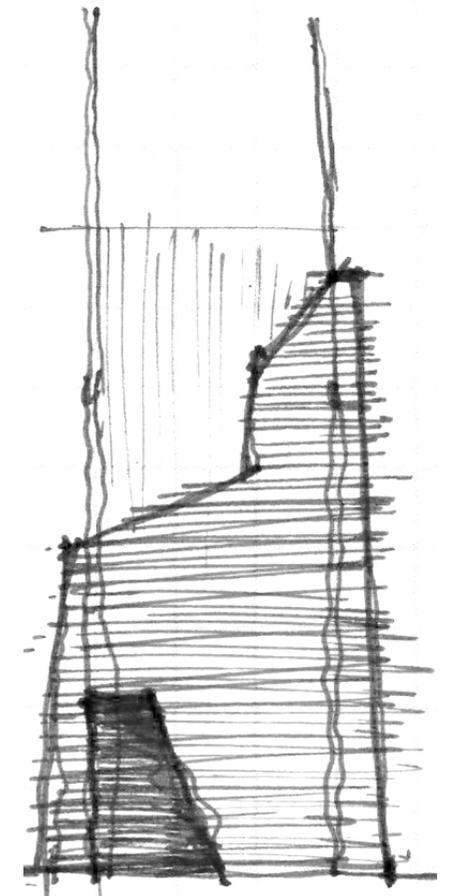
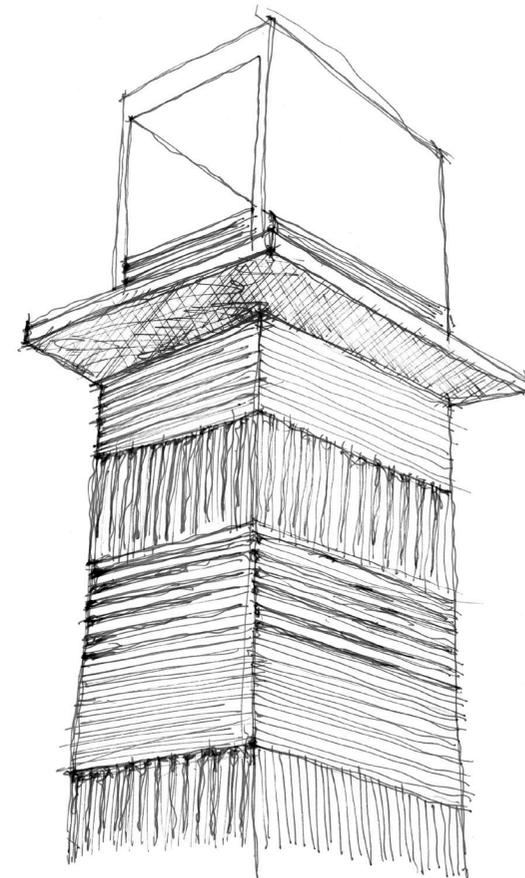
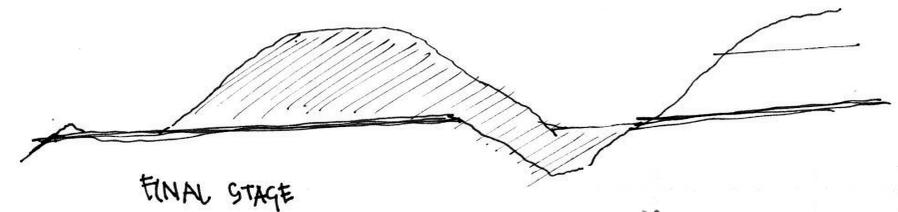
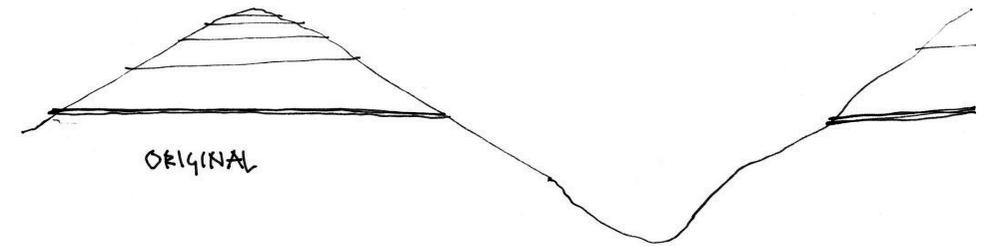
## viewing tower

The No 1 Surface mine is an active mountain top removal surface mine site. This is one of the largest mountain top removal sites in the region and has been active since 1998. The mine is owned by Alex Energy Inc. and employed over 250 employees around the clock.

There are five key steps in Mountaintop removal. First, the layers of rock are removed from above the coal. Second, the upper seams of coal are removed with the remaining rock and dirt placed in the adjacent valley. Third, the lower seams of coal are removed with the rock and dirt being piled up in the already filled in adjacent valley. Forth, some stages of re-grading start happening as coal is still being mined. Finally, when all the coal is gone from the mine, the last stages of re-grading takes place. What these stages do is shift the mountain not allowing for the original depth of the valley.

The conceptual design for this site is to create a series of two towers that express the original mountain and valley. The first tower will be a marker of the original elevation of the mountain. The tower placement is exactly where the mountain reached its peak. The tower will be 157 ft. tall, which is the height of the material that has been taken away from the mountain. The design of the tower is meant to control views of those ascending and descending. The design will put emphasis on different aspects of the mine and landscape of the surrounding area. The second tower will be placed at the original depth of the valley and the design of this will be similar to the first tower but smaller. The overall concept is to express the original height and depth of the mountain and valley.

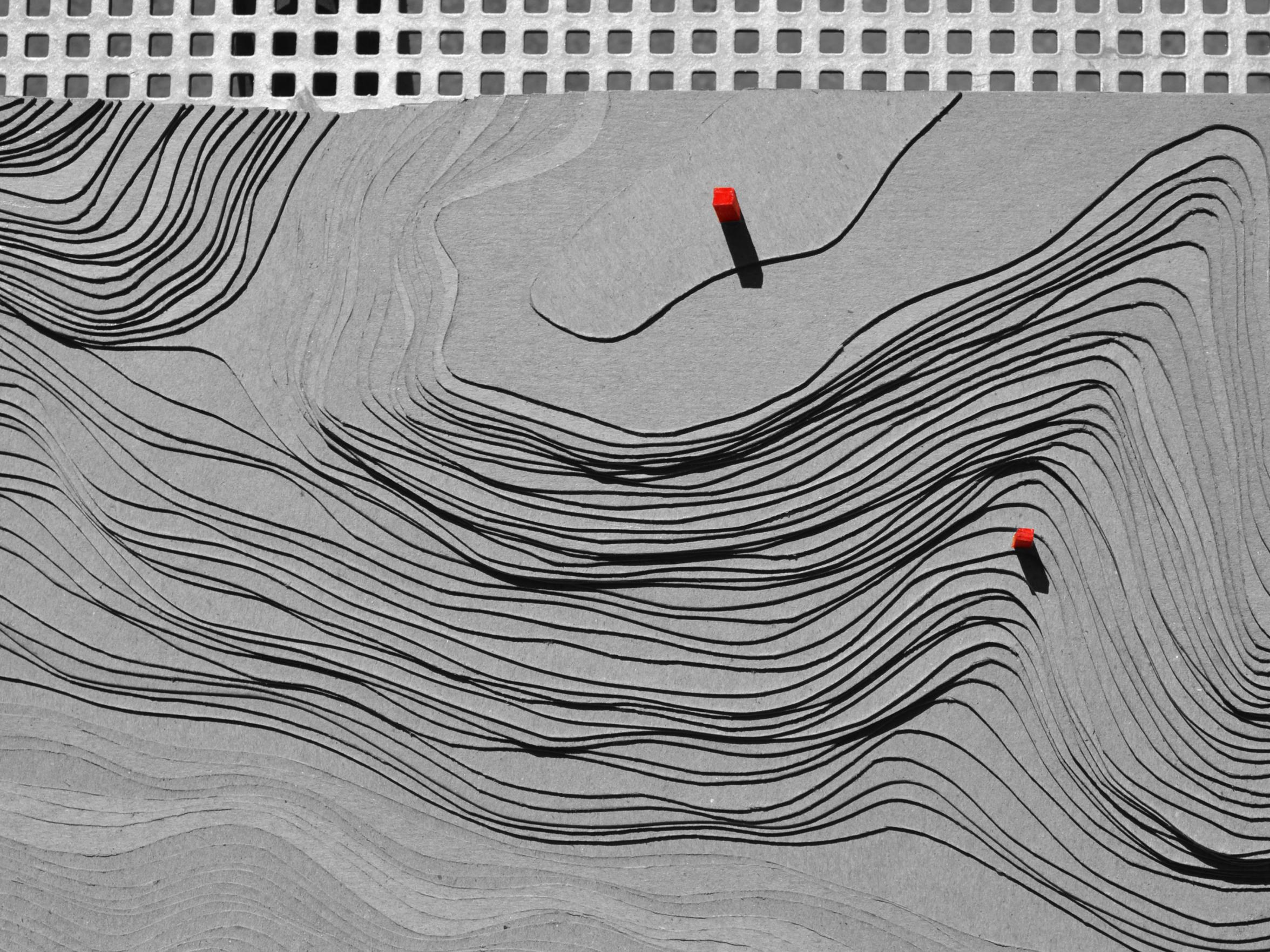
## conceptual sketches

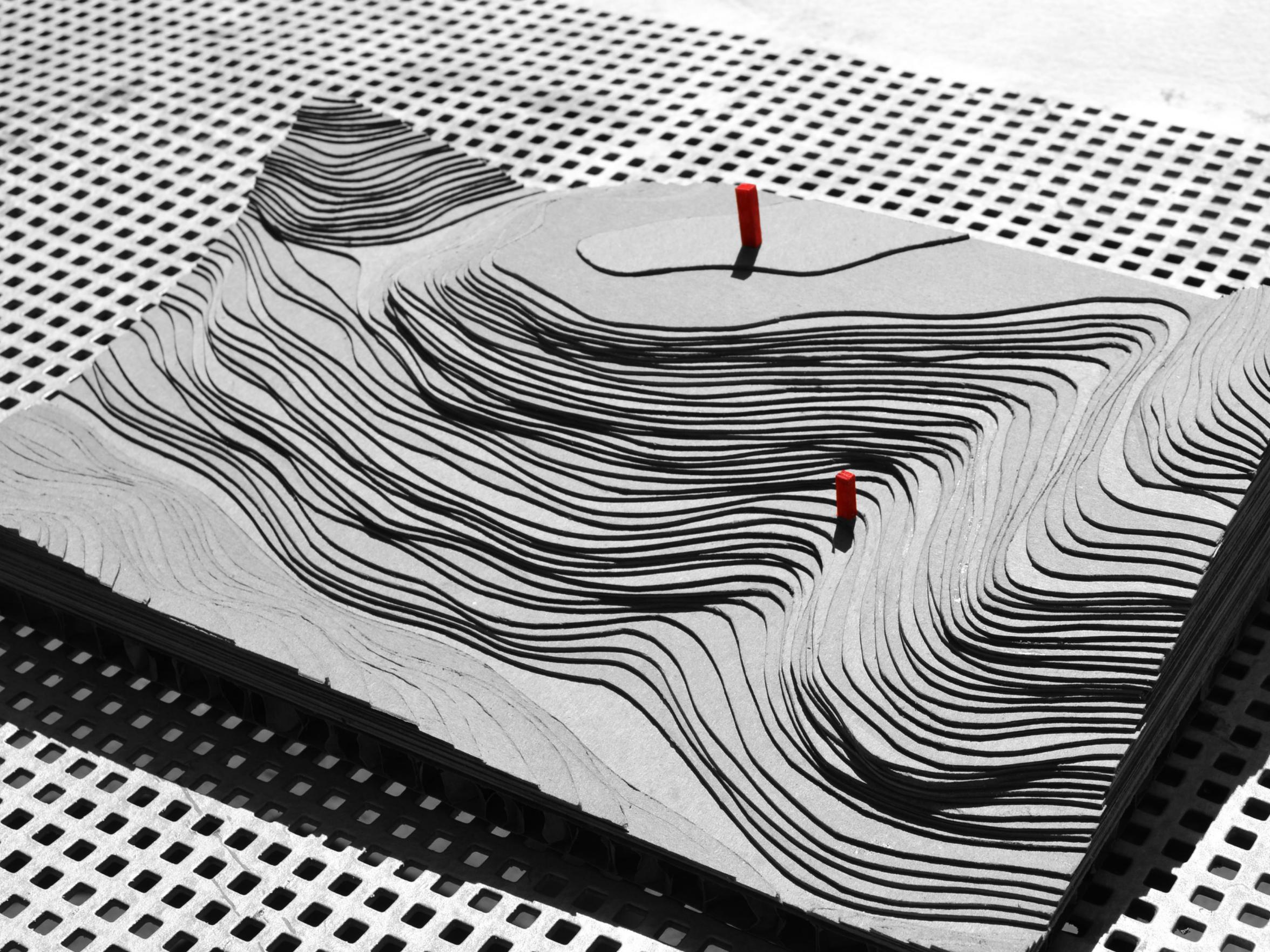


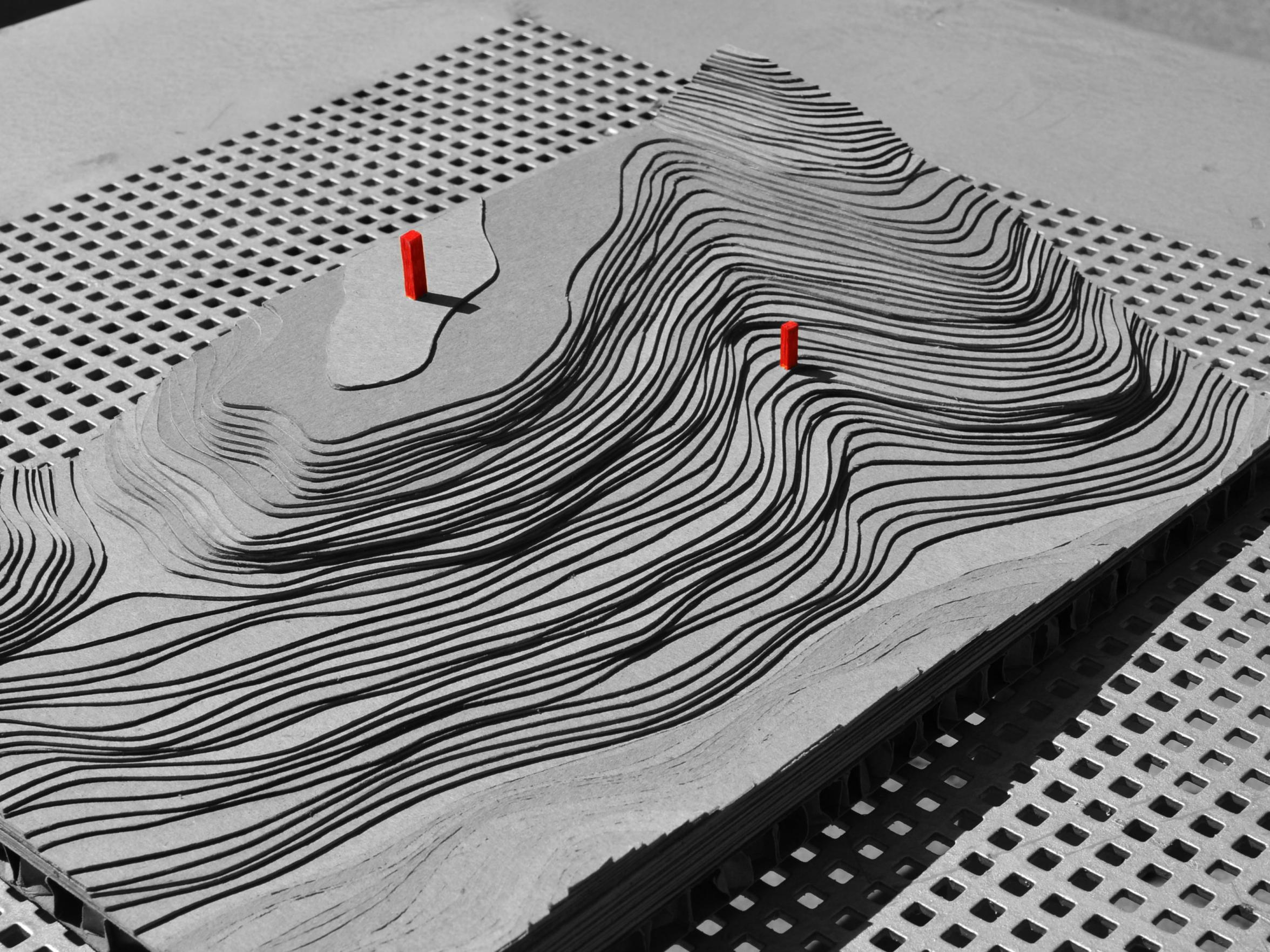
# No 1 Surface aerial

250'







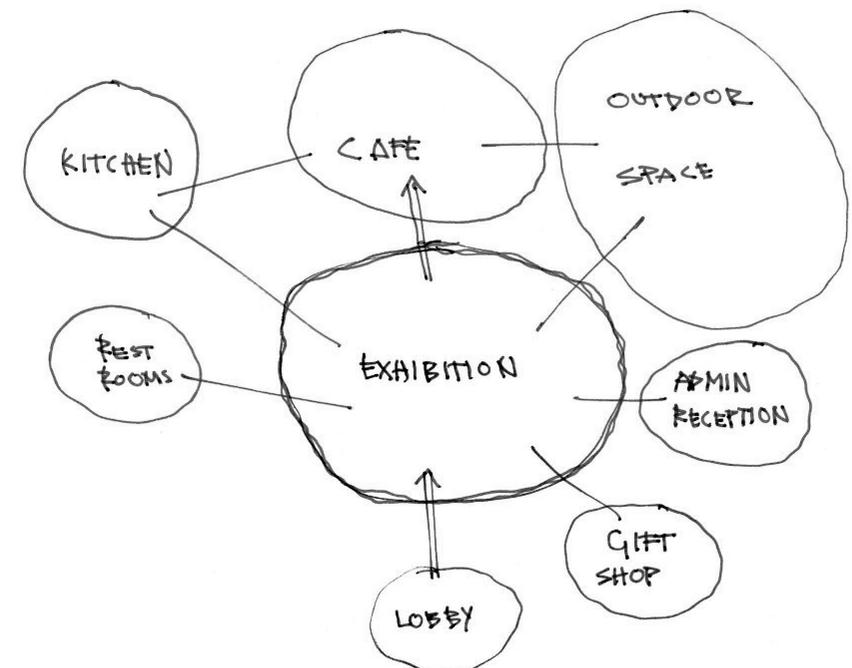
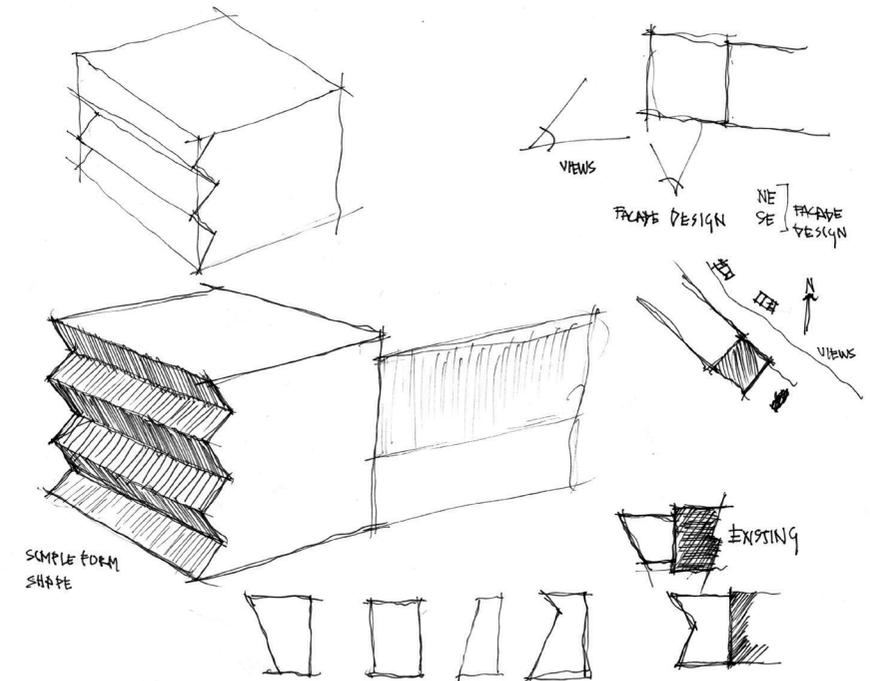


# Fayetteville

## WVC Headquarters

The conceptual design for the Fayetteville site is based around the idea that the town is now becoming more reliant on the tourism industry. The site here is located at the end of the historic business district on the edge of town. The building that conceptually will be placed here is an office headquarters for the West Virginia Connection. Programmatically the building will be broken up into offices to run and maintain the WVC, while also offering community exhibition and conference space to hold different events throughout the community. Architecturally the building is meant fit into the context of the historic downtown area but not be blurred as one of the original historic buildings. The aesthetics of the building is to be in the same materiality of stone, wood, and steel, similarly to the other architectural elements along the WVC.

## conceptual sketches

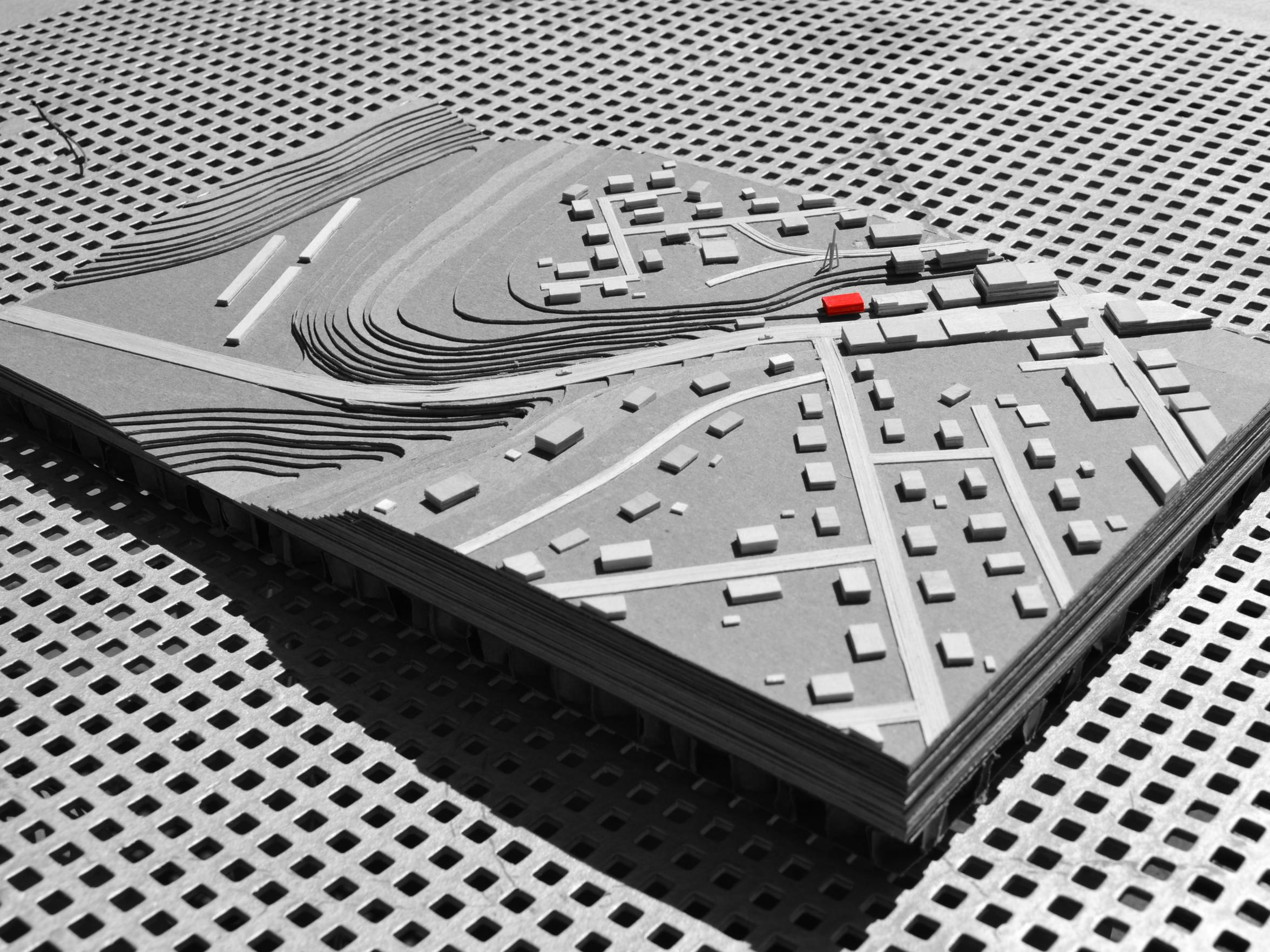


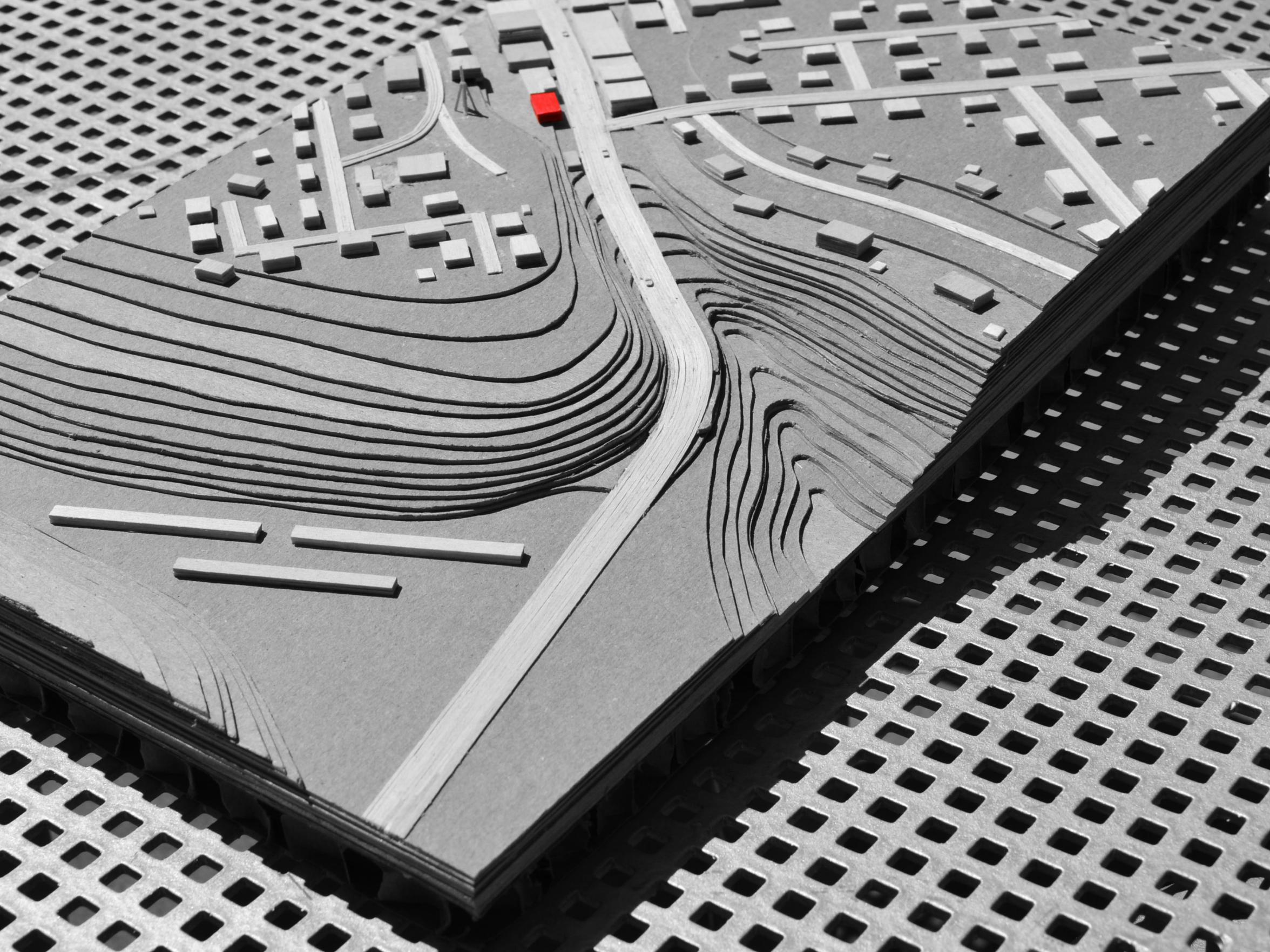
Fayetteville aerial

250'









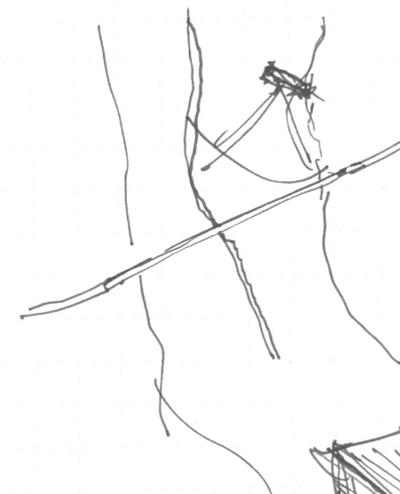
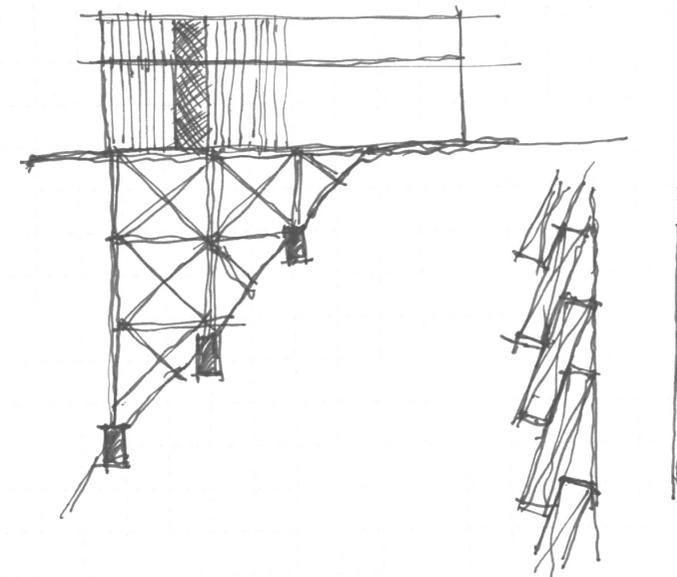
conceptual sketches

# New River Gorge

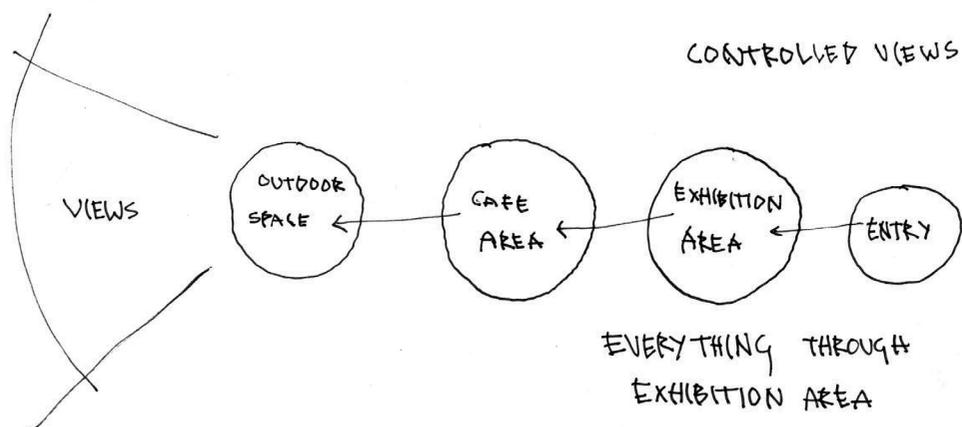
## WVC Visitor's Center

The New River Gorge site lies on the east side of the gorge just north of the New River Gorge Bridge. The New River Gorge is one of the areas major attractions; it acts as the center of the growing tourist industry. Many of the possible outdoor activities such as white water rafting, mountain climbing, and hiking are all made possible with this feature of the area.

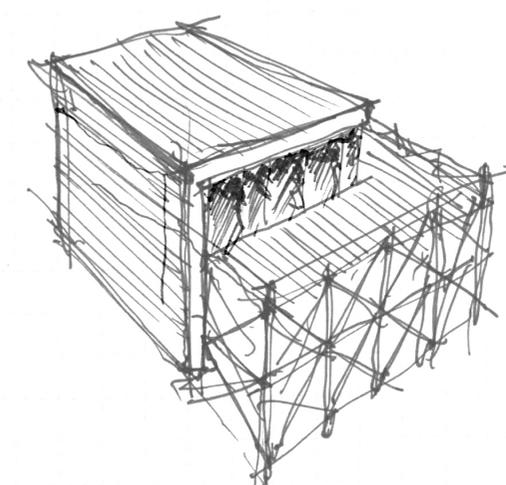
The design for New River Gorge site is meant to be the West Virginia Connection main visitor information center. The concept for this design is to create a space that has everything flow through an entrance, information, exhibition, and café space to end at a viewing area that looks out into the gorge. It is important that the structure reflect the architecture and other structures of the region since many of these existing structures have been influences already by the topography.



- \* N
- SOUTH GLAZING
- VIEW SOUTH TOWARDS BRIDGE
- ENTRANCE / VIEWS CONTROLLED

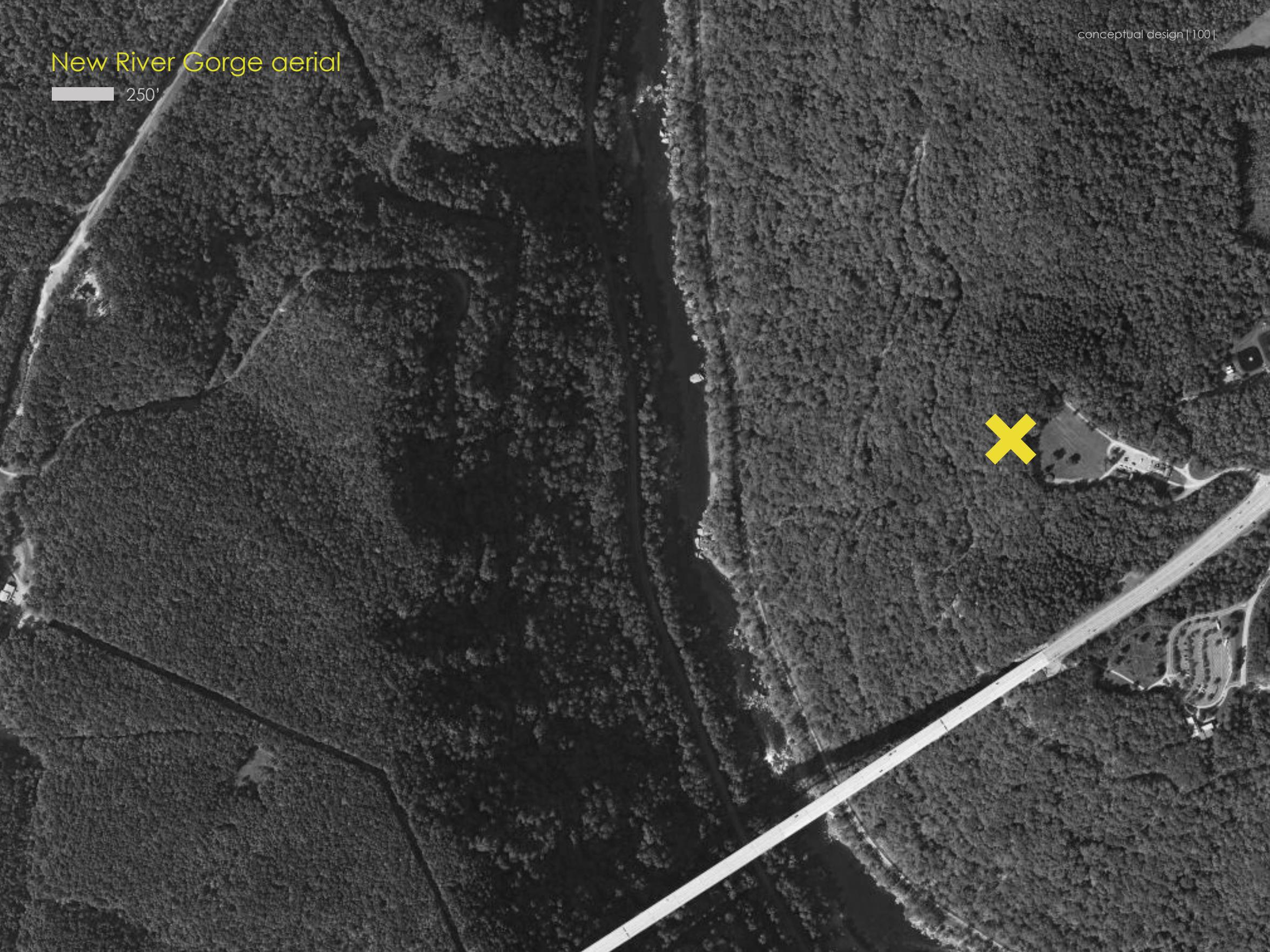


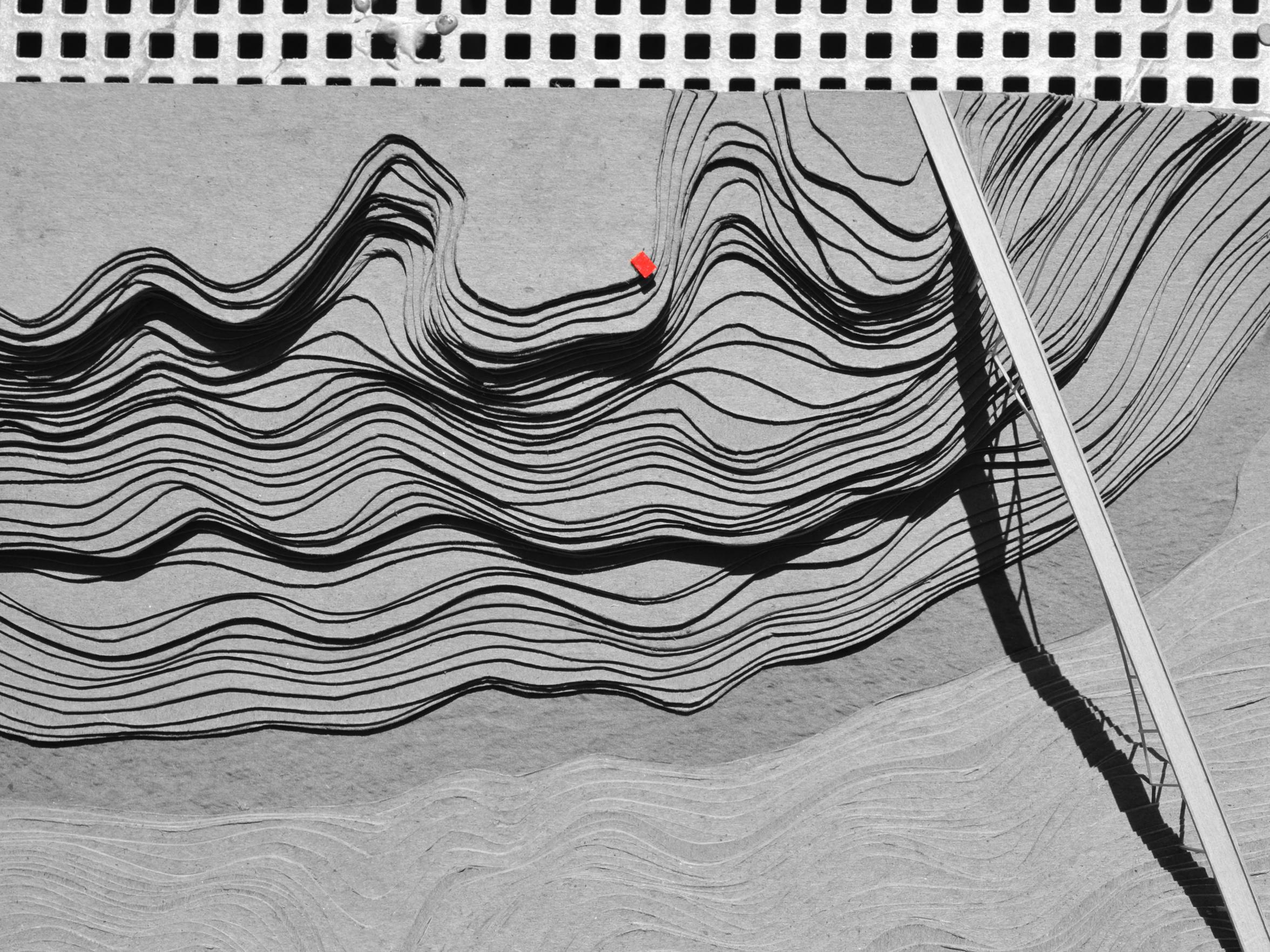
NORTH  
FACE

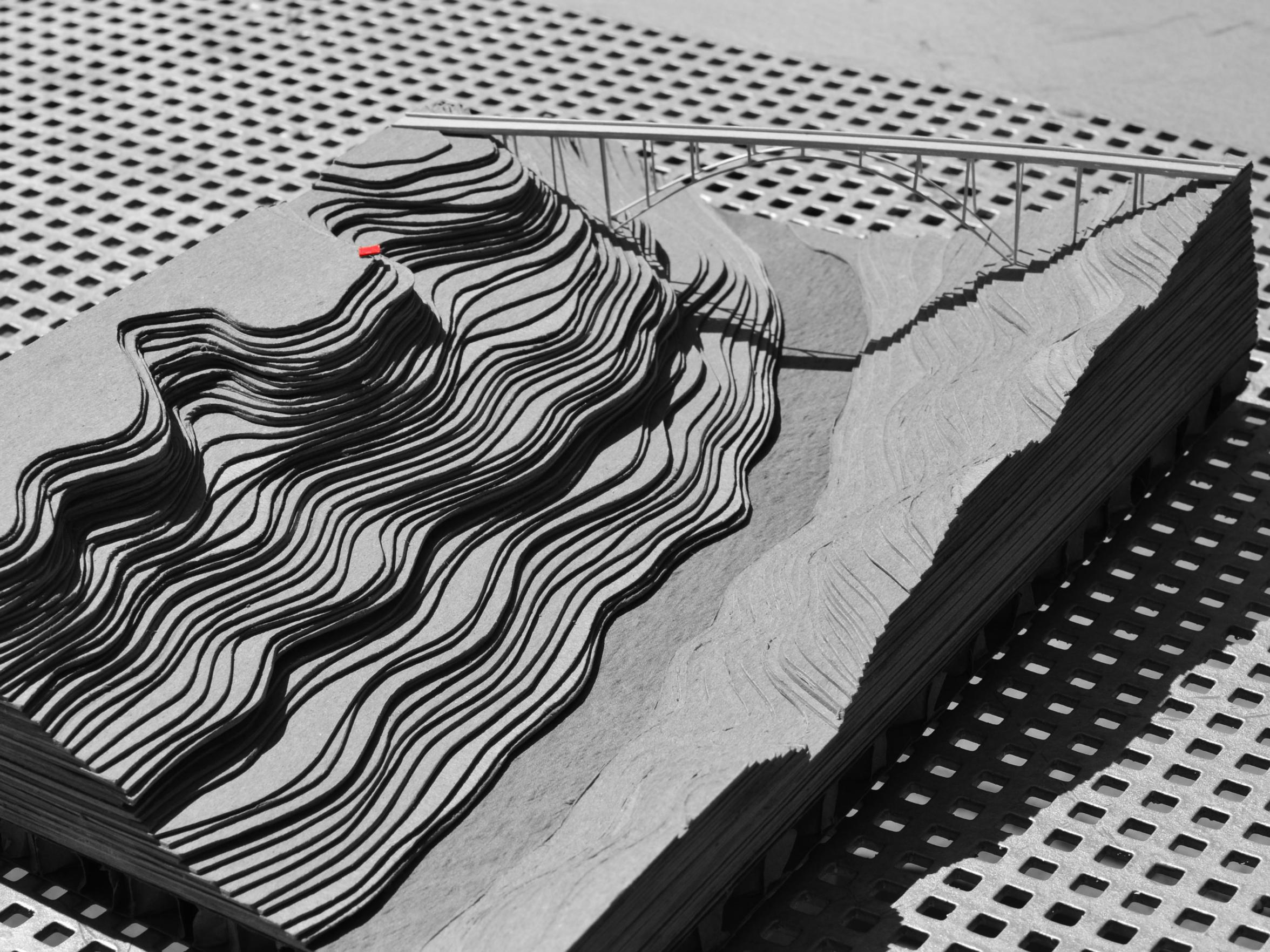


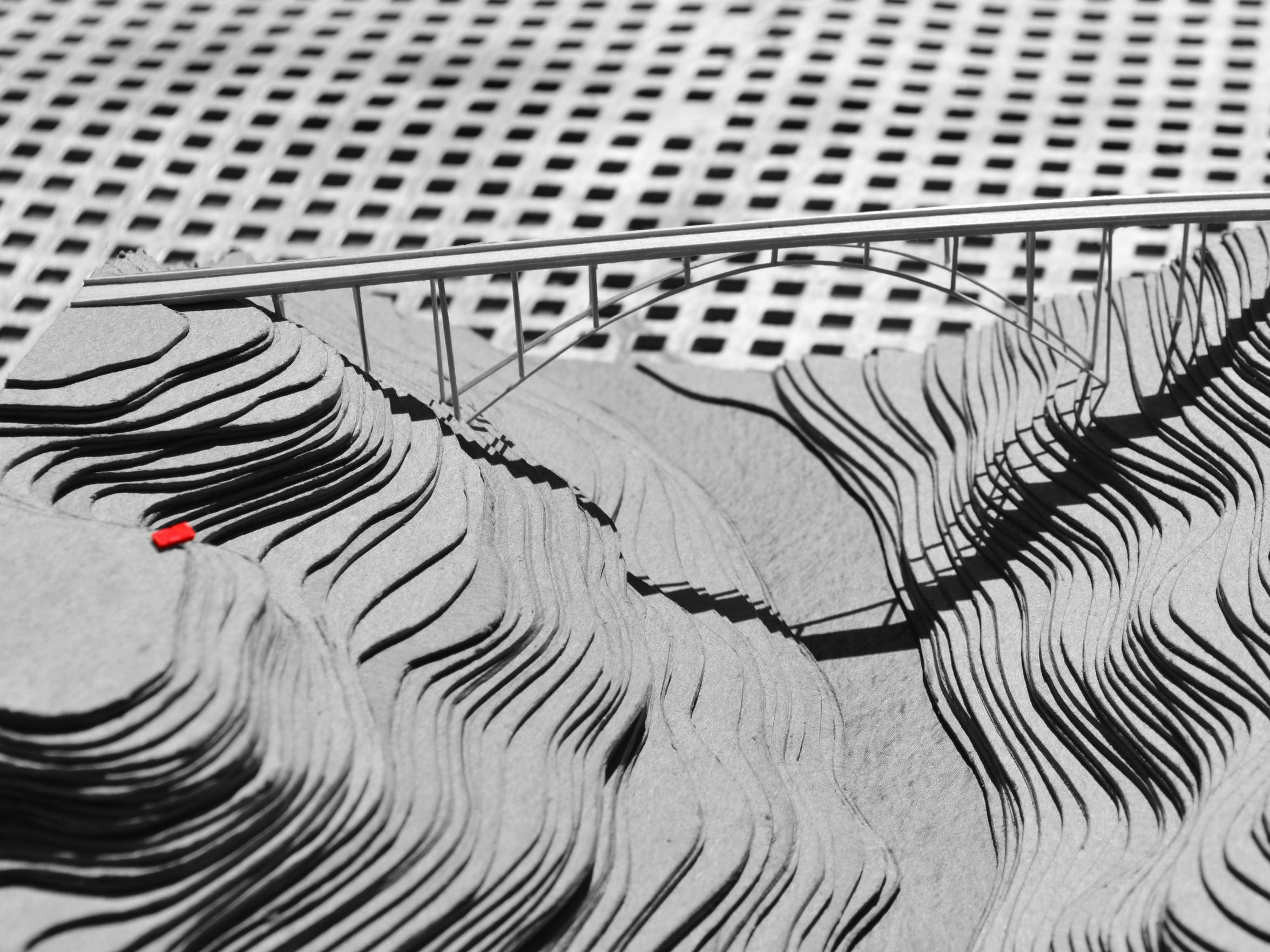
# New River Gorge aerial

250'









007  
developed design

# Visitor's Center

## design thought out

The design for the WVC Visitor's Center started with a few central concepts that I had developed after looking at the architectural precedent studies. Simple shape, site placement, honest use of materials, and view were all taken into account through the development of the design.

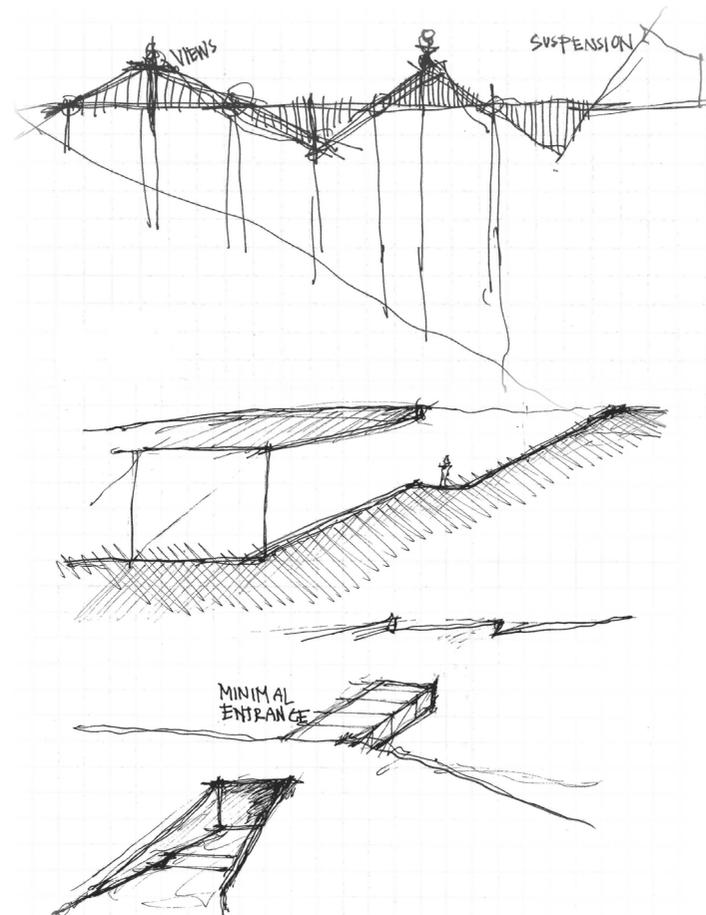
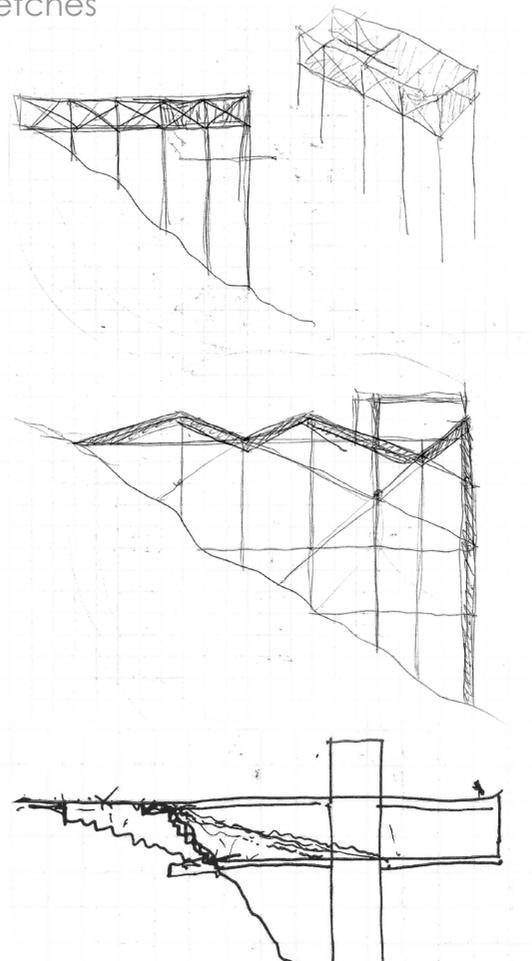
The design was developed off of the idea of a truss; the truss can be seen in the structures of the Kaymoor mine and also in the New River Gorge Bridge. This truss was conceptually the housing for the building. Structurally the building was going to be integrated into the design and structure of the truss. Over the design, the truss took different shapes, styles, and proportions. As the design of the truss developed so did the placement. The placement of the truss in relation to the gorge was important and ended up sitting fifty feet below the rim of the gorge. The entrance of the structure is minimal and reflects the same language as that of underground mining. The truss, which was once thought of, as being supported with columns is now one large cantilevered space.

Much of the design is oriented towards the experience of the visitor. As the visitor descends down into the structure, the live rock walls pinch begin pinching together to force the feeling of uneasiness. The live rock walls act as a memorial wall for those miners who have deceased in mining related accidents. Once the visitor passes through the pinched opening the structure opens up little by little and ultimately leaves the visitor with an amazing scenic overlook of the gorge.

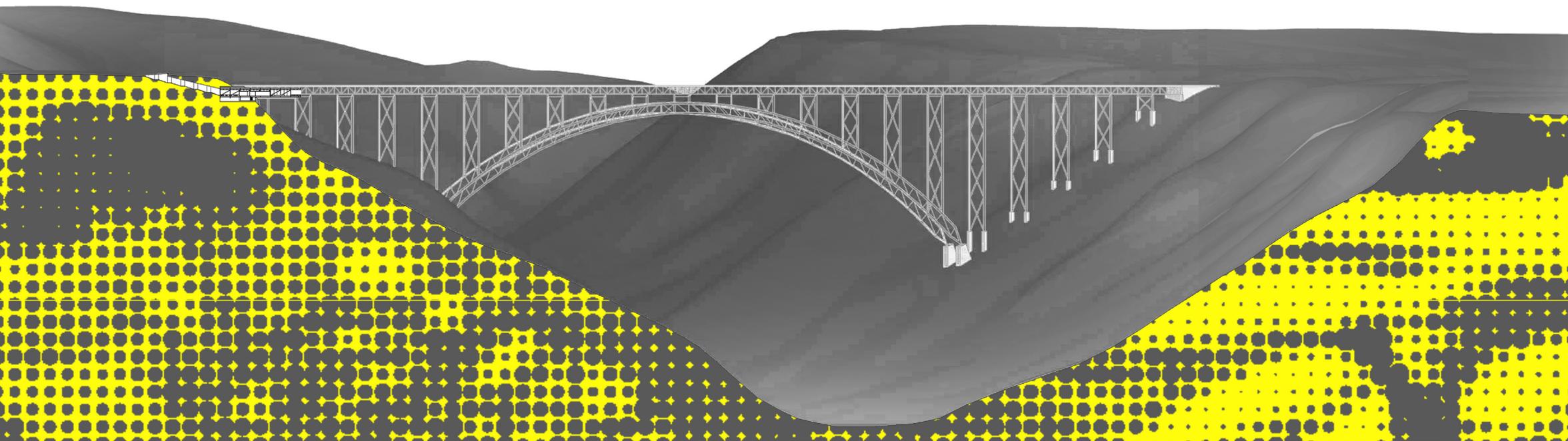


evening perspective

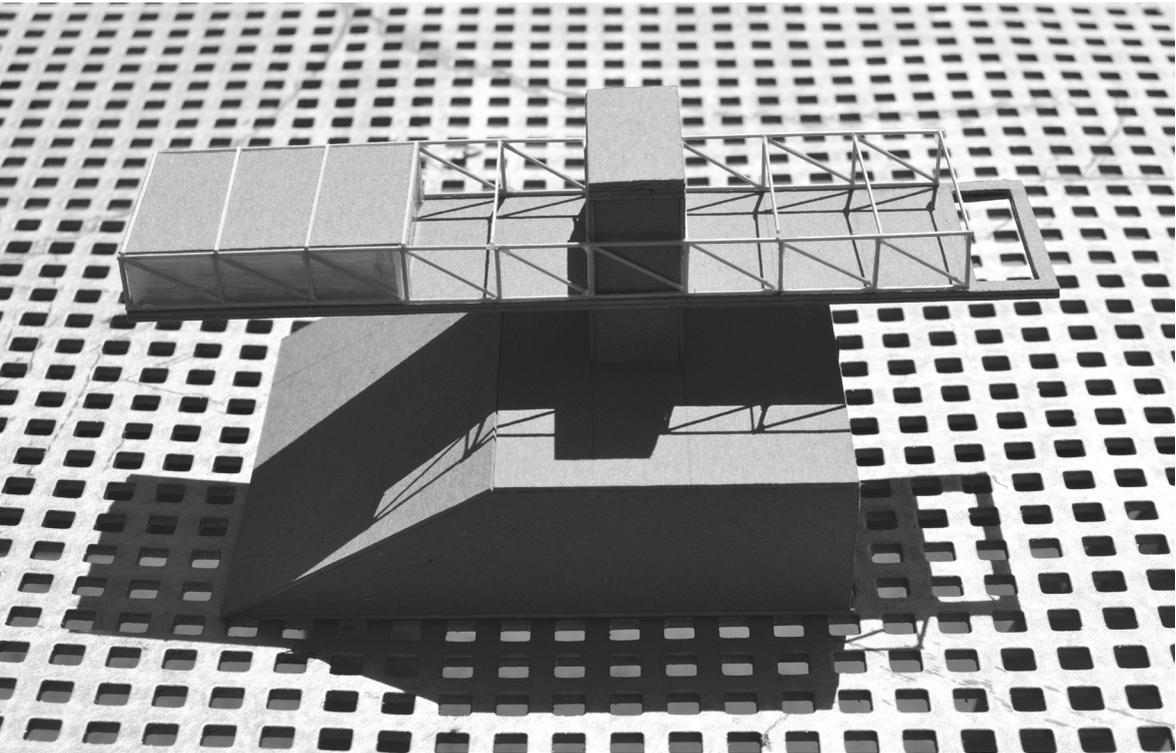
conceptual sketches



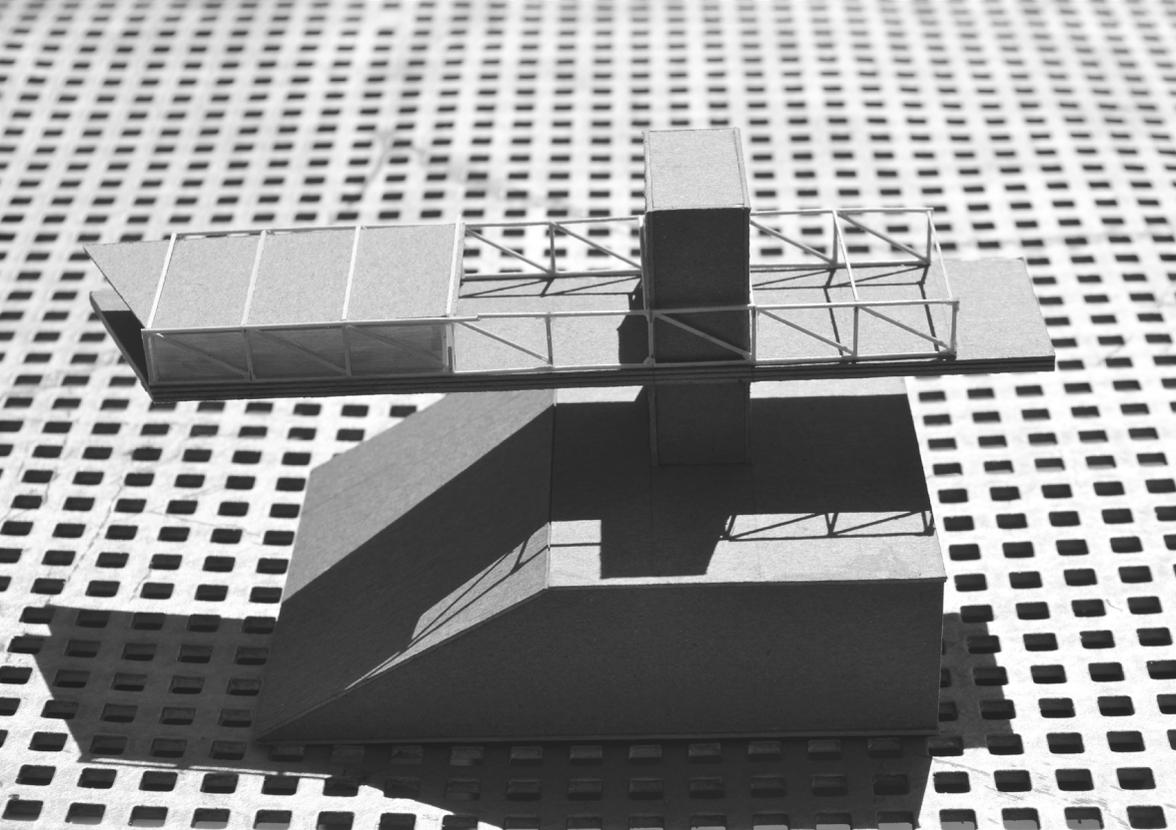
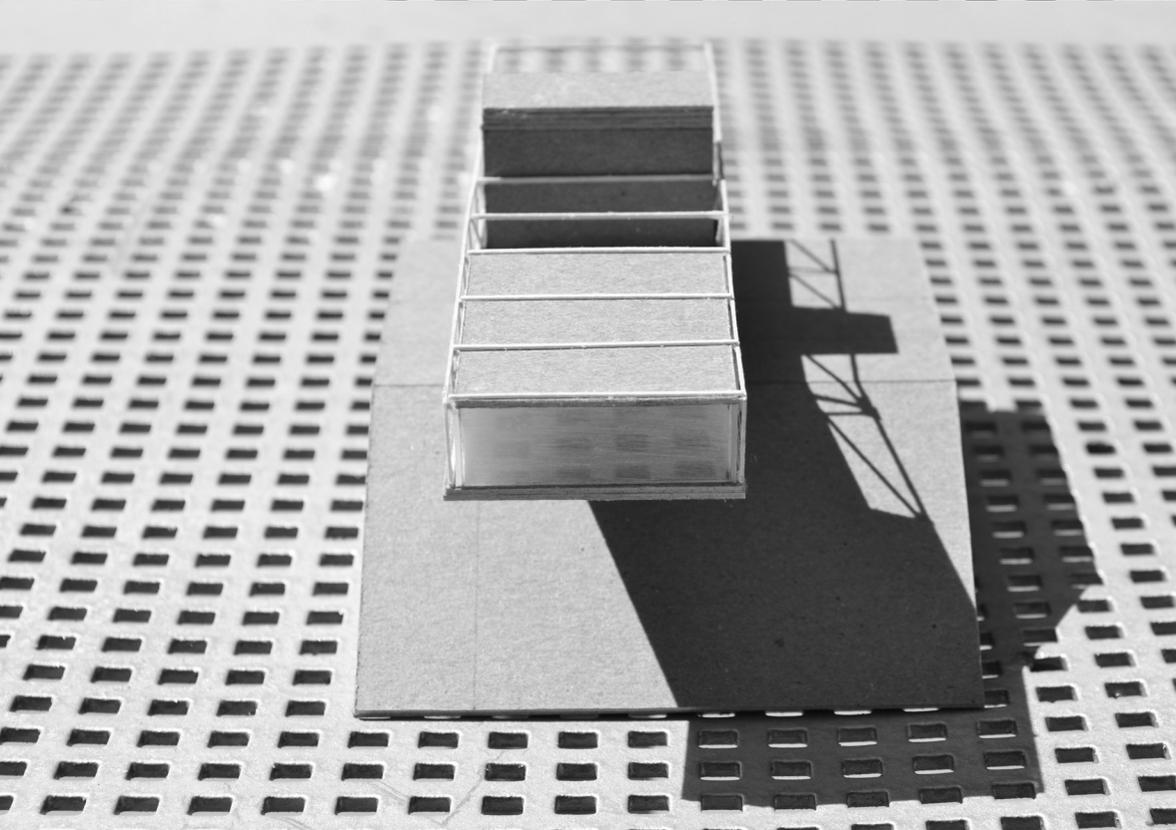
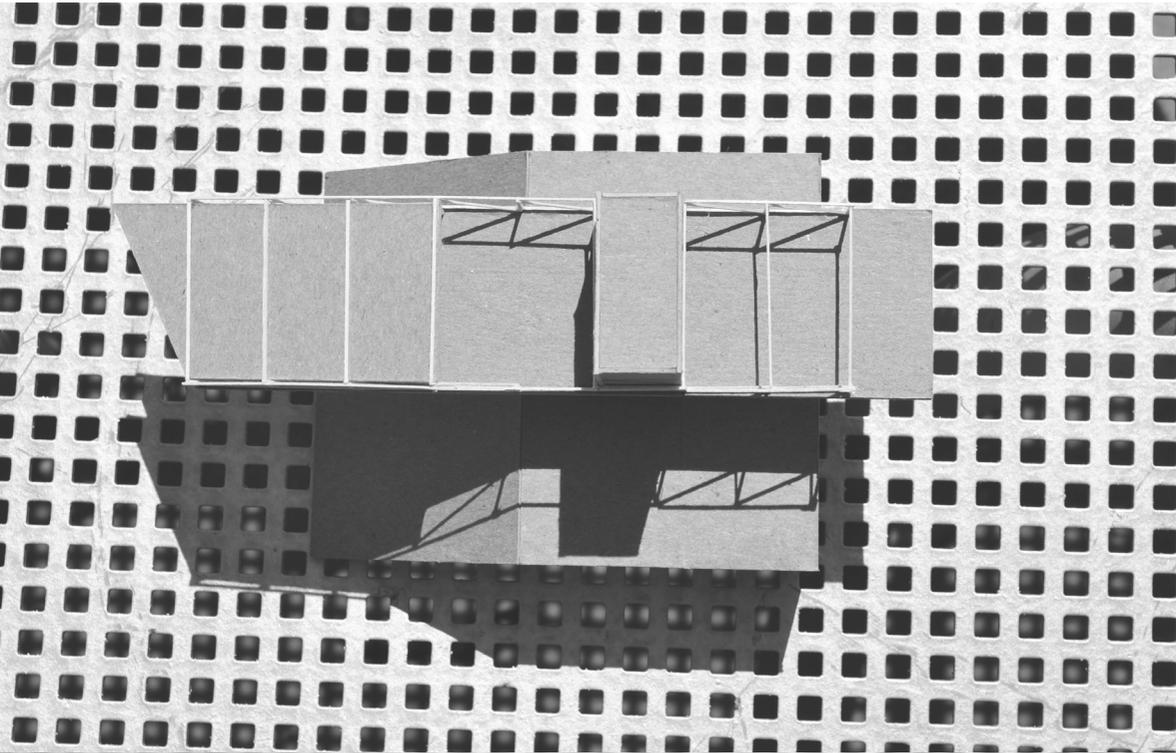
new river gorge section



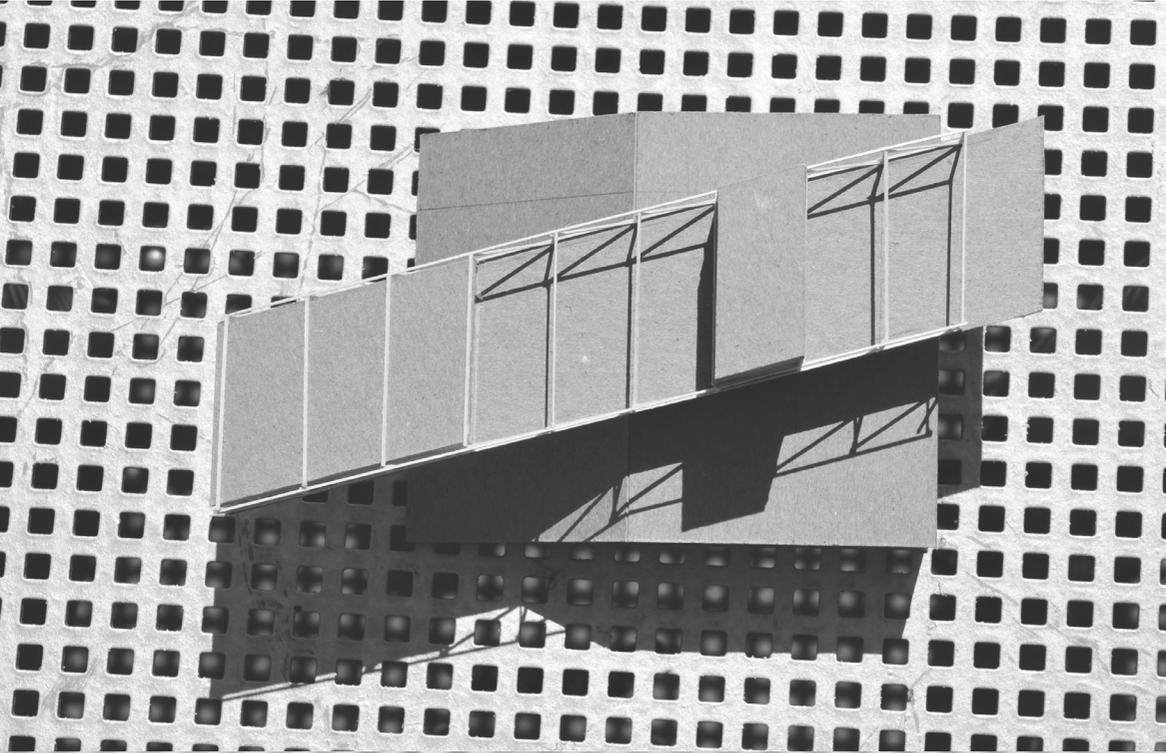
conceptual model 1



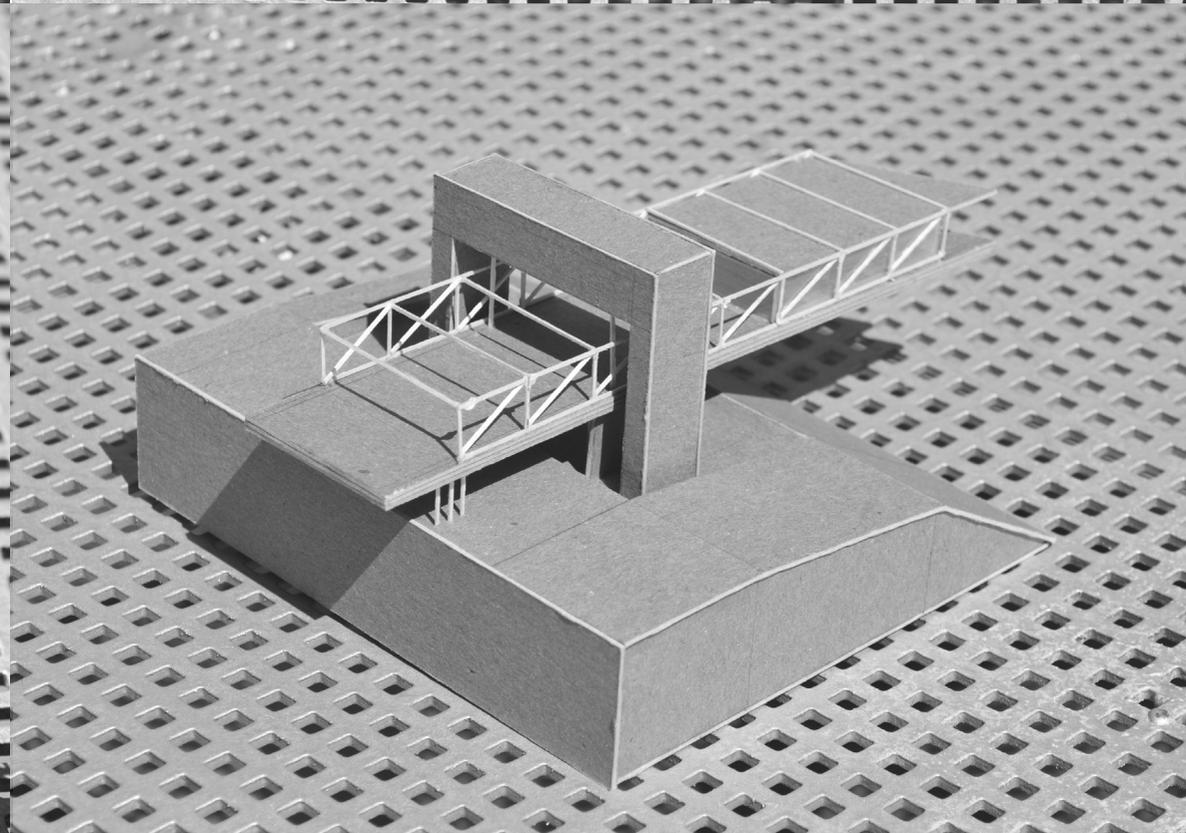
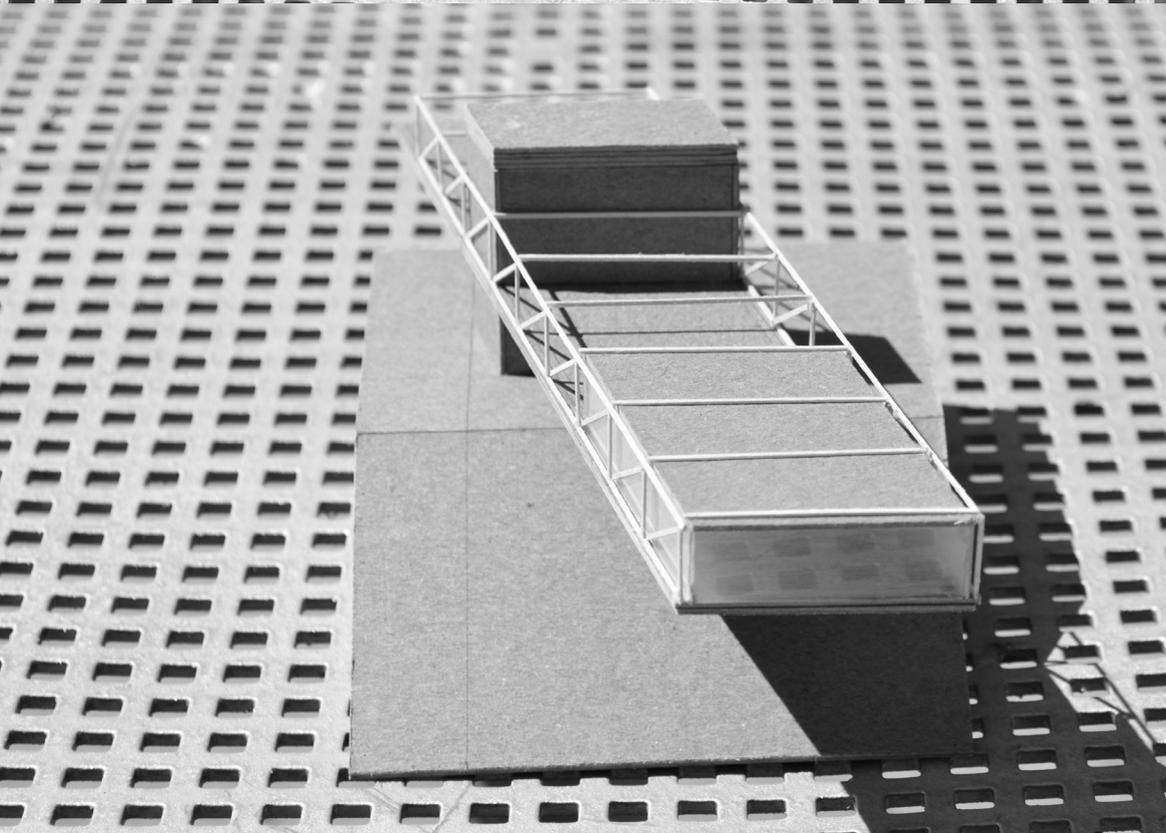
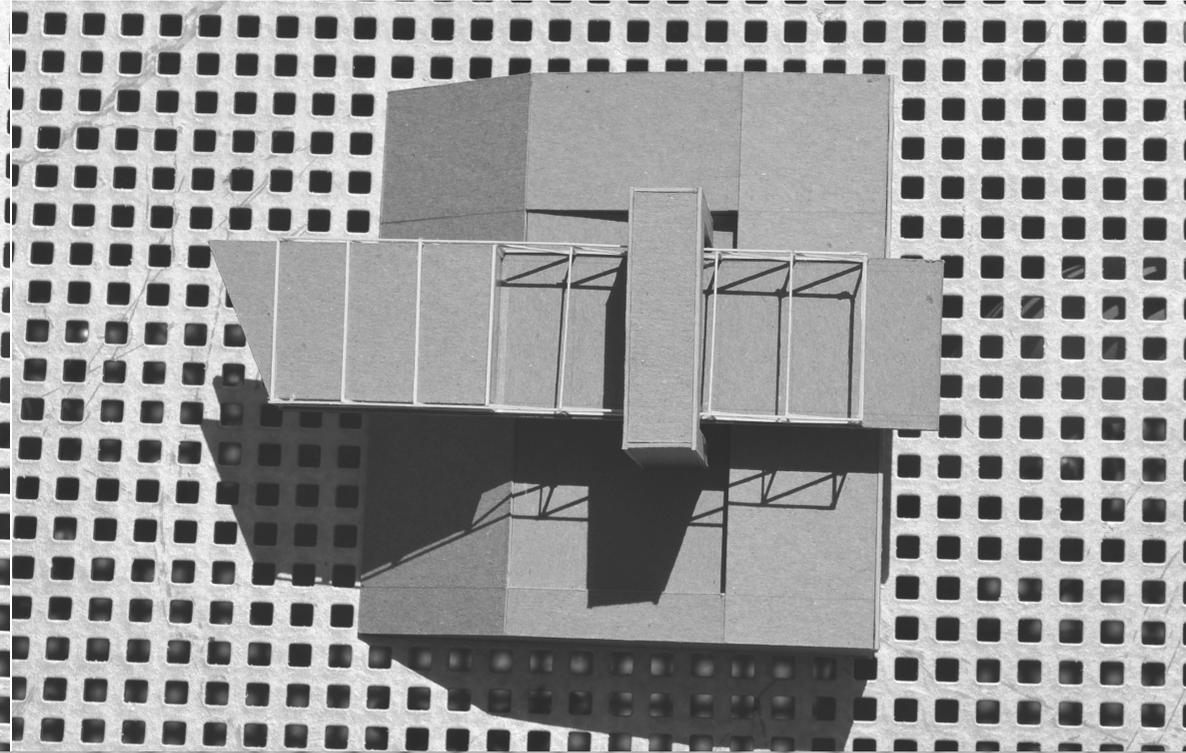
conceptual model 2



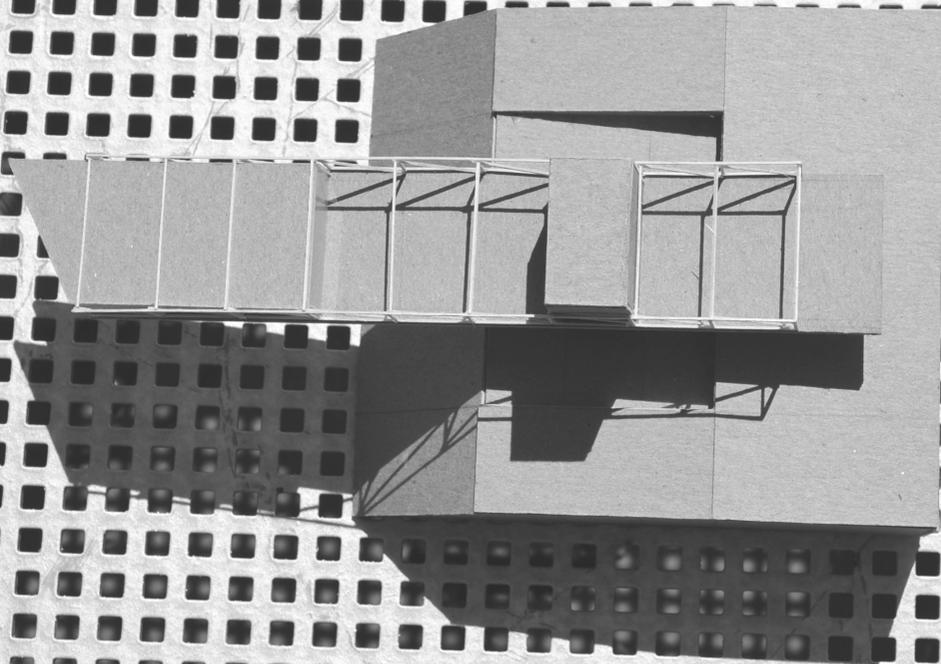
conceptual model 3



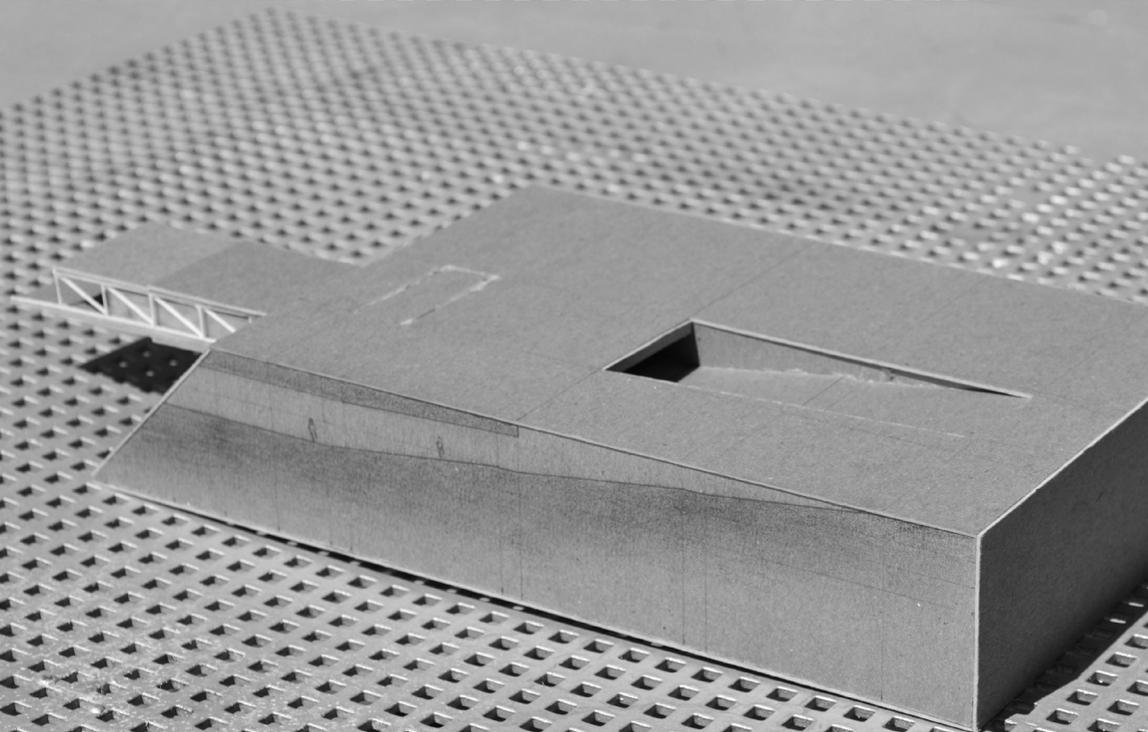
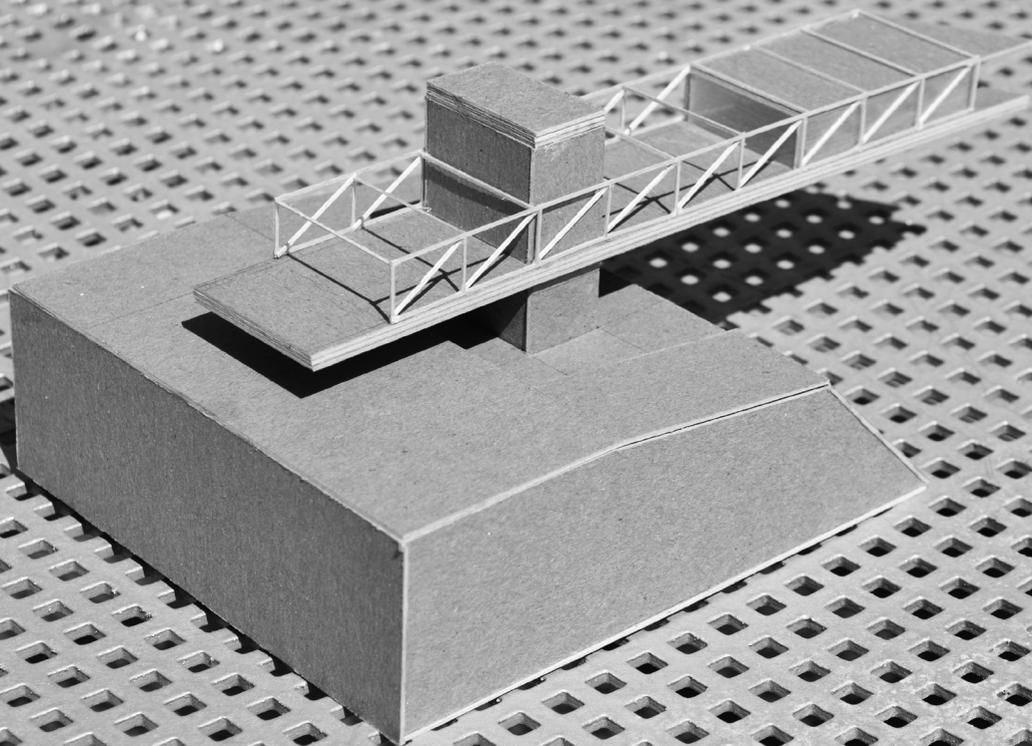
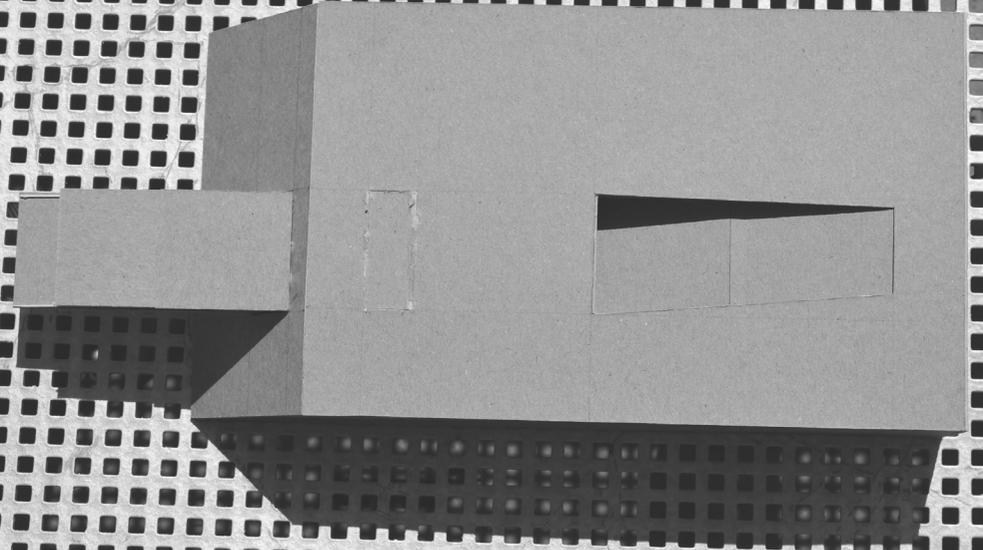
conceptual model 4



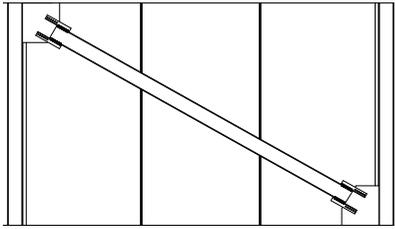
conceptual model 5



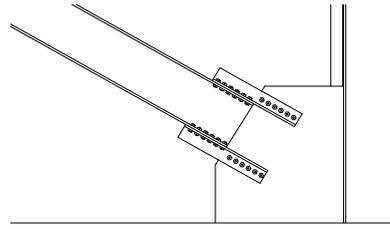
conceptual model 6



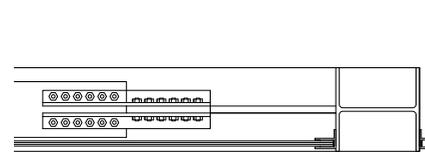
connection elevation  
1" = 2'-0"



connection detail  
1" = 4'-0"



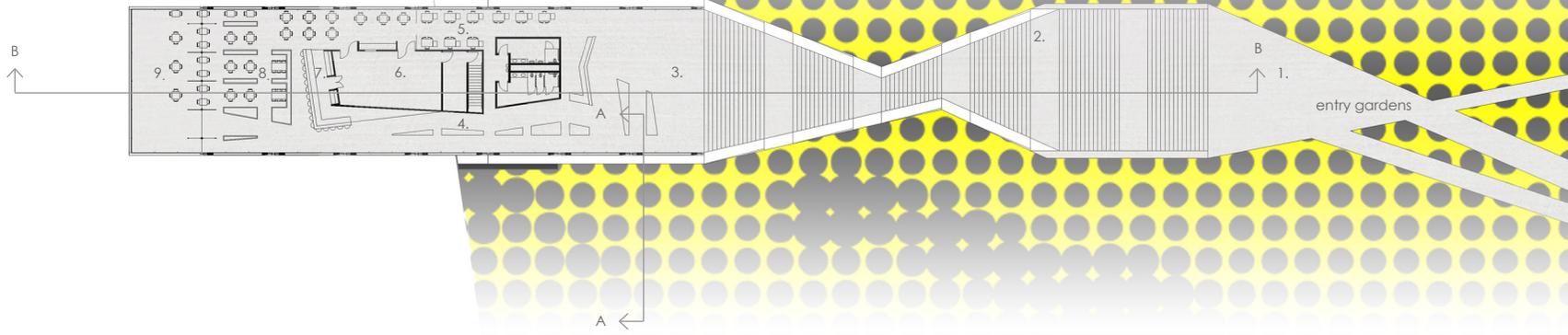
connection detail  
1" = 4'-0"



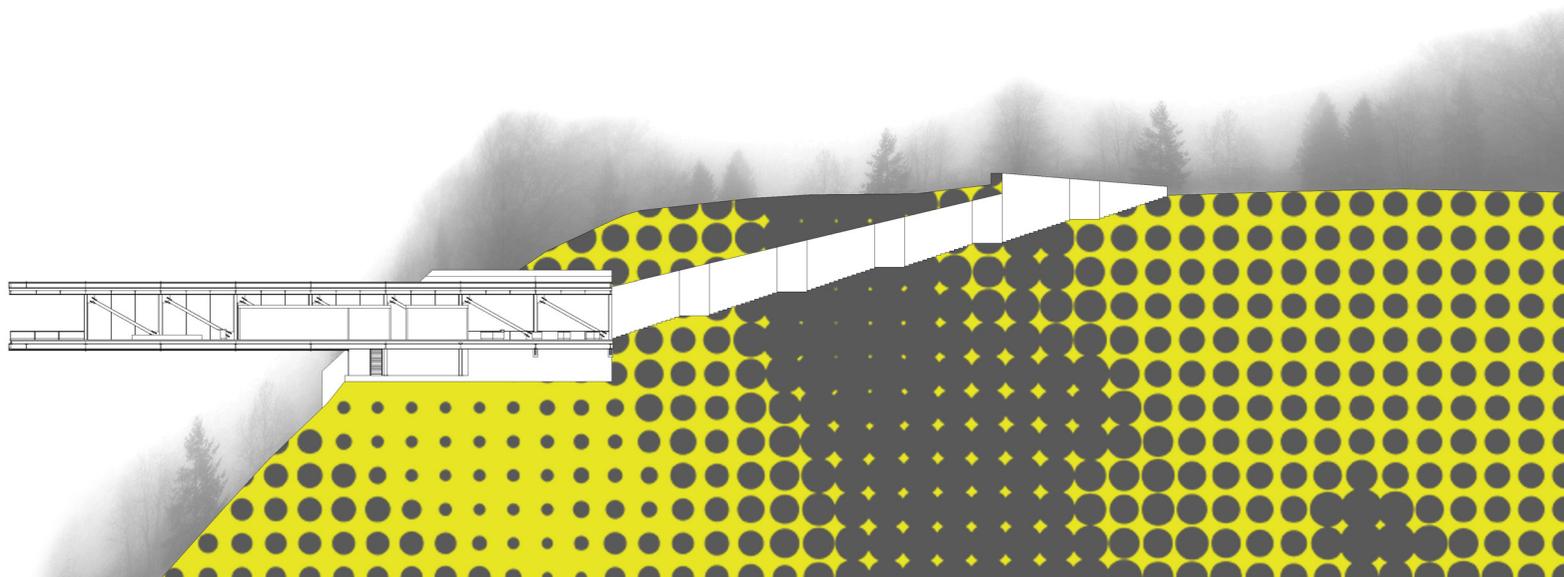
### Truss Frame |

### Floor Plan | 1" = 32'

- Program | 10,000 sf  
West Virginia Connection Visitor Center
1. entrance walk
  2. memorial wall
  3. retail area
  4. museum area
  5. information
  6. kitchen
  7. bar
  8. dining room
  9. public scenic overlook



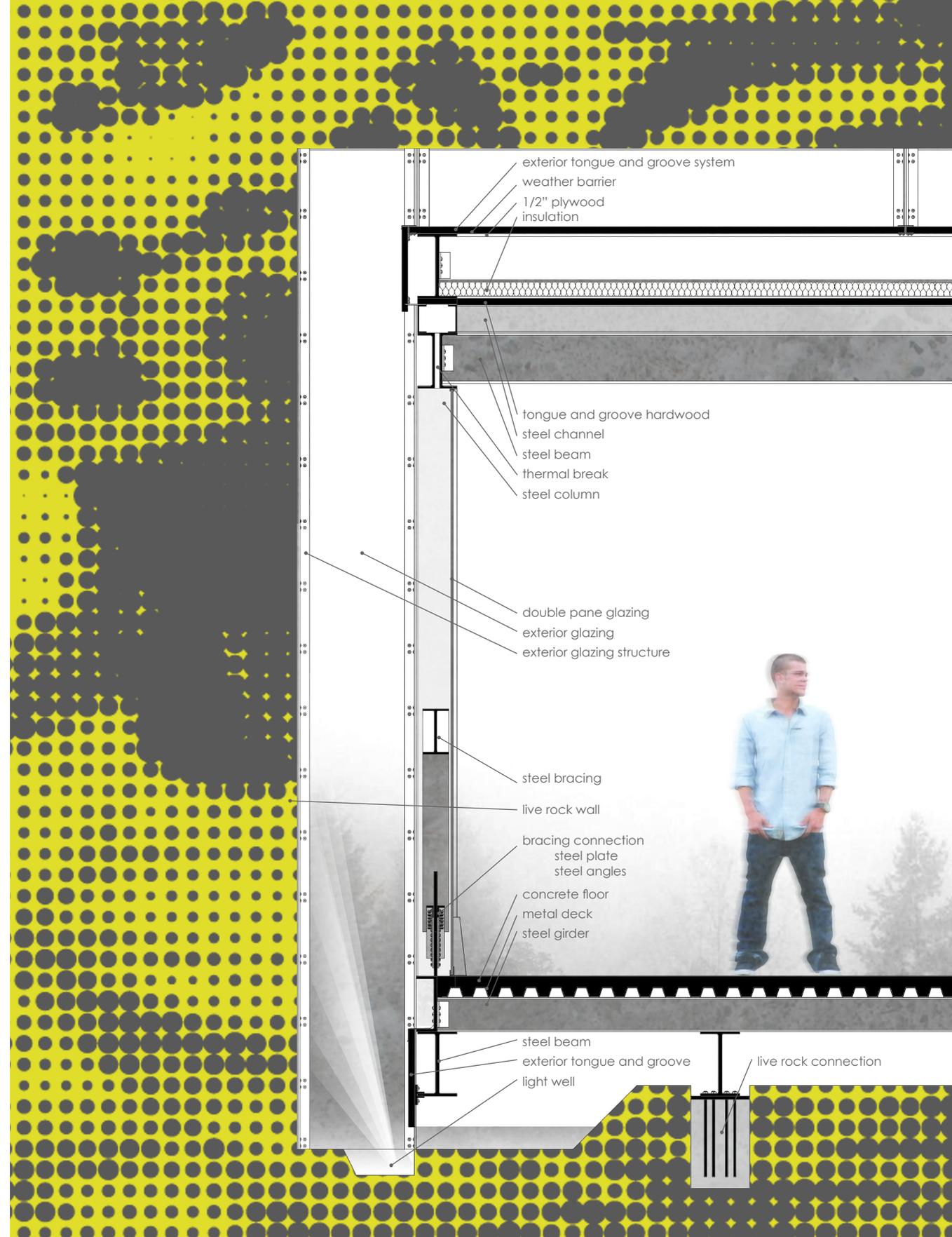
### New River Gorge Section | B-B 1" = 32'



## Gorge Connection

The connection to the gorge became a great opportunity for design. The truss did not just simply want to sit flush with the edge of the gorge. The connection is made with a concrete sleeve that the truss then comes out of. Even then the truss does not simply sit flush within the concrete sleeve. There is a 3'-0" gap in between the truss and depending where you are in the structure, either live rock or concrete sleeve. This gap between the structure and the live rock is then lit up with lights that the visitors cannot see.

wall section | A-A  
1"=3'-0"



# Bridge Day Perspective



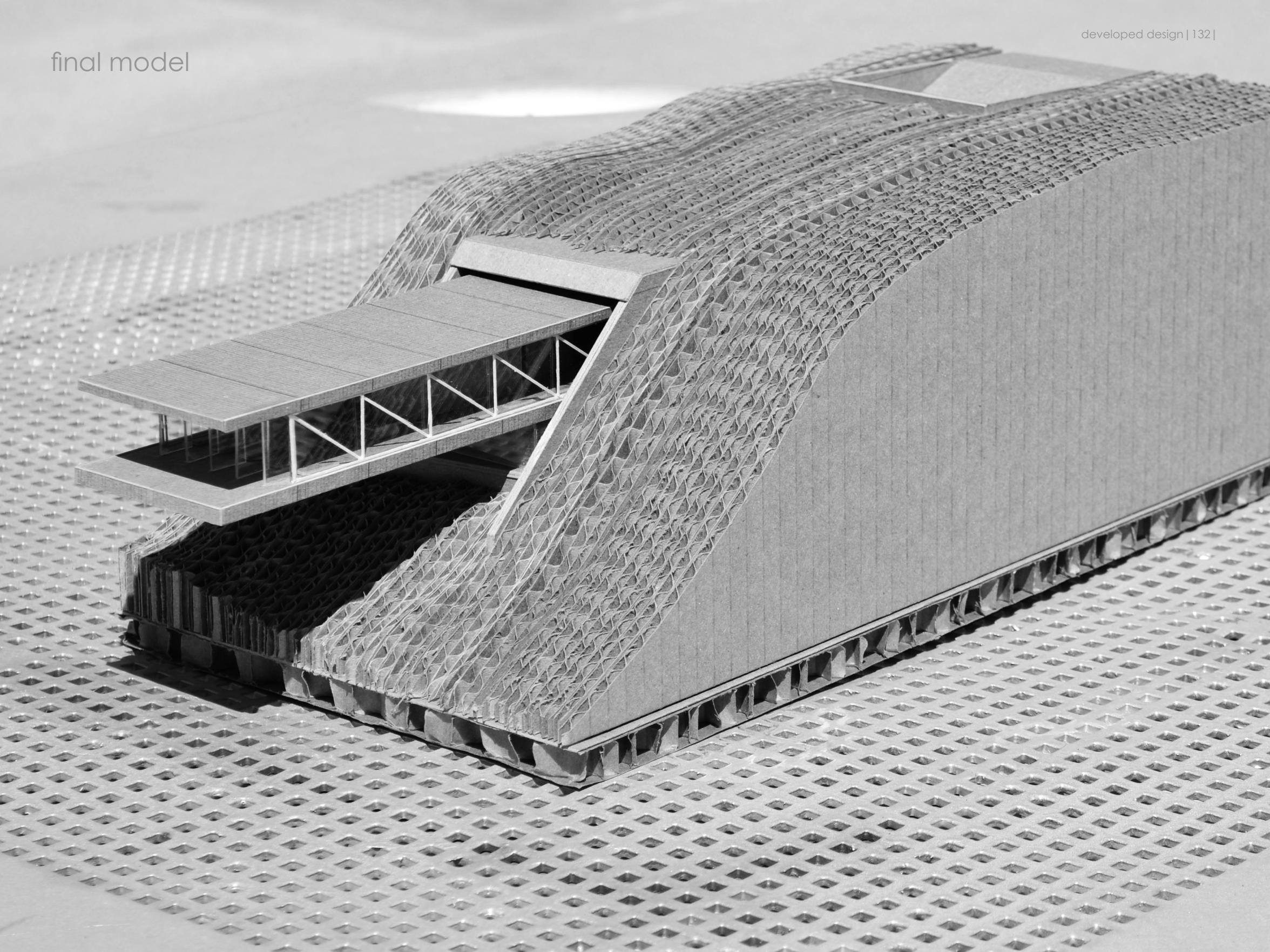


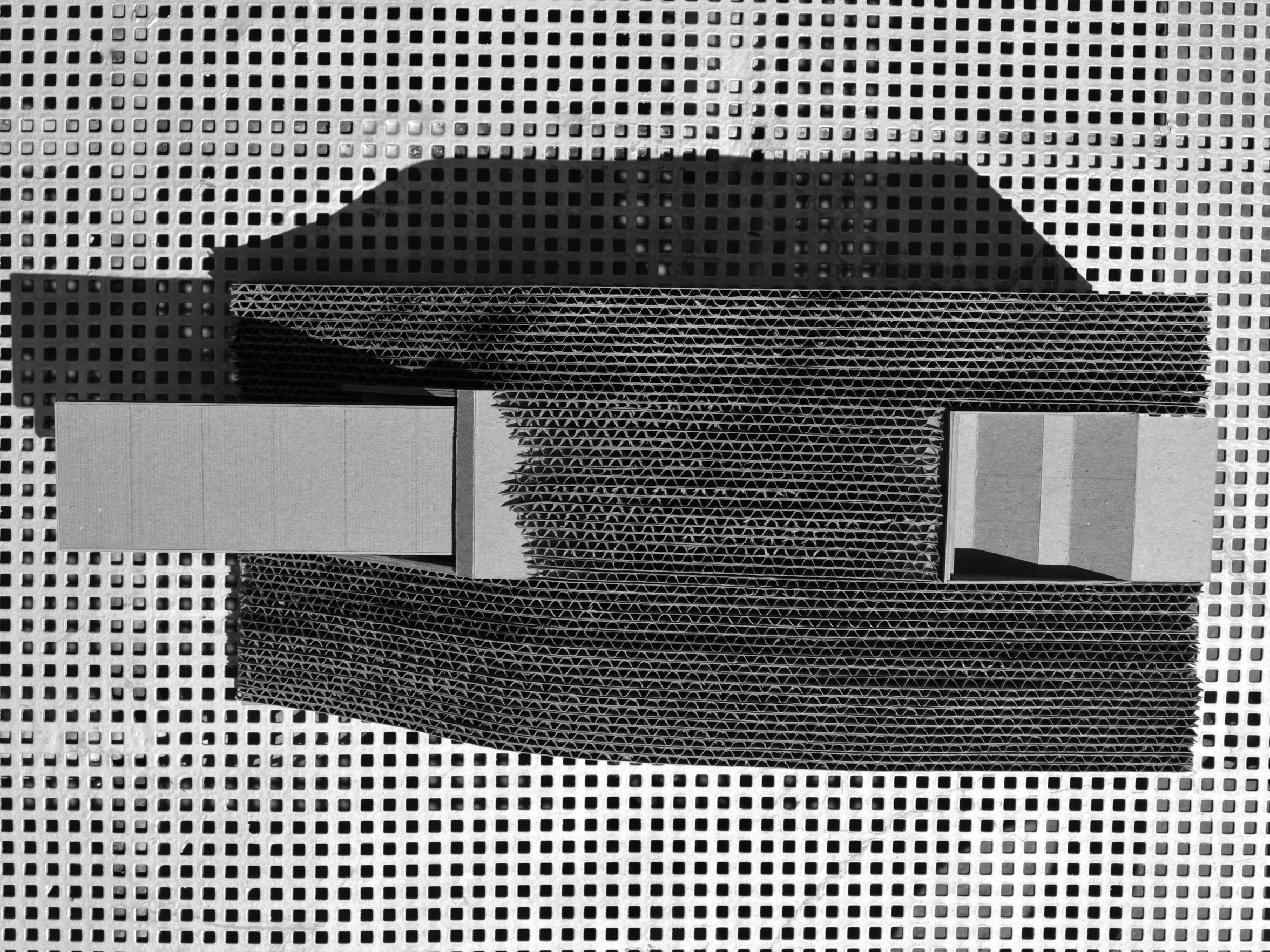
morning perspective

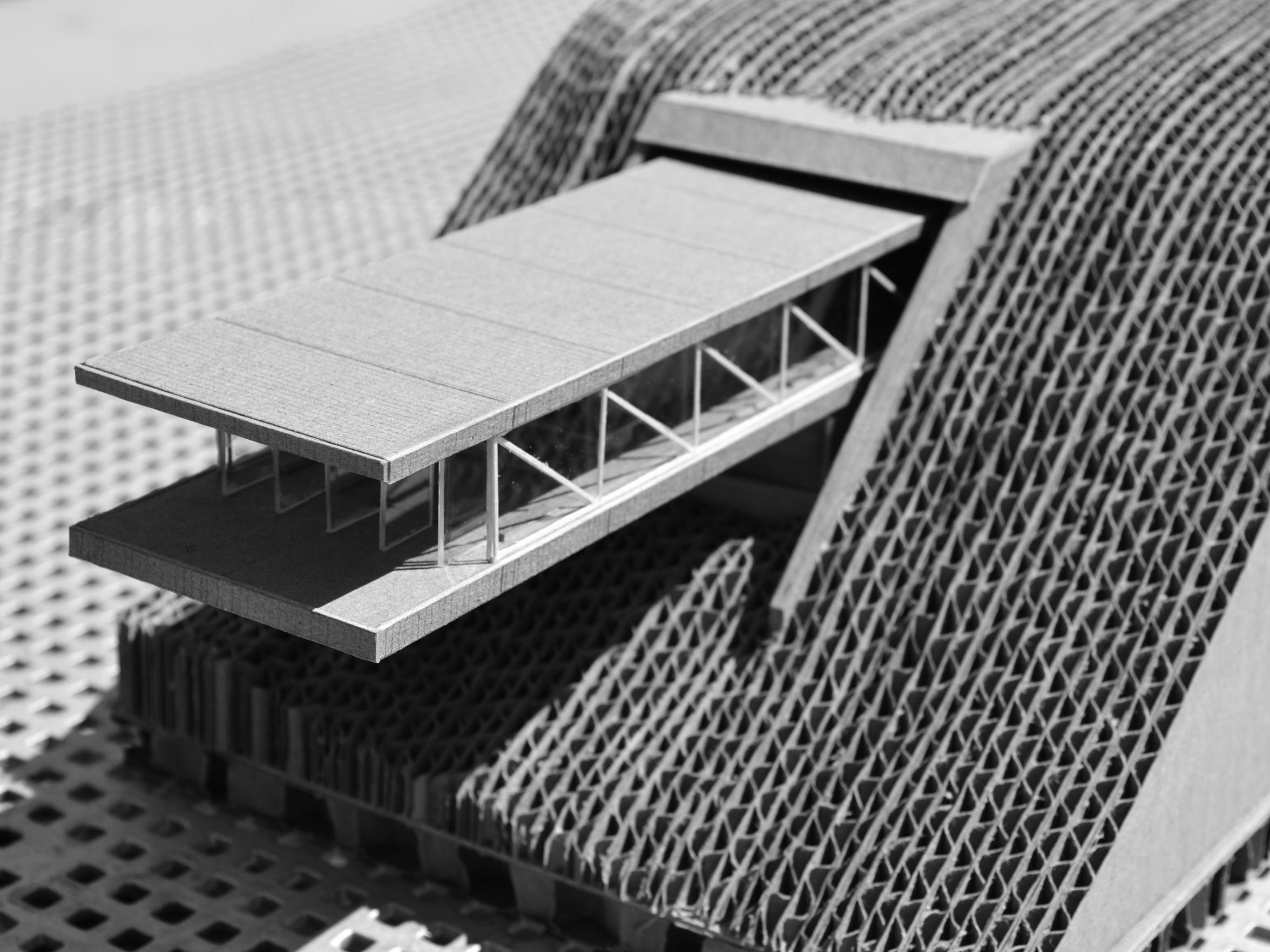


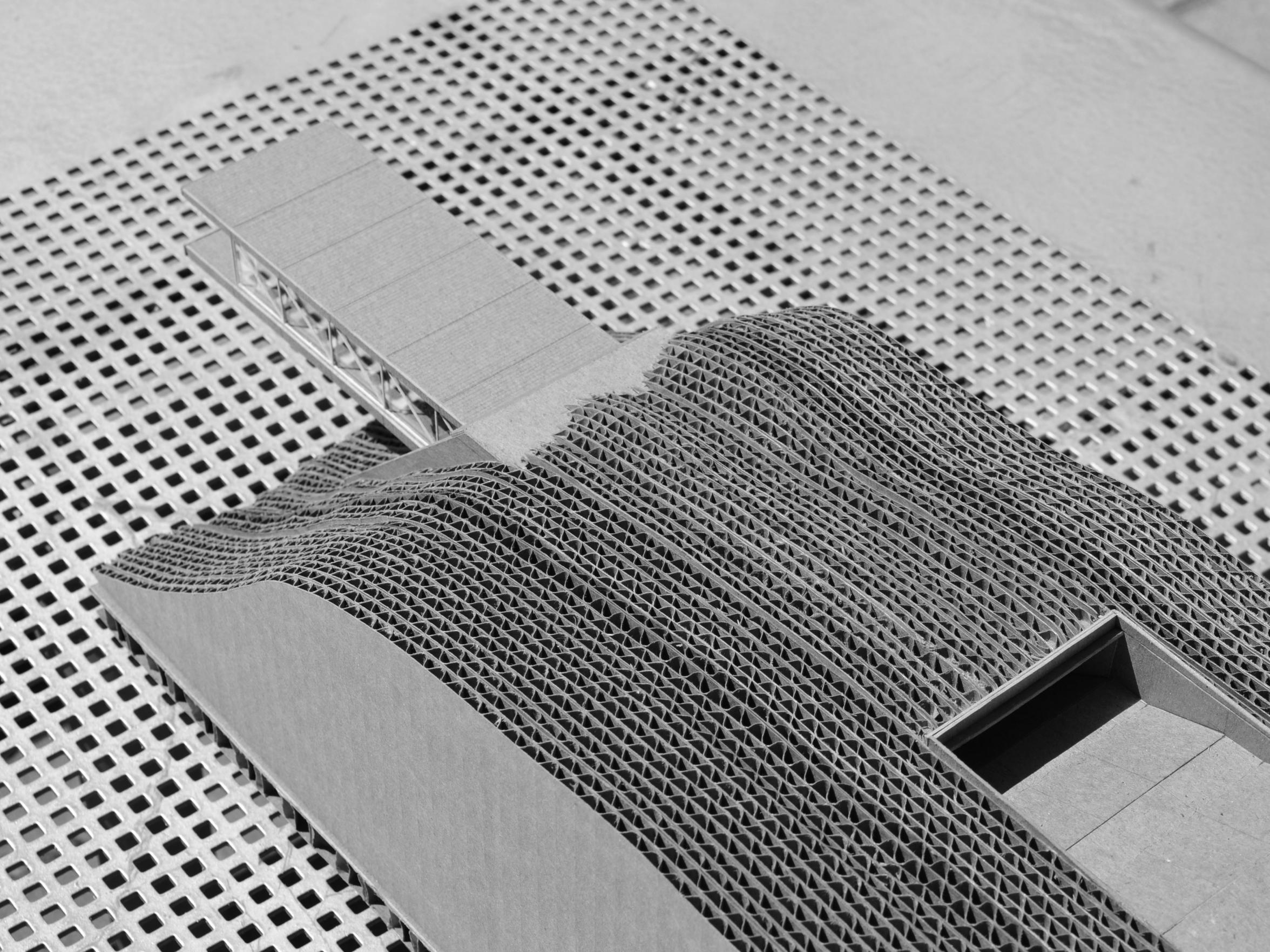
night perspective

final model









nature  
mining  
town



## final thoughts |

### Conclusion:

In conclusion the West Virginia Connection becomes an economic catalyst for the Nicholas and Fayette Counties in West Virginia. By utilizing everything that already exists, the WVC creates a new draw to the area, which means there isn't a huge financial need. It is obvious to see that the dependence of coal mining is dwindling along with many of the cities and towns that are in such rural areas. The WVC begins to address the issue of a financial dependence shift from that strong dependence on coal to relying more on the tourism industry and the natural beauty of the state.

### Critics final remarks:

1. "This is really an overall great project, but I feel like the building that you produced is so strong and then it gets placed next to the New River Gorge Bridge, which is also such a strong structure. I feel like they may be competing with one another."
2. " I really like the masculinity of the structure. I think that it works well next to the bridge."
3. "I think that you could have made the ramp much longer. Then you would not have had to worry about codes even. An extremely long ramp would be a huge statement to lower yourself into the building"
4. "Is there a reason for the direction of the cross members of the truss? Do you care if they are in tension or compression? Ahh nevermind I don't want to ruin something for you if you did it for aesthetics." John C. Mueller

Personally, I could have never come close to doing this thesis by myself. The thesis is not just your regular design project; it is a very demanding process that requires a passion for the particular topic and numerous points of resources and support. My architectural education has been shaped by and influenced by many people, some of which I would like to acknowledge here.

Special thanks to:

1. My dad, for always pushing me to be the best at everything that I do, giving me a good work ethic, and also, for giving me the passion for this particular area of West Virginia that my thesis is in.
2. My mom, for always being there with love and support in everything that I do.
3. My bro, giving me countless critiques and advice on my design work.
4. Noah Resnick, my thesis professor, for really giving me direction when I needed it but still allowing me to make the project my own.
5. Wladek Fuchs, Joe Odoerfer, and Tom Roberts, for helping push not only my design sense but also being able to push my sense of humor, making studio a lot of fun for me.
5. All my friends at school, for dealing with everything I've dished out. I'm sure I was annoying at times but I was just trying to spice things up a bit!

# end notes

## thesis paper

1. Fayetteville WV. Fayetteville Convention & Visitors Bureau, n.d. Web. 12 Dec. 2012. <<http://www.visitfayettevillewv.com/>>.

## features

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3. New River Gorge. National Park Service, 2013. Web. 24 Apr. 2013. <<http://www.nps.gov/neri/a-river-runs-through-it.htm>>.
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## planning precedents

1. Emscher Park: From Dereliction to Scenic Landscapes. Danish Architecture Centre, n.d. Web. 5 Jan. 2013. <<http://www.dac.dk/en/dac-cities/sustainable-cities-2/all-cases/green-city/emscher-park-from-dereliction-to-scenic-landscapes/?bbredirect=true>>.
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6. Nasjonale Turistveger: National Tourist Routes in Norway. Statens vegvesen, 2012. Web. 27 Feb. 2013. <<http://www.nasjonaleturistveger.no/en>>.
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8. About the Natchez Trace. Scenictrace.com, 2013. Web. 27 Feb. 2013. <<http://www.scenictrace.com/about-the-trace/>>.
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## architecture precedents

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- 5.** Emscher Park: From Dereliction to Scenic Landscapes. Danish Architecture Centre, n.d. Web. 5 Jan. 2013. <<http://www.dac.dk/en/dac-cities/sustainable-cities-2/all-cases/green-city/emscher-park-from-dereliction-to-scenic-landscapes/?bbredirect=true>>.
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