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SUBJECTS

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DONALD JUDD

Donald Judd was an American artist that rejected traditional paintings and sculptures. Instead, he believed that art should exist as it does in its environment, thus, developing the idea of object. Unlike traditional sculptures, which are placed upon a plinth, setting it apart as a work of art, Judd's works stands directly on the floor and as a result, forces the viewer to confront them according to their own, material existence.

Judd set out to form pieces that were free of emotion and self reference. To accomplish this, he created single or repeated geometric forms produced from industrialized, machine-made materials that abstained from the artist's touch.

In his opinionated essays, Judd criticized architects for designing museums for the sake of the museum itself, exploring formal and spatial interests rather than designing a building for the artwork it was to house. Judd placed most of his work in abandoned industrial buildings, like this one, even though he wished he could create unique spaces for each individual object. However, Judd worked with what he had and did the next best thing by taking the spaces available to him and making permanent installations specifically designed for the spaces they are housed in. This is seen in much of his work, including one of his most popular, untitled 100 aluminum milled boxes, where each object is sized within the joints of the foundation.



Donald Judd, 1992. Photo by Leo Holub. Image © Judd Foundation.

ART FOR ARCHITECTURE OR ARCHITECTURE FOR ART?

Much of Donald Judd's life was spent making pieces of art for existing works of architecture. Towards the end of his life, Judd started to explore the idea of space designed for the art, rather than, art designed for the space. He planned to make ten concrete domed structures that were centered on 12 equally spaced squares. Each structure varied in height and width based on the object that was to be housed. However, due to his untimely death and structural instability, Judd's idea of space designed for art was never realized. All that is left of this project are two unfinished concrete domes that sit in an open field in Marfa, Texas.

This idea of architecture for art is the driver for this project by building off the ideologies of Donald Judd and his critiques of museums for the sake of museums.



Image: Nicole Paul Popovich, University of Florida

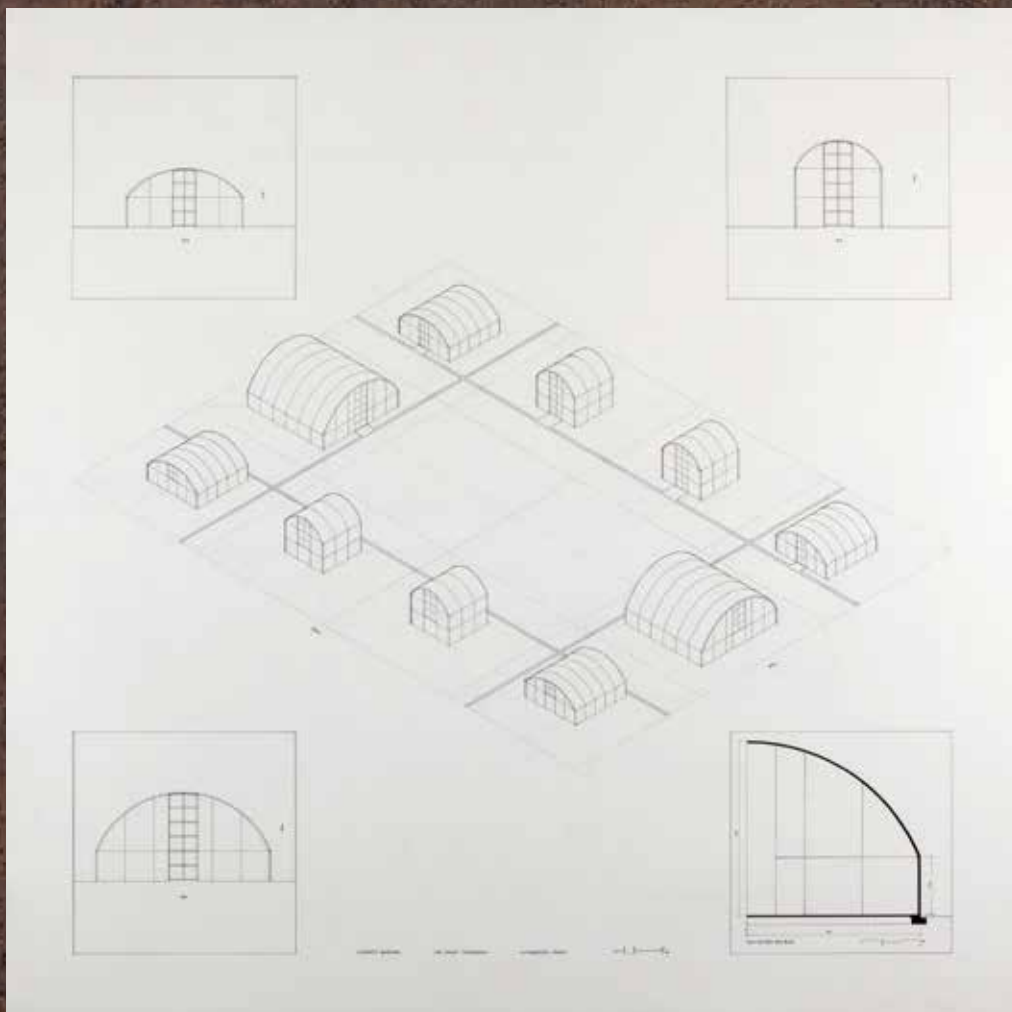


Image by Chinati Foundation

Source: <https://chinati.org/programs/donald-judd-concrete-buildings/>



Image by Michael Irving

UNTITLED OBJECT

This is one of the few objects by Judd that doesn't sit on the ground. Due to the scale of this object, Judd places this object on a table. Some might argue that doing this defeats the idea of objects not being placed on pedestals, however, due to the smaller size of the object, sitting on a table provides more of an interaction and observation from a person.

Judd made several iterations of this particular object in a range of materials: stainless steel, galvanized iron, cold-rolled steel, anodized aluminum, acrylic sheet, and wood. He explored the expression of space, color and material through this three dimensional object measuring one meter in length and width.

This object was intriguing to me due to its creation of space through folding of something that was originally flat to create an object of three dimensional form. Additionally, its resemblance to the neighboring building to the site, the Nasher Sculpture Garden by Renzo Piano provide merit to further the study.

I began with an exploration of this object through its material and fabrication. Each object was created at the Texas A&M University ranch using a water jet to cut the metal and a finger break to fold the metal. However, in order to form these objects you must make each fold in a specific order starting from one end of the sheet working to the other. Because of the limitations of the equipment each fold is only partially executed, creating an overall curve form. The folds are then manually clamped together giving way to the finished object.



Source: <https://www.dia.org/art/collection/object/table-object-91200-50301>



1. Water jet used to precisely cut sheets of metal into desired shape.



2. Flat shape of object that was drawn on the computer and cut using the water jet.



3. Manual finger break used to fold the metal, giving the object three dimensional form. However, due to the limitations of the equipment, the object must be folded starting from one end to the other

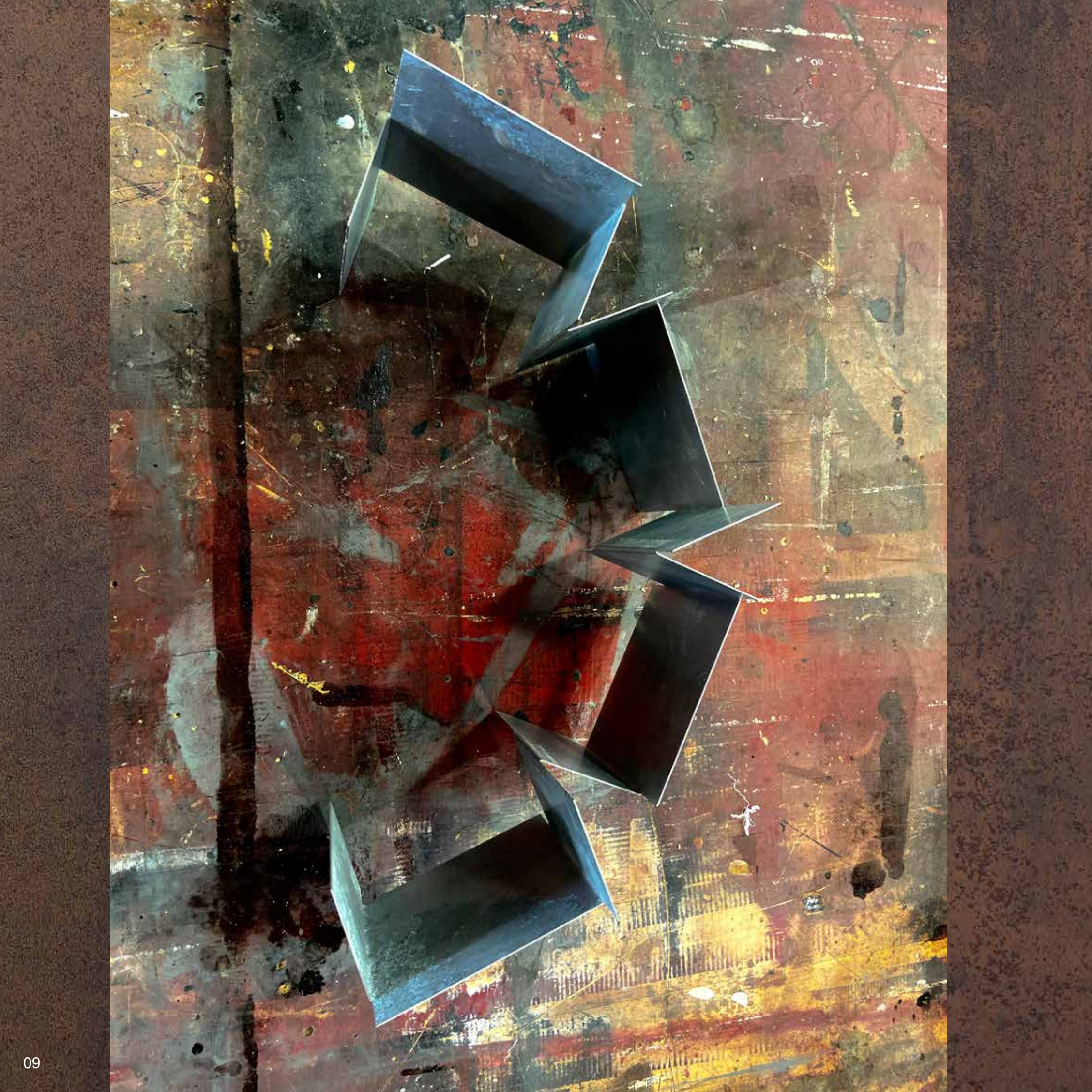


4. Another limitation of the equipment is that it does not allow for 180 degree folds to be fully executed. Because of this, the object starts to create a curved form. After all folds on the finger break are completed, the incomplete folds are finished using pliers to pinch the folds together.

DISCOVERY

A discovery moment of juxtaposition of object and background came about during the fabrication of the objects and inspired relationships of art and form. This moment of juxtaposition helped lead to the realization of bendability an object has when stood on end. This shows up later in the curved wall.

A valuable lesson came from this discovery. The limitations of the equipment was originally viewed as a hinderance but without this hinderance, this relationship would never have been discovered. In these hindrances often lie opportunity.





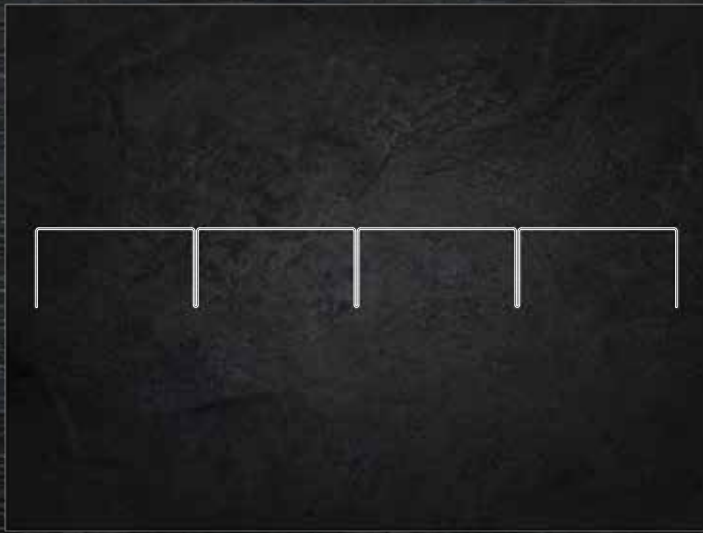
OBJECT & ARCHITECTURE

The first object created is a copy of Judd's. It was created to study the piece through its materiality and space. After fabrication of this first object, I started to create interpretations of the object by manipulating the spaces created. The first interpretation looked at the object as four rectilinear shapes butted together and started to horizontally shift these rectilinear masses.

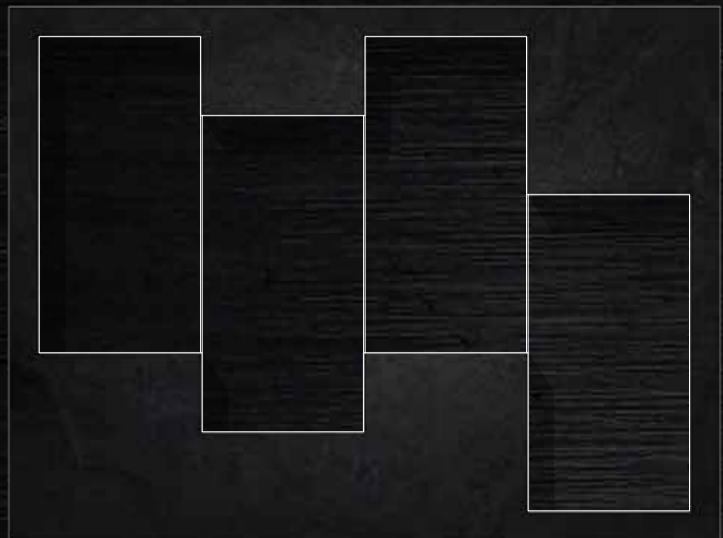
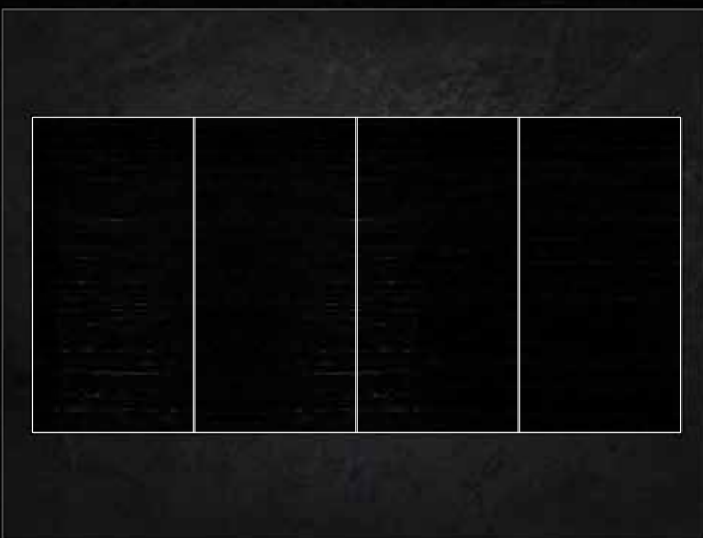
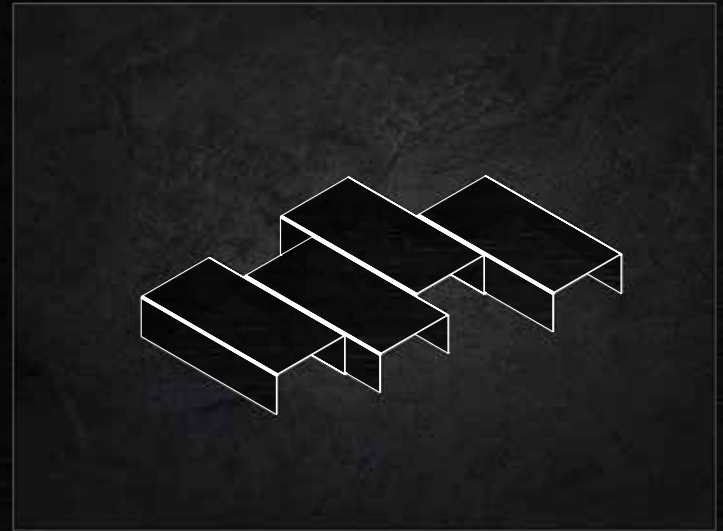
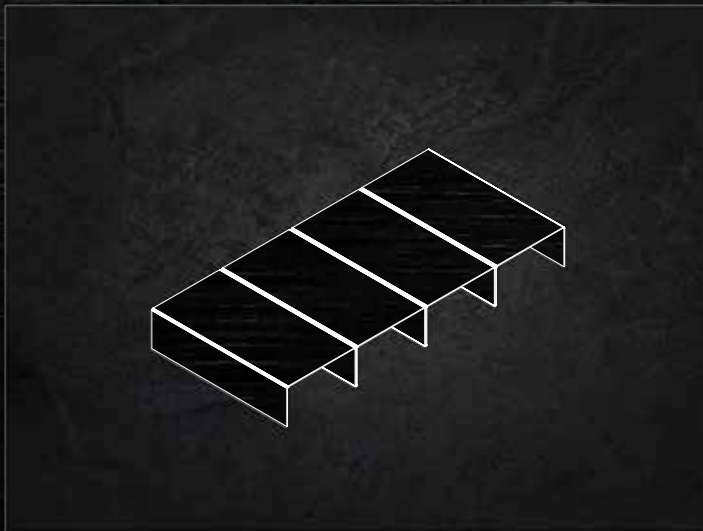
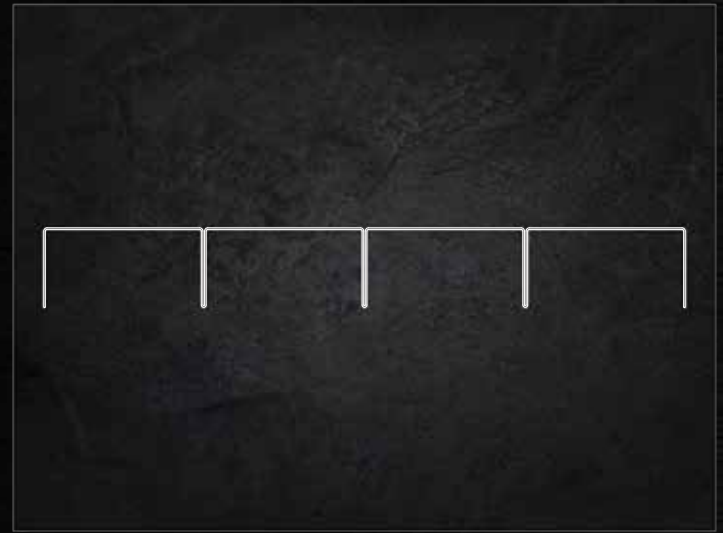
The second interpretation of this object looked at the original object in a similar way, however, rather than shifting horizontally, I stretched each rectilinear form vertically, without the horizontal shift. After these two interpretations were completed, I combined the two. Creating horizontal shifts and vertical manipulations to the original.

The final interpretation of the object had a different approach than the first two. This exploration started by looking back at the original object and noticing the in-between space that allows light to enter. The only issue was that light was unable to illuminate the spaces created by the object. By taking an individual rectangle, flipping it upside down, and housing another rectangle with a manipulated scale inside, a similar in-between space was created that let light fill the framed spaces. By combining the horizontal shift, vertical stretch, and manipulation of light, the form of the Architecture took shape and becomes an object that houses objects.

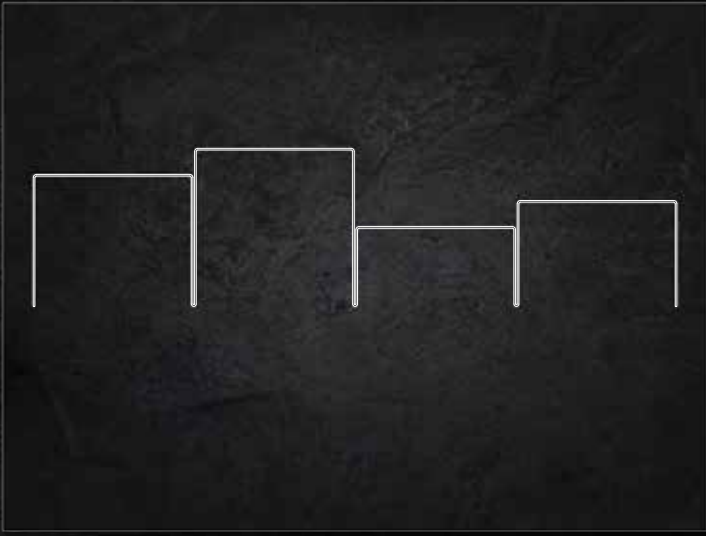
OBJECT



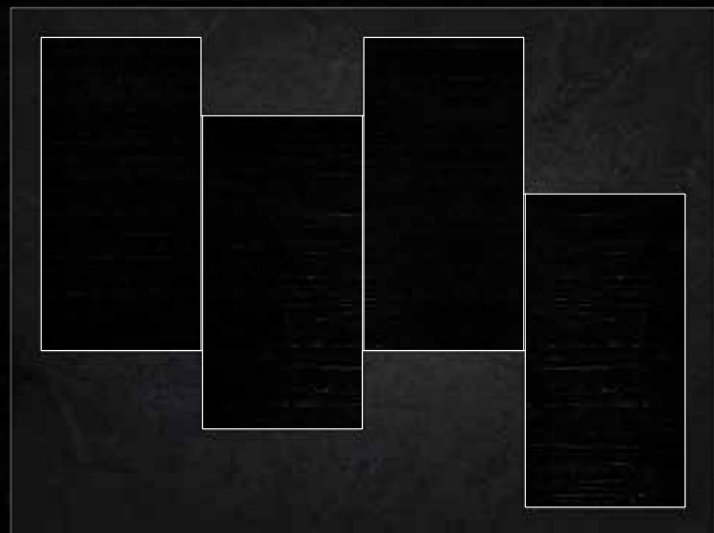
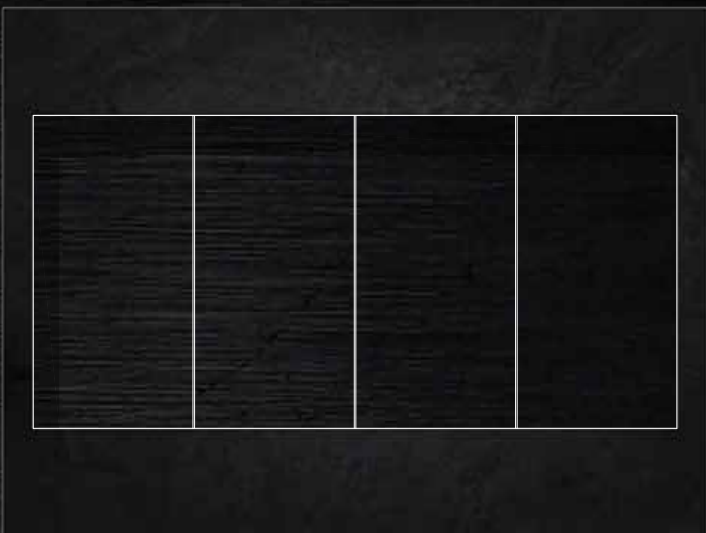
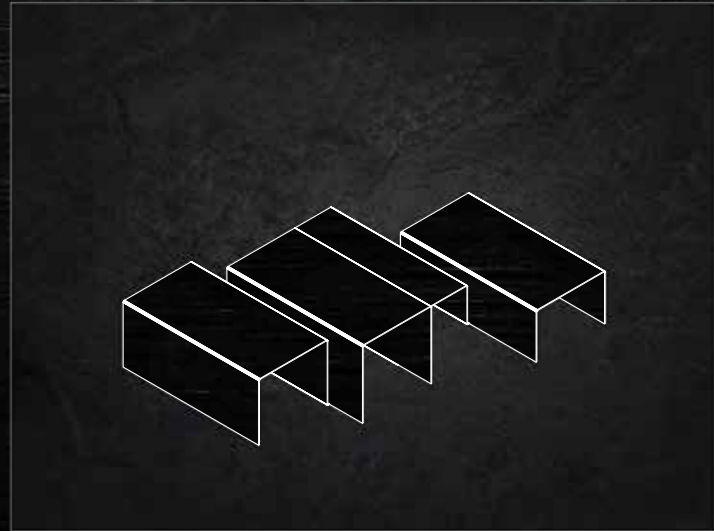
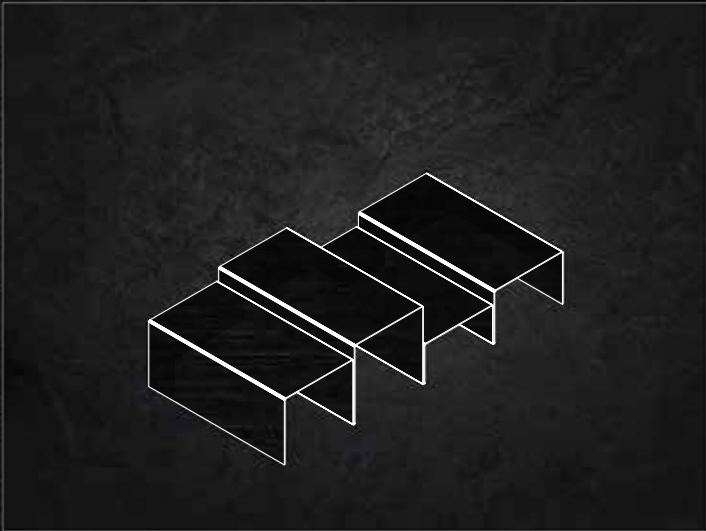
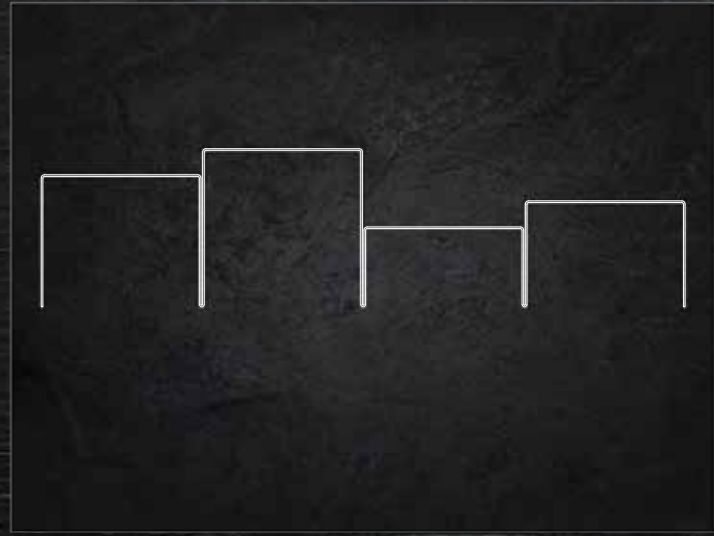
HORIZONTAL SHIFT



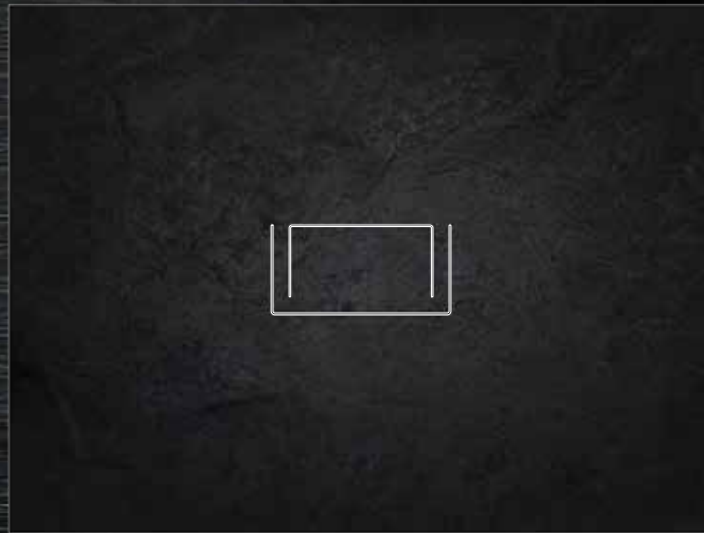
VERTICAL SHIFT



HORIZONTAL & VERTICAL SHIFT



LIGHT MANIPULATION

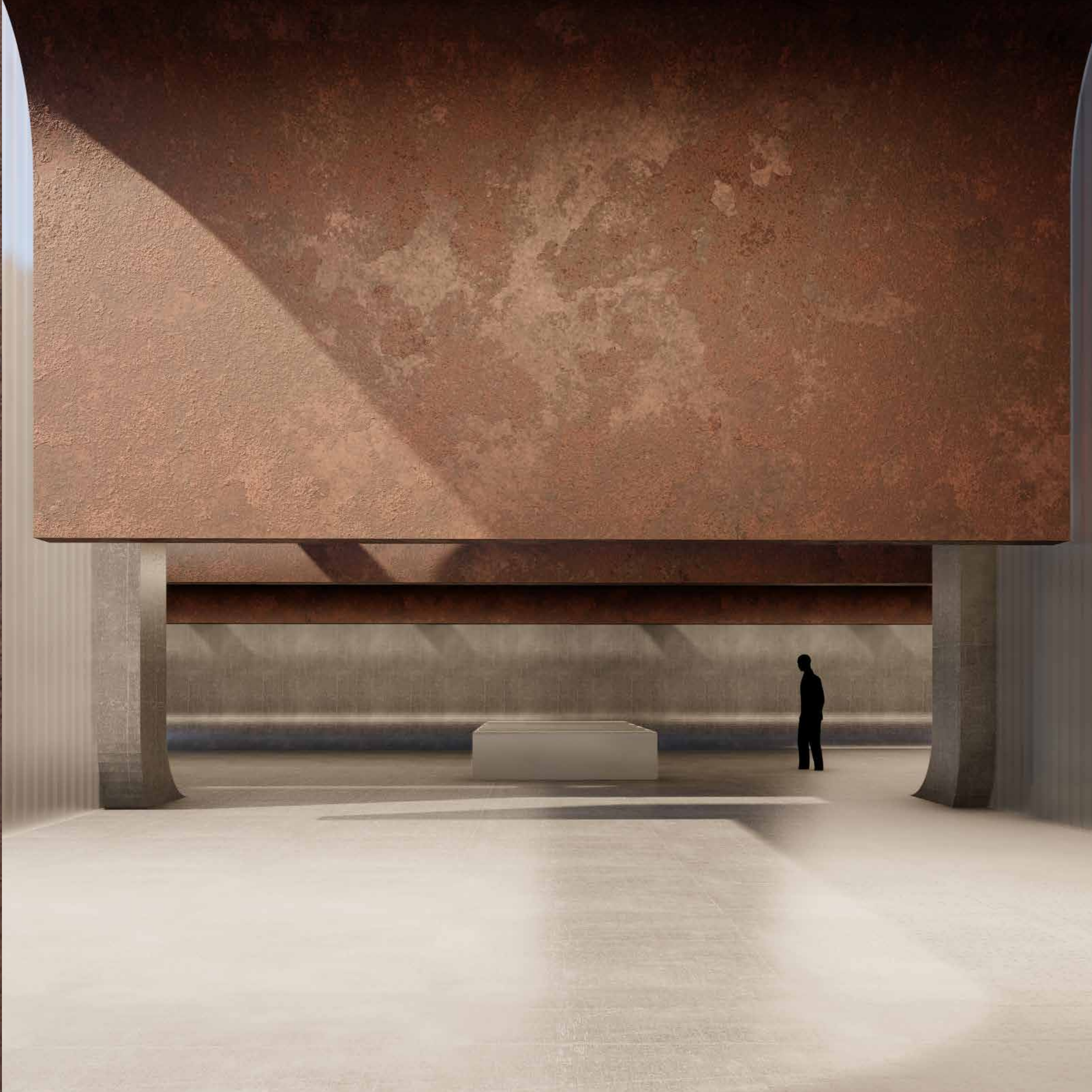






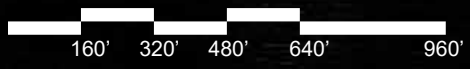
FORM TO ARCHITECTURE

This architectural museum builds off the study of Donald Judd's objects and creates a space designed for art, rather than art designed for a space. Consisting of four rectilinear masses, this museum sits above the ground creating an exterior covered courtyard in the museum district of downtown Dallas, Texas. The interior houses several works of Judd in a space that reflects interpretations of his work.



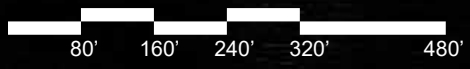
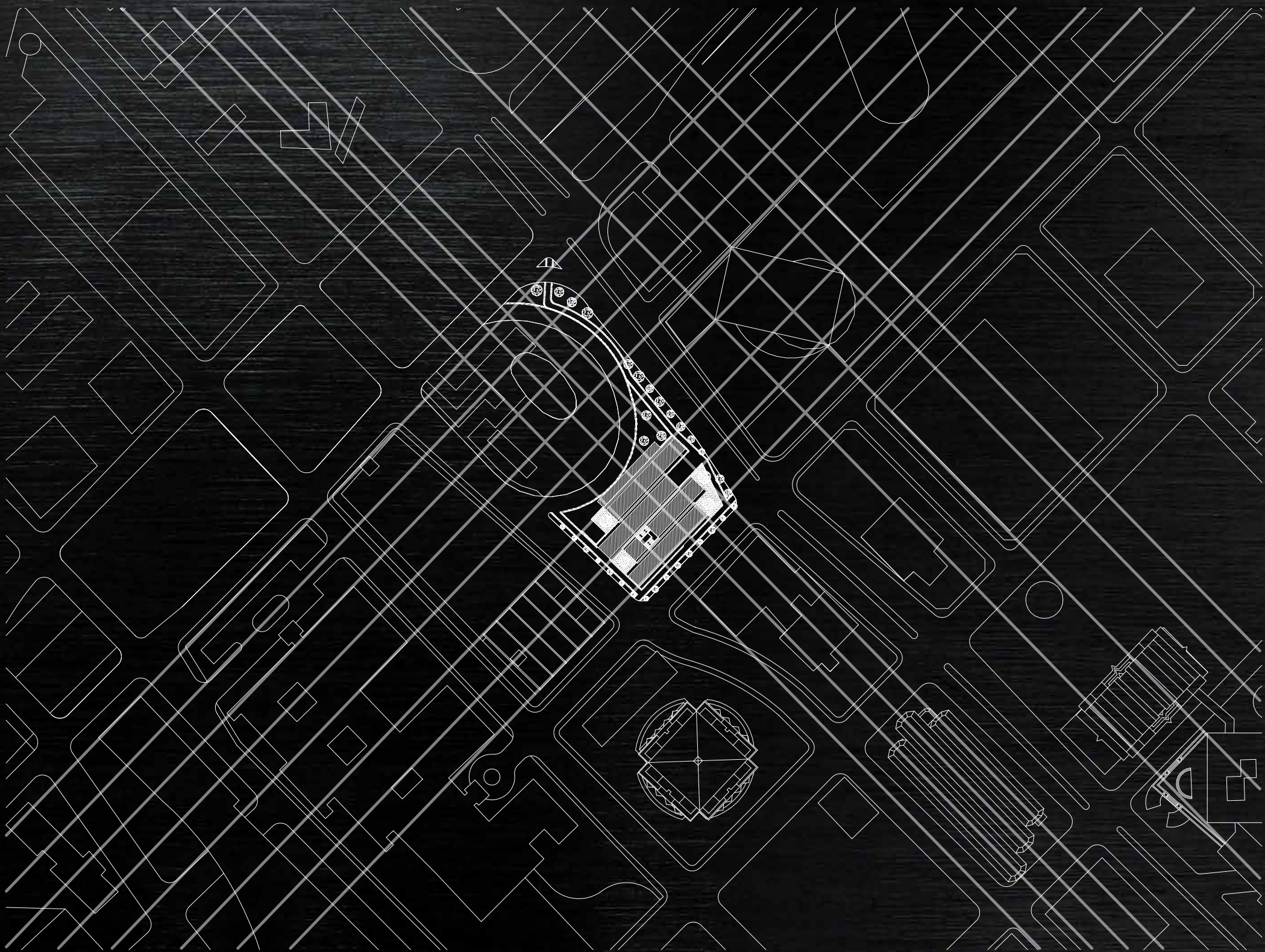
SITE

The site is located in the heart of downtown Dallas in the museum district and sits next door to the Nasher sculpture garden. A unique aspect of this site is due to a curved highway exit ramp that cuts through the site. This provided a great opportunity to utilize the curved wall created by the object as a division between the highway ramp and the site.



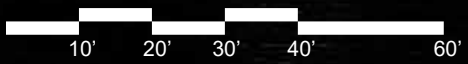
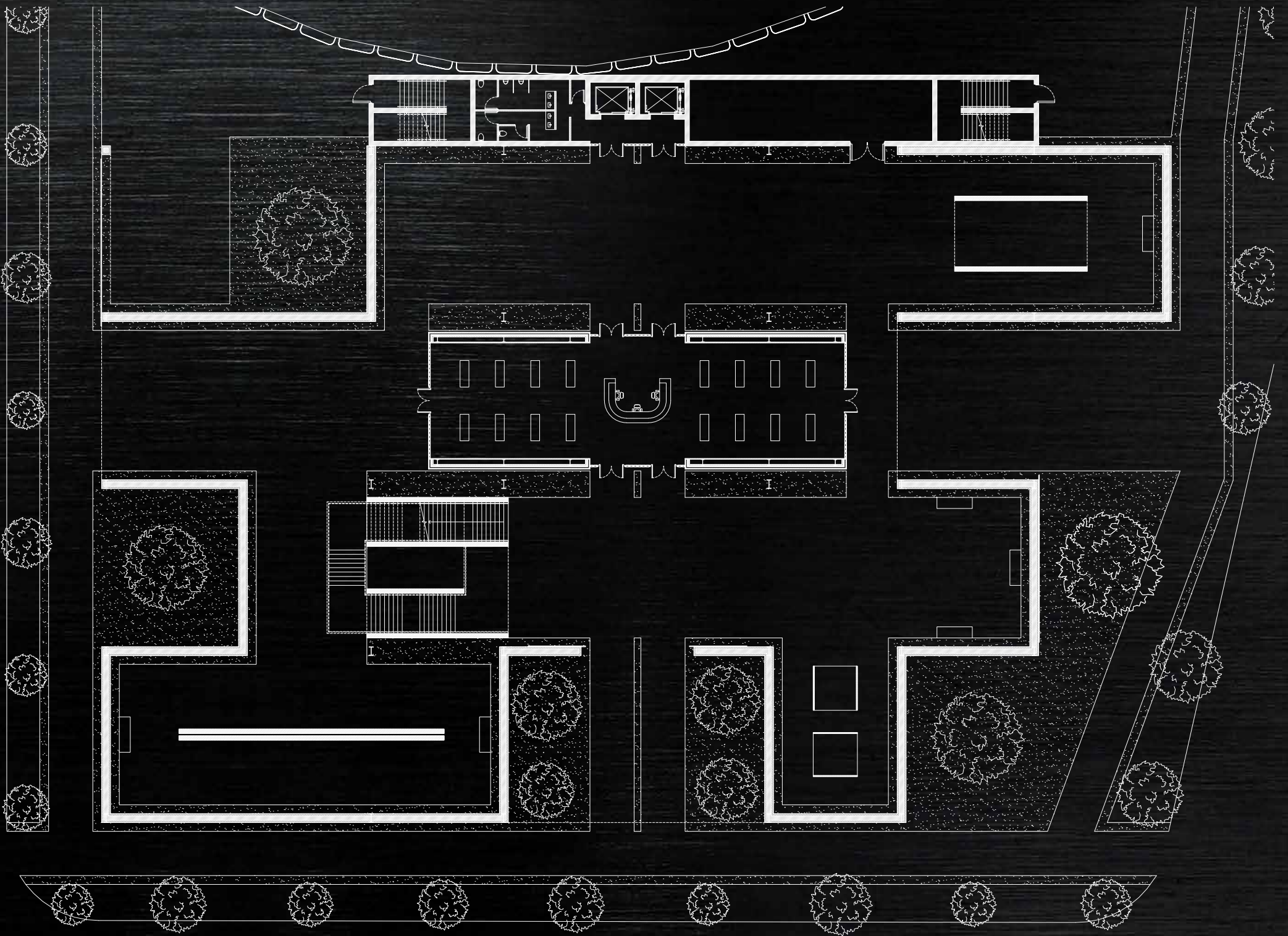
SITE GRID

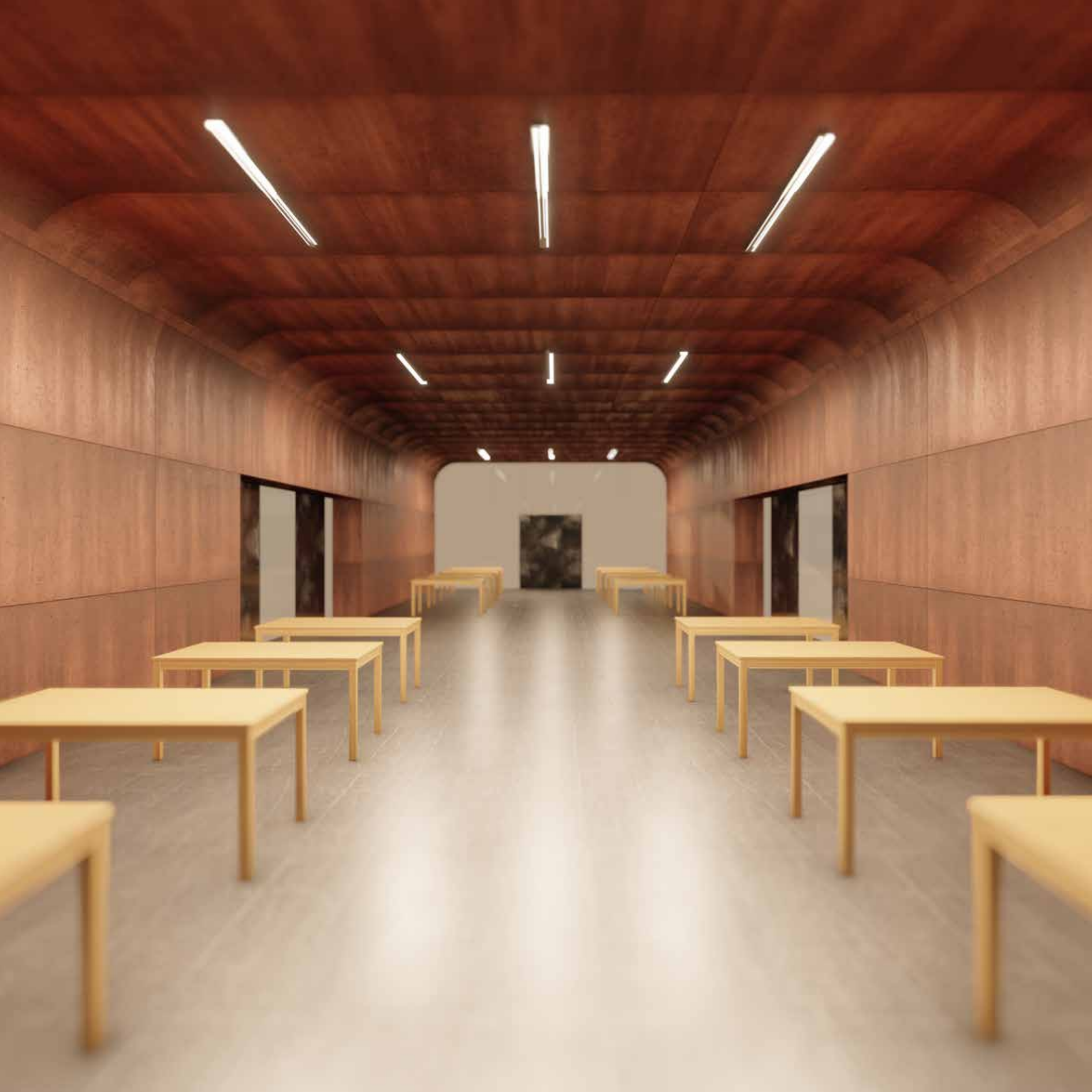
To understand the site, I looked at which buildings came first and how their proportions and geometries influenced each other and created the grid that you see here, which this architecture sits within.



FIRST FLOOR

The ground floor courtyard is open to the public during the museum hours. Someone working in a nearby building or someone just passing through can enter from one of the three entrances and relax as they enjoy their lunch or simply be relieved from the harsh Texas sun. If visiting the museum, people enter the space and visit the object housed under the museum. Here they can purchase museum tickets and a variety of gifts and souvenirs. From there, a visitor can enter the museum from the ceremonial stairs or the elevators.





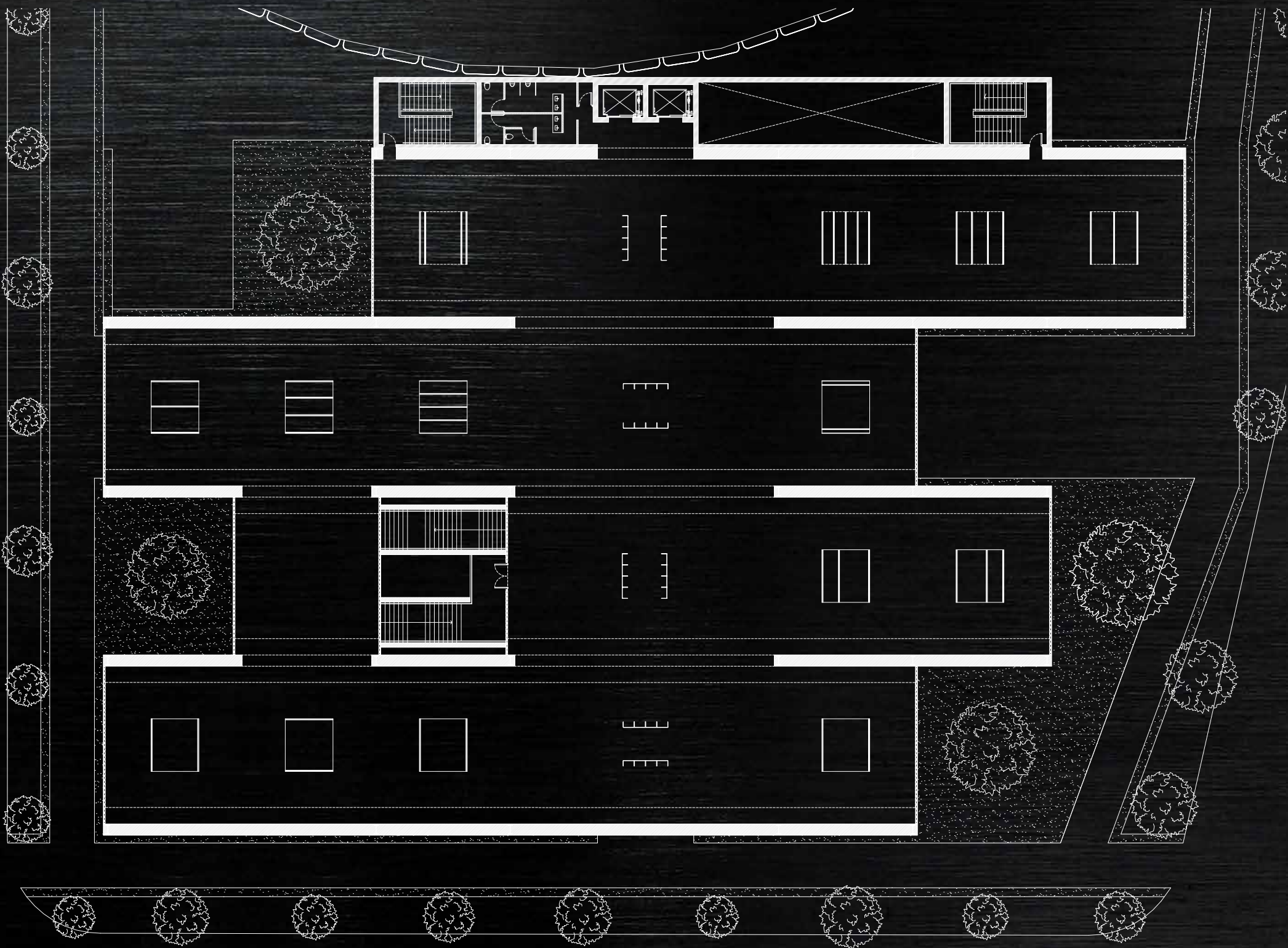


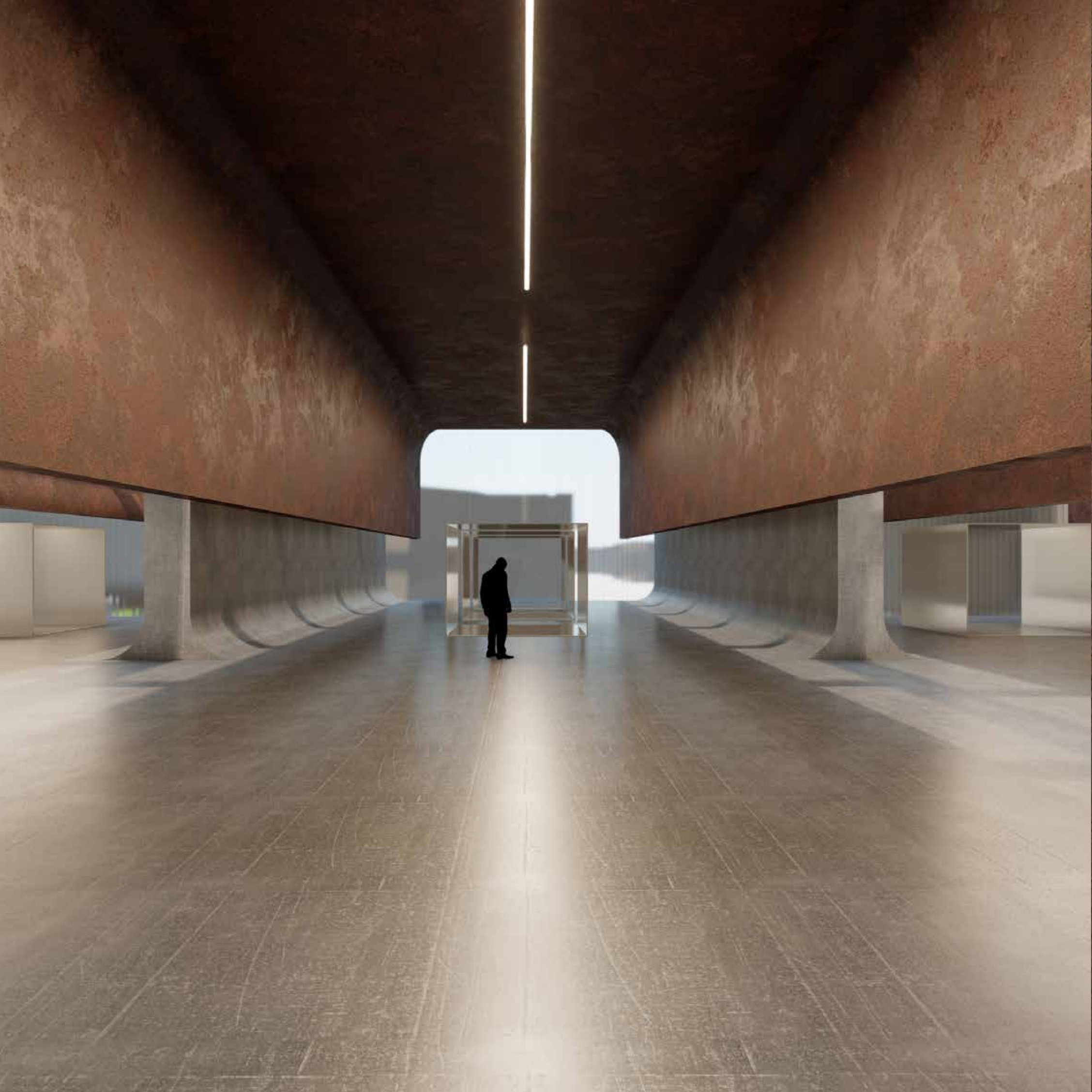
SECOND FLOOR

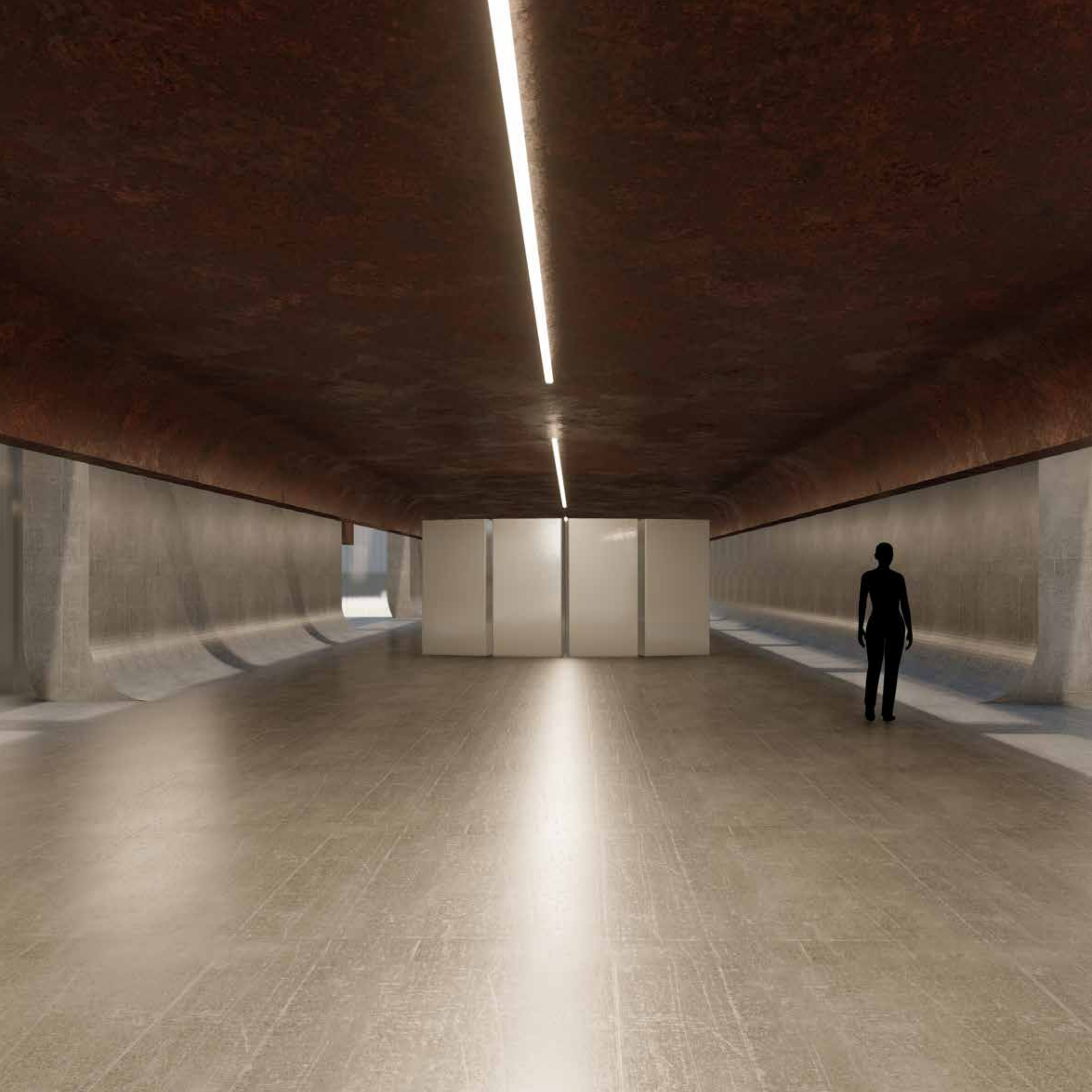
To understand the site, I looked at which buildings came first and how their proportions and geometries influenced each other and created the grid that you see here, which this architecture sits within.

As they enter the museum, they are free to walk around the galleries. However, because of the intersection of the four rectilinear masses, there is a fifth gallery that is formed. The north, south, entrance, central, and in between galleries.

Here we see some of the spaces created in the galleries. In section you are able to see how the vertical shifts affect interior spaces, how light is able to enter the space through the roof, and how the folding of metal objects becomes realized within the architecture.





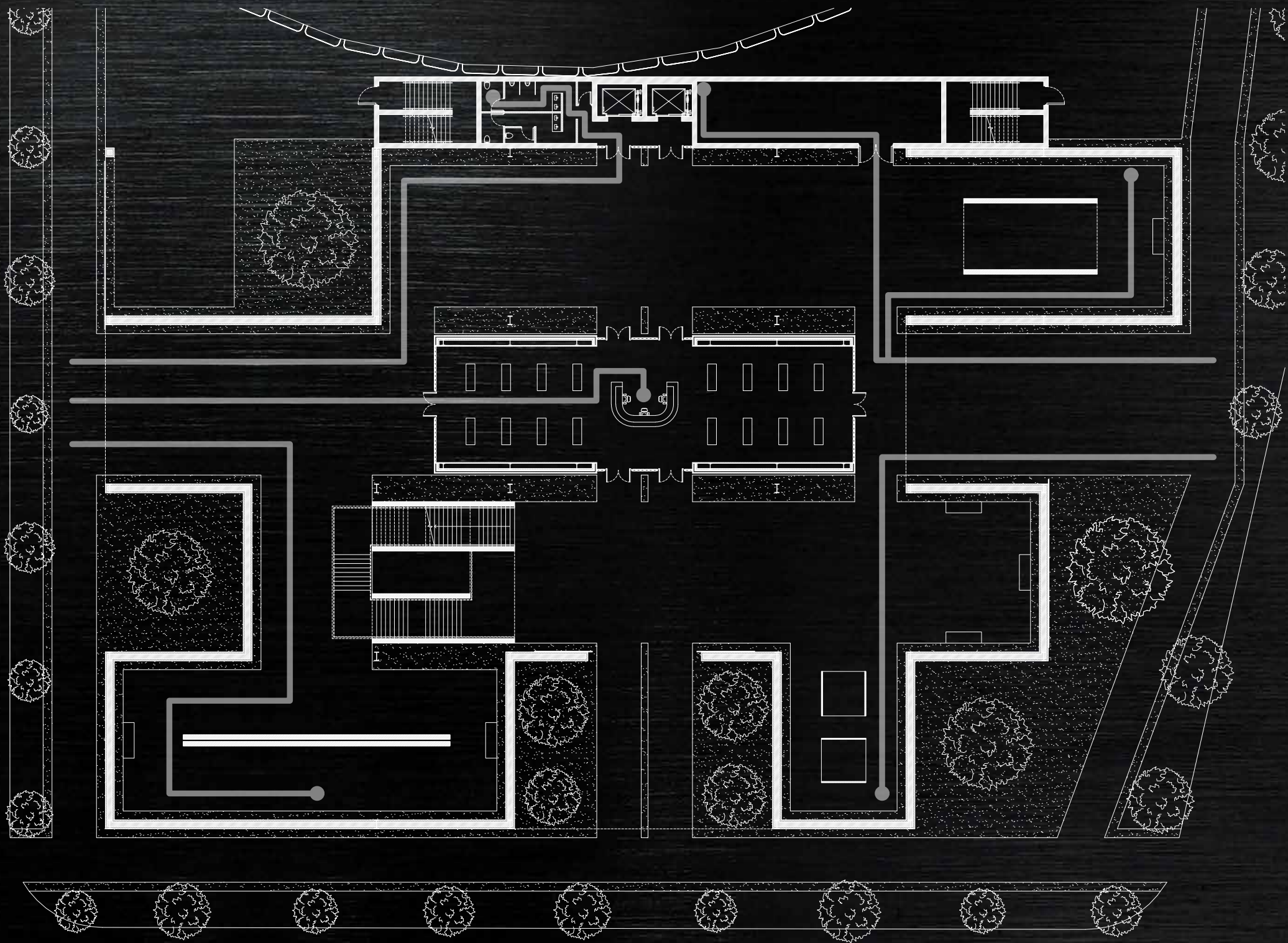


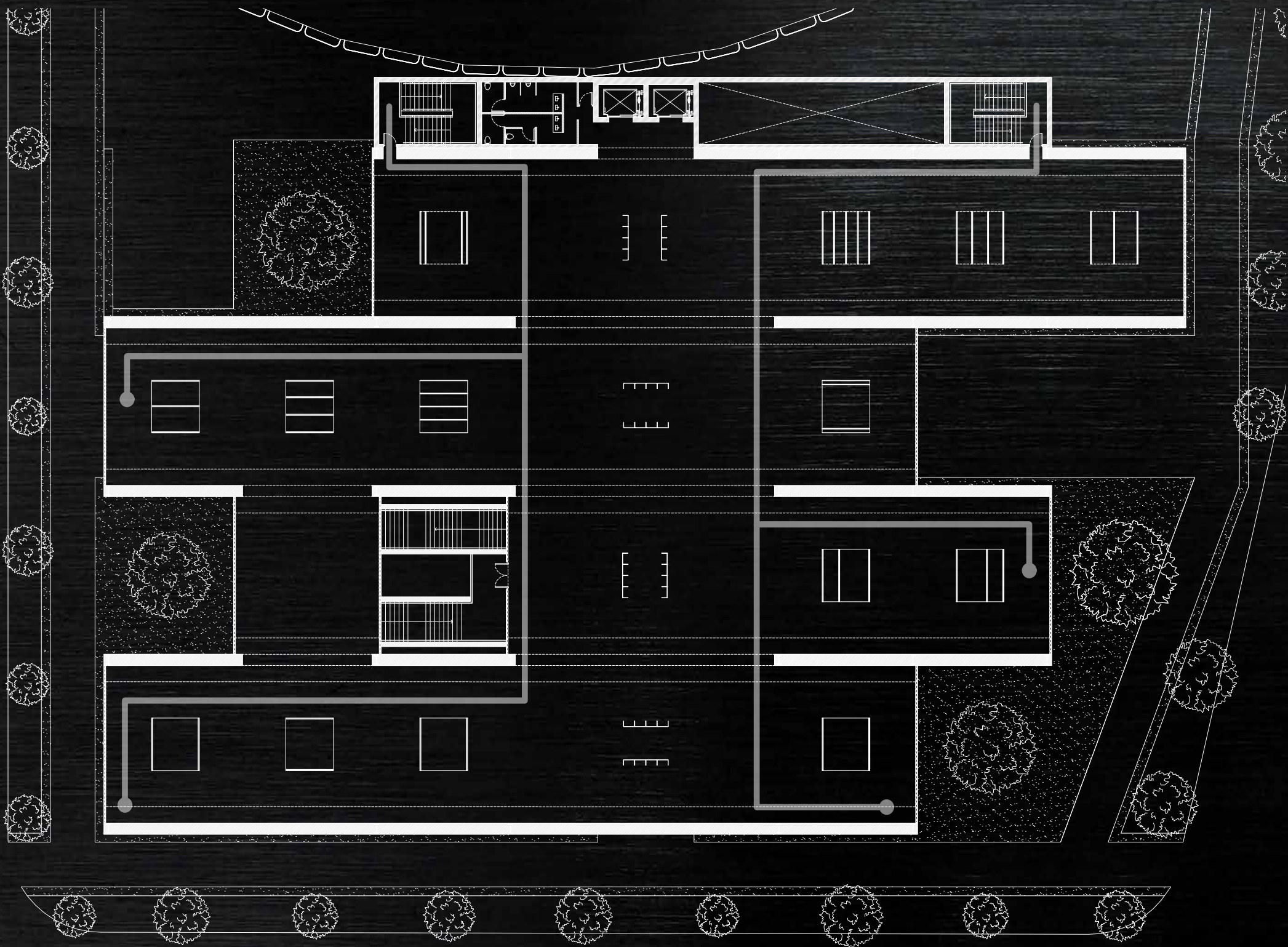




EGRESS

These drawings illustrate paths of egress for the two floors of this architecture. The maximum allowable distance for both floors is 250'. The first floor has a maximum travel distance of 200' and the second floor has a maximum of 240'.

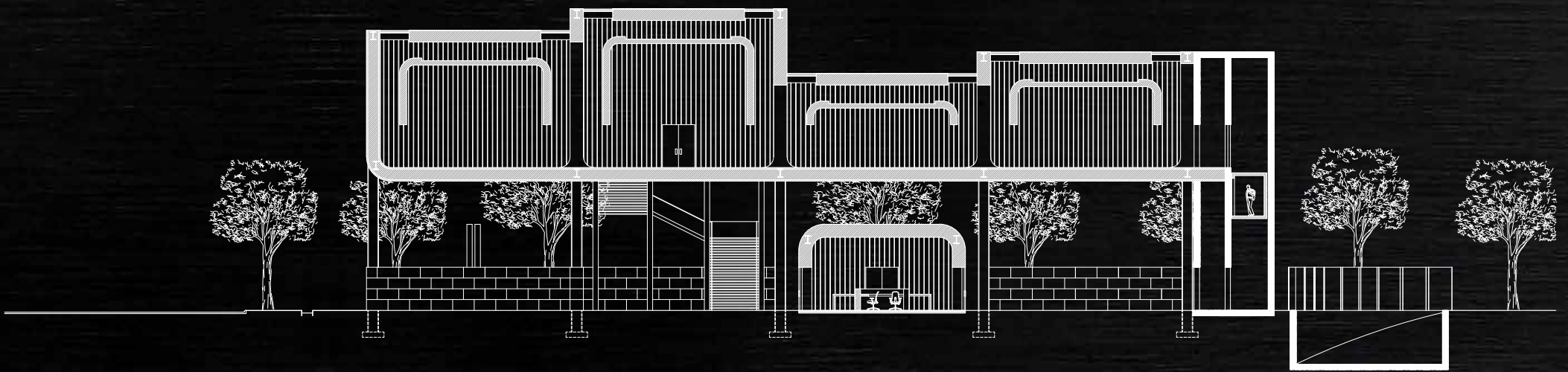


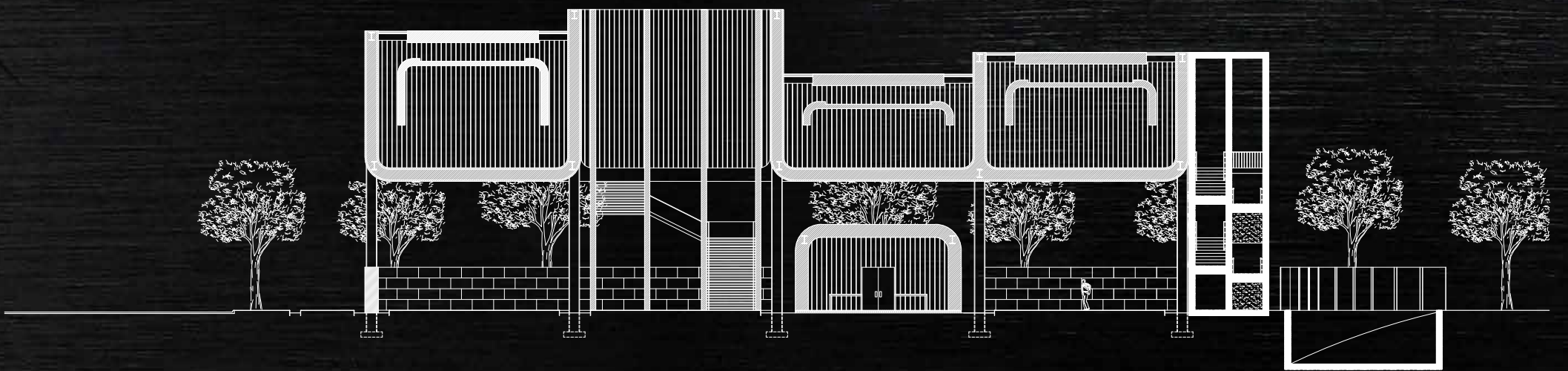


SECTIONS

In section, you begin to see how the interior spaces are formed with the floor bending to become a wall and the curved form of the object to become the ceiling. Additionally, the relationship between the museum, exterior wall, and void becomes evident in their proportions.

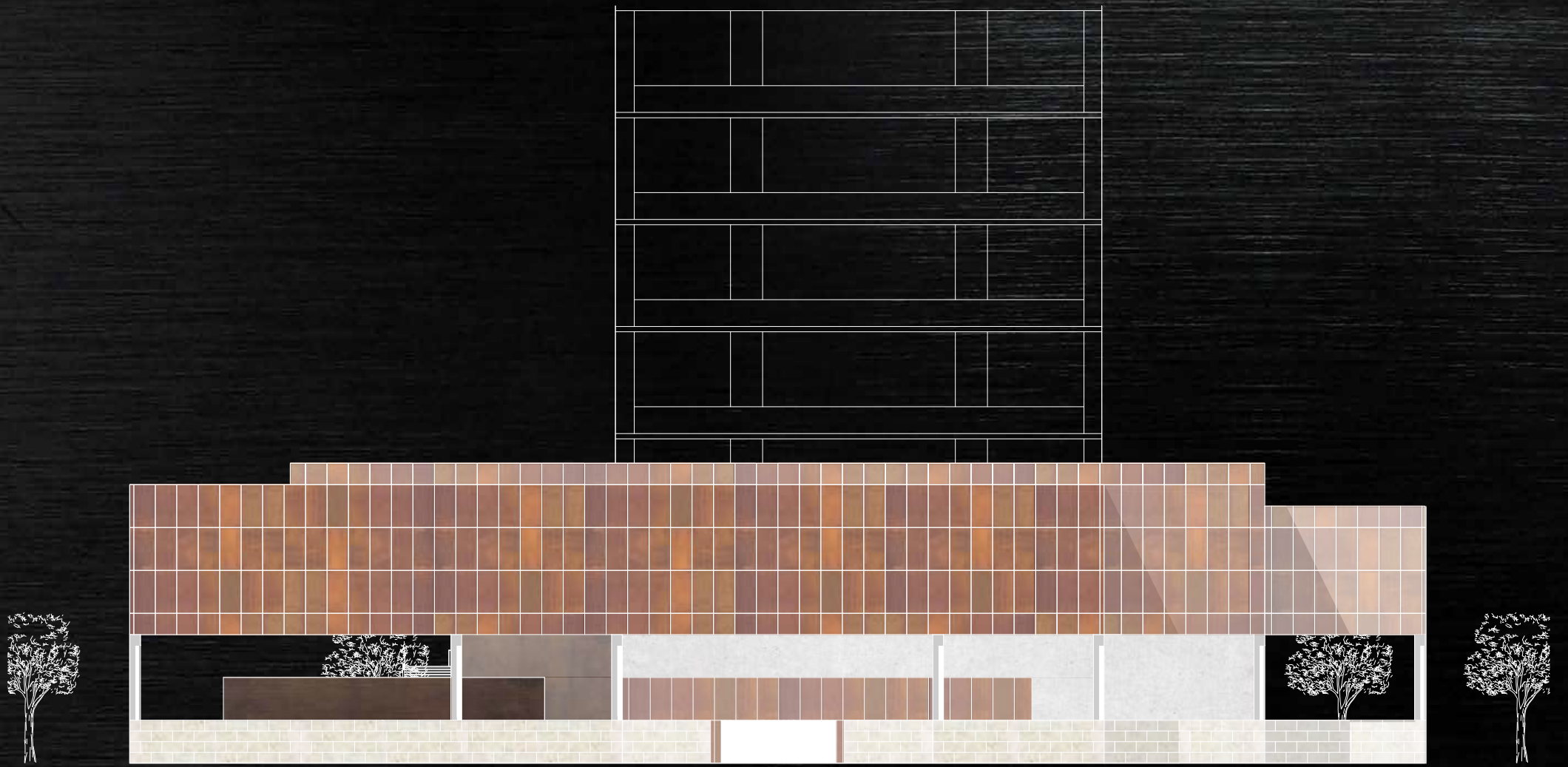




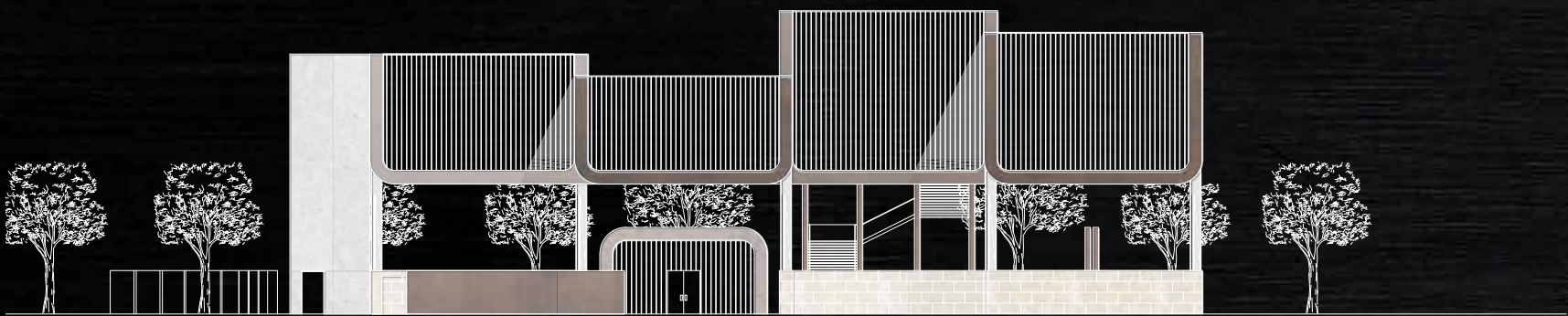


ELEVATIONS

In elevation you see the steel facade of the museum and contrast of the travertine wall that frames the exterior courtyard. The use of travertine adds to the contextual relationship with multiple neighboring buildings using travertine as a primary finish.



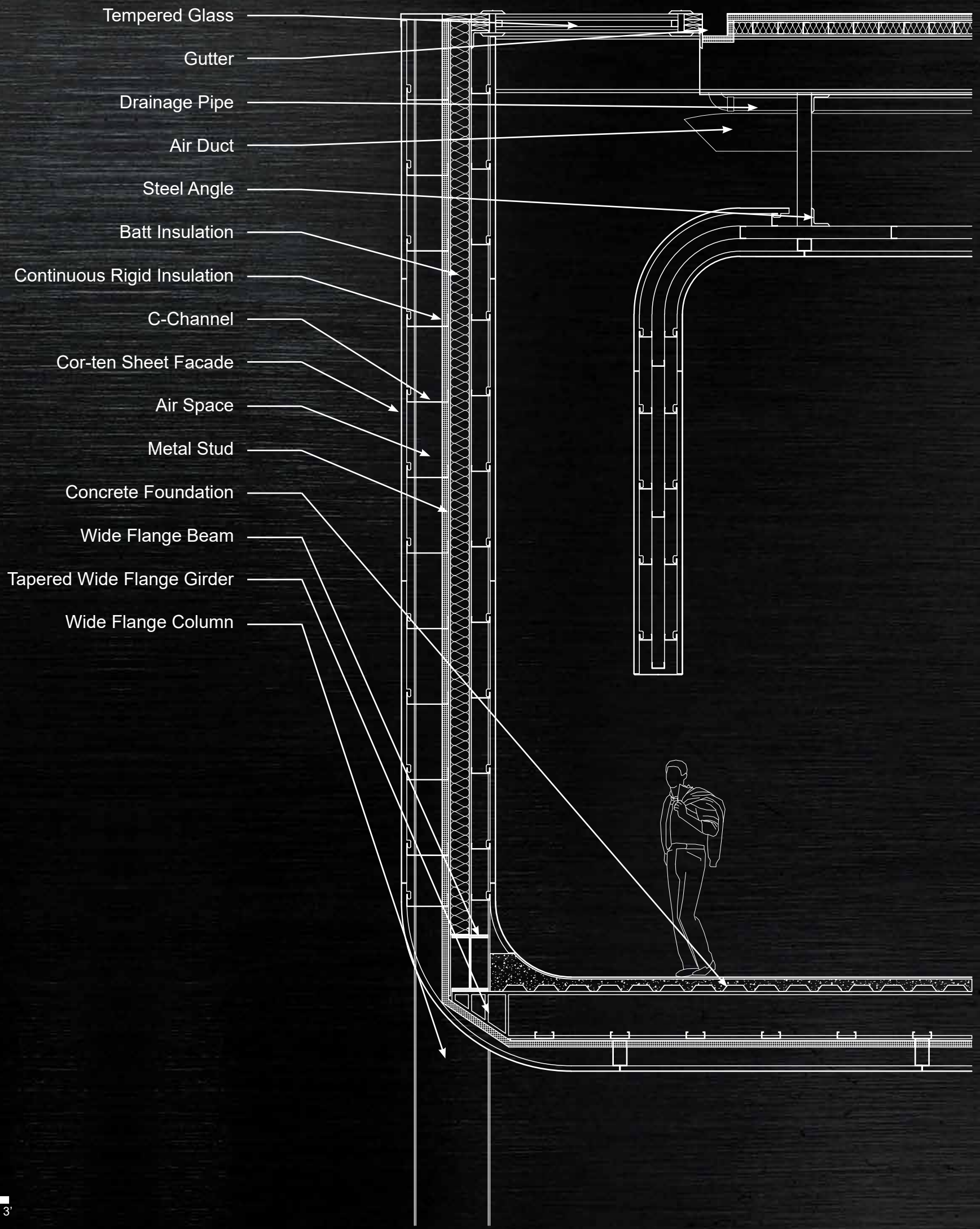
10' 20' 30' 40' 60'

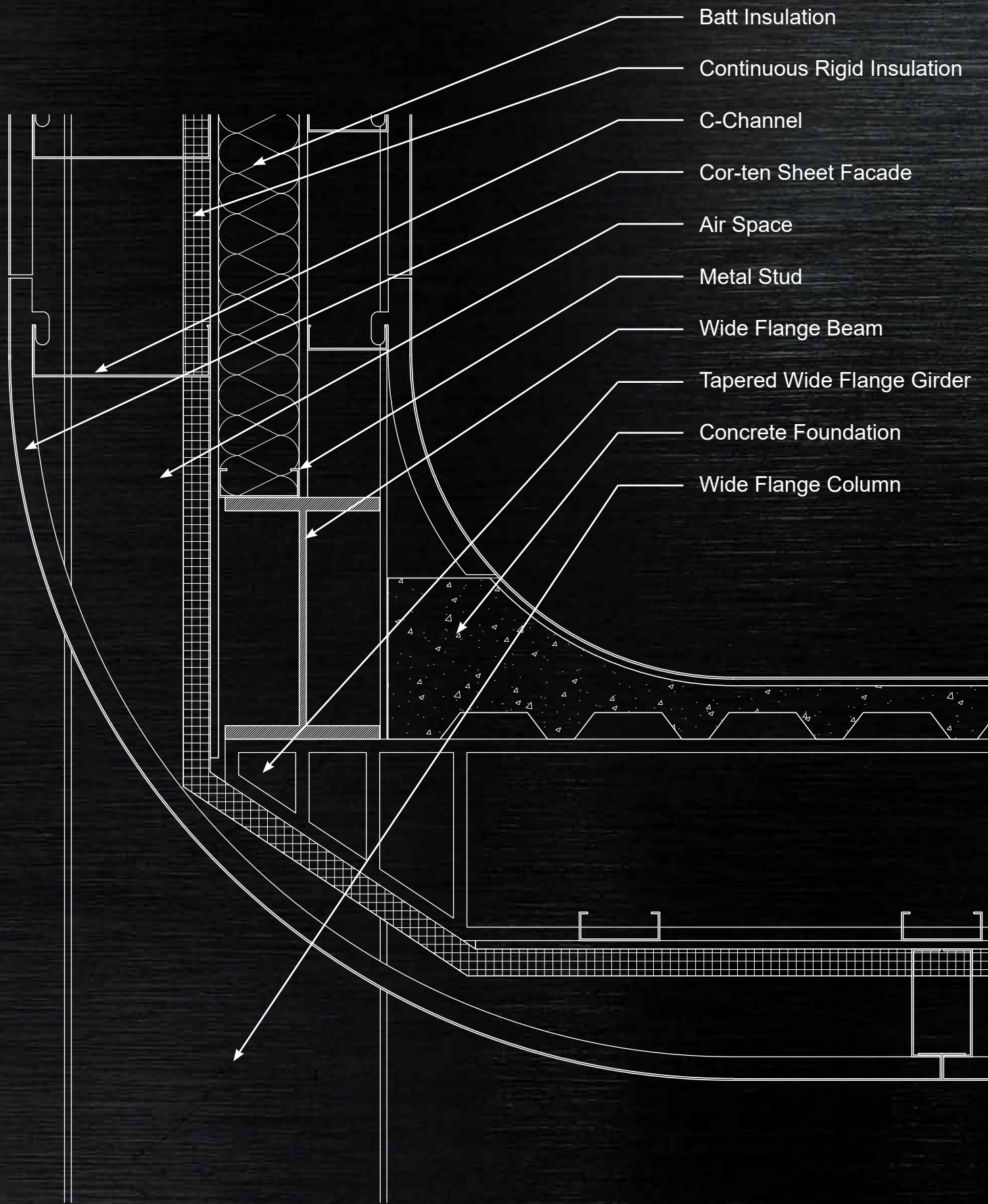


WALL SECTION/DETAILS

As you can see, this curve is no longer a single piece of metal that is folded. There is an assembly of the floor and wall that are combined to reflect the object. This creates conflict with the making of the curved edge of a single material. However, since the scale of the architecture and object are two different things, there is a transition of assembly that takes place to satisfy the needs of building performance that would otherwise do not be met with a single piece of curved metal.

The same is true when you look at the roof detail. Because of the different scales and building performance needs, there is a transition that takes place between the object and architecture. However, in this transition there is a balance in reflection of an idea and performance of a building that must happen when an object becomes
Architecture.





Batt Insulation

Continuous Rigid Insulation

C-Channel

Cor-ten Sheet Facade

Air Space

Metal Stud

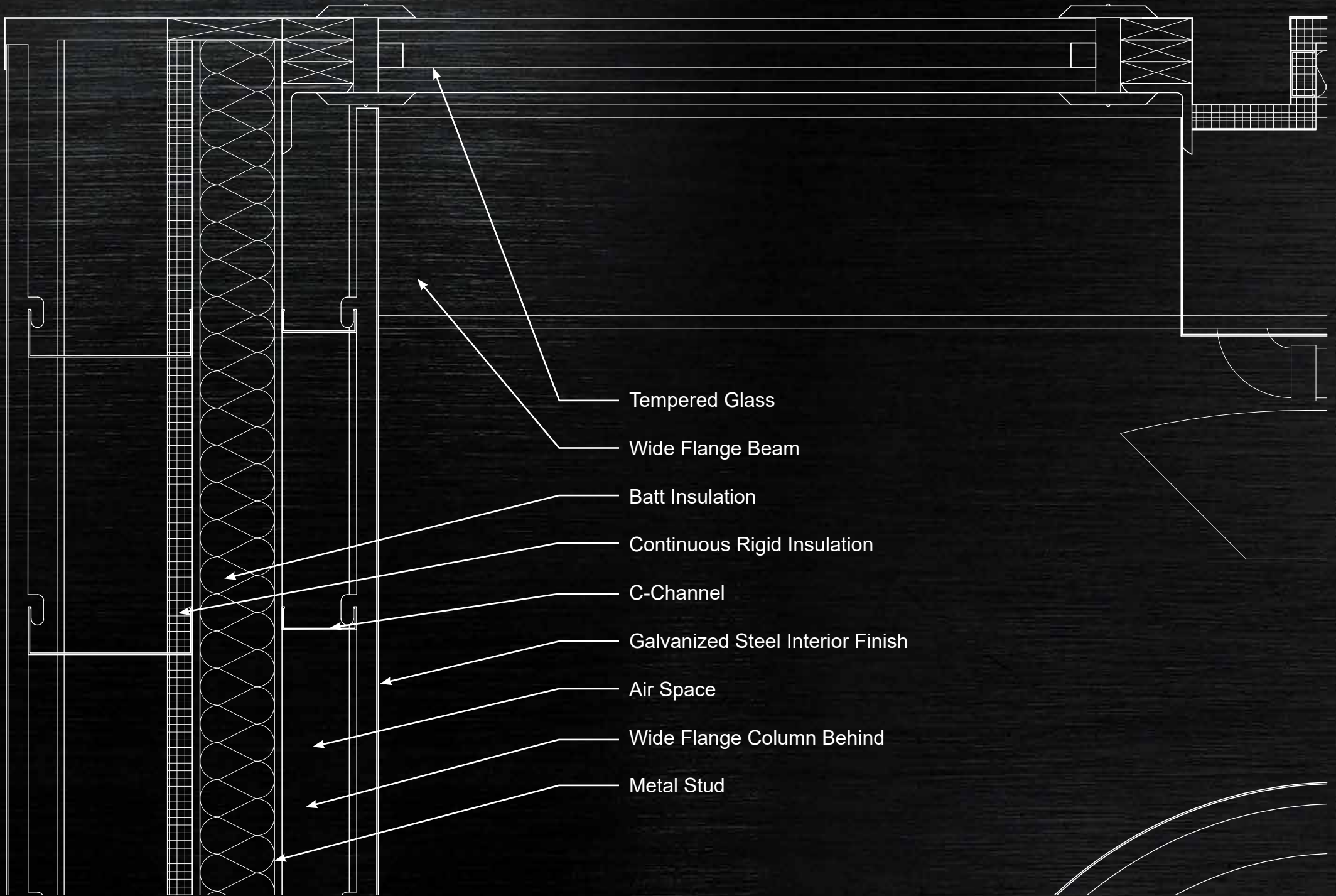
Wide Flange Beam

Tapered Wide Flange Girder

Concrete Foundation

Wide Flange Column





CONCLUSION

In the exploration of architecture for art, there is an important transition that occurs when the study of an object must become architecture. In this transition, scale, awareness of assembly, performability, and response to context must take place. As the architecture develops, the architect is faced with the challenge of developing a balance between staying true to the art and creating architecture that is functional and feasible. However, In this balance is opportunity for design.

