

CONTEMPORARY ARTS MUSEUM IN ROANOKE

AN ENTRANCE TO THE CITY

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CONTEMPORARY ARTS MUSEUM IN ROANOKE

BY ARJUN SHARMA

Thesis submitted to the faculty of Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of Masters of Architecture.

20th October , 2008
Blacksburg , Virginia

Professor James R Jones, Chair

Professor Hans C Rott

Professor Mario Cortes

Keywords: Cantilevered , Mass , Roanoke , Museum , Art , Urban Plaza , Contemporary , Entrance , City ,Salem

ABSTRACT

Roanoke, as a city, needs to redefine itself and to constantly respond to what new should come to the city. Society and culture become an important factors in design. The insertion into an existing fabric requires a careful dialogue between past, present and future. The proposed building sets in contrast to the existing structures in the neighborhood of the site, establishing its own response to time. Although contrasting the existing buildings the proposition is responsive to context in terms of scale and materials. The context is important to continue the harmony and rhythm of the urban fabric.

The site is located at one of the main entrances to downtown Roanoke and market square and hence the proposed building acts as a gateway to the future of the city. Due to its location the building will project the first image of the city. Therefore the proposed building should enhance and adapt to the social and cultural roots of the city. My thesis is a reaction to the existing conditions at the site for what I believe to be a lack of sensitivity to the context and the needs of the people of Roanoke. A museum is a public institution to provide insight into the attitudes and values of the local community. Through design the building is intended to symbolize the gateway to the future of the city.

The basic shape of the building is curved in response to the plan of the site while allowing for an urban plaza in front. Cantilevered masses which radiate from Market square are inserted into the primary building mass providing a connection to a larger context. The cantilevered masses (which hosts art galleries) hover over and project into the urban plaza providing Roanoke city with a public space downtown. Thus the two most important elements i) Cantilevered masses and ii) The Urban Plaza are means to weave the thesis project into the existing urban fabric of the Roanoke.

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Acknowledgement

- I would like to sincerely dedicate this thesis to my family. Thanks Mom , Dad , Pran Uncle , Shashi Auntie, Dinesh Mamu, Shallu, Anjali, & Rishi for giving unconditional love and support and being there always. You are the driving force in my life. Dad and Pran Uncle have always been my inspiration and thanks for instilling those motivational sparks in me. Jai Mata Di!
- I would like to thank my Committee: Jim Jones, Hans Rott and Mario Cortes for their constant support and encouragement. It really made my journey in Virginia Tech a life changing and a memorable experience I am deeply influenced by Hans perspective on Architecture and his ingenious way of explaining things by giving relevant examples and his clarity of thought which really helped me in understanding nuances in Architectural elements of design. I have never enjoyed any other class more than Epistemology and Urban Seminars he taught. Jim's detailed feedback on my design and helping me explore my core concept and highlighting the strong points of my design are some of the things that I would always appreciate and remember. Moreover his design presentations on Friday evenings in Cowgill have always have had a deep impression on me in a way of his explanation of usage of each design element in the projects he discussed every alternate Fridays or so. Mario's guidance in resolving the complex structure of my design was really helpful and I love his approach for teaching structures in such an exciting manner. It was a pleasure seeing different kinds of spaghetti columns and beams in his assignments. I would specially like to thank my committee for being so understanding and accommodating always.
- My friends have always been my unspoken strength. Devi has always been there for me in stress times and fun times. Nishant and Annu for always being a phone call away and being so helpful. Naif, Ryohei, Girisha as studio mates have been outstanding. Also would like to thank my best friends Subi, Vicky, Yusuf, Vishu, Dhruv ,Aditya for their never ending support and making my Masters in VTech a memorable experience!!

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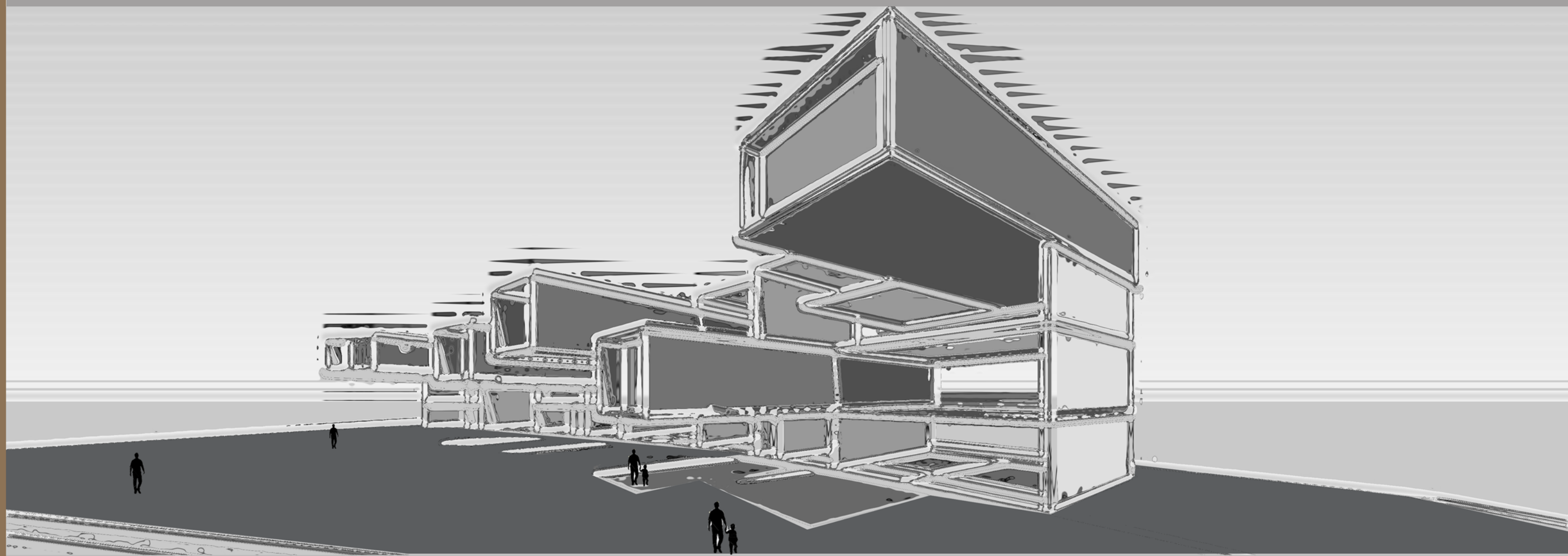
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Site and the city:

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SITE AND THE CITY:

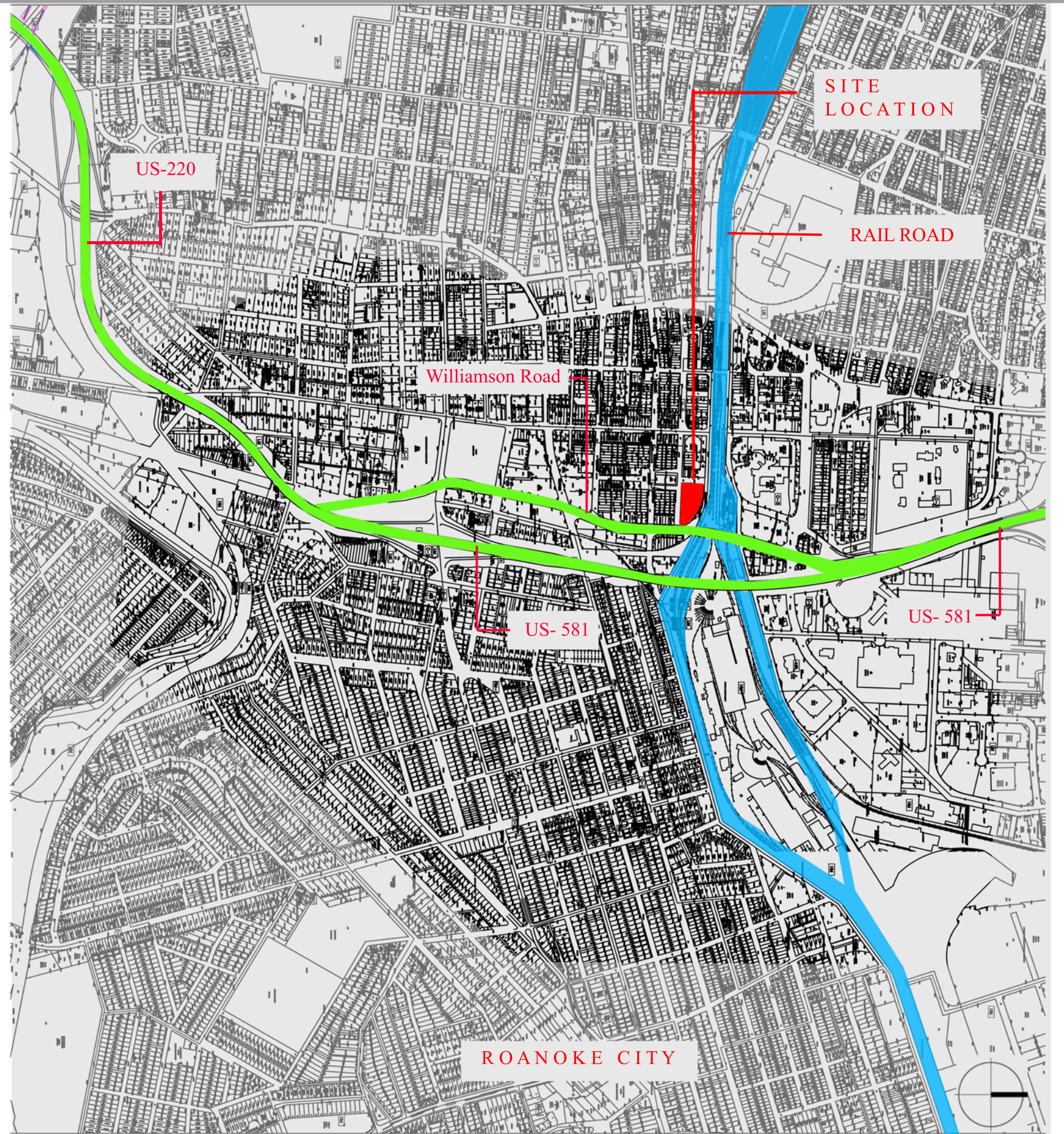
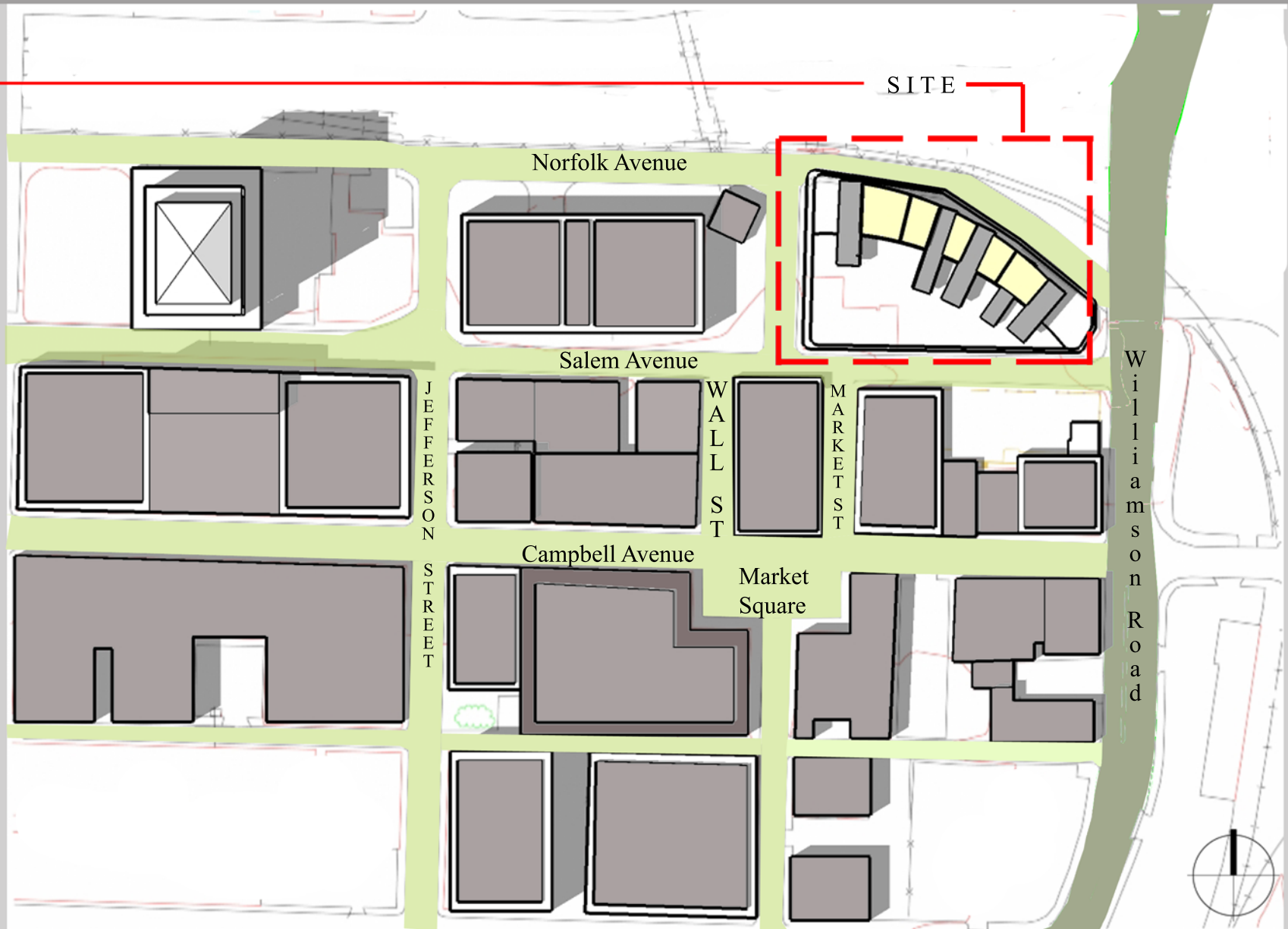


Fig. 1.0



Picture of the site taken from Norfolk Avenue looking towards Salem Avenue.



SITE PLAN

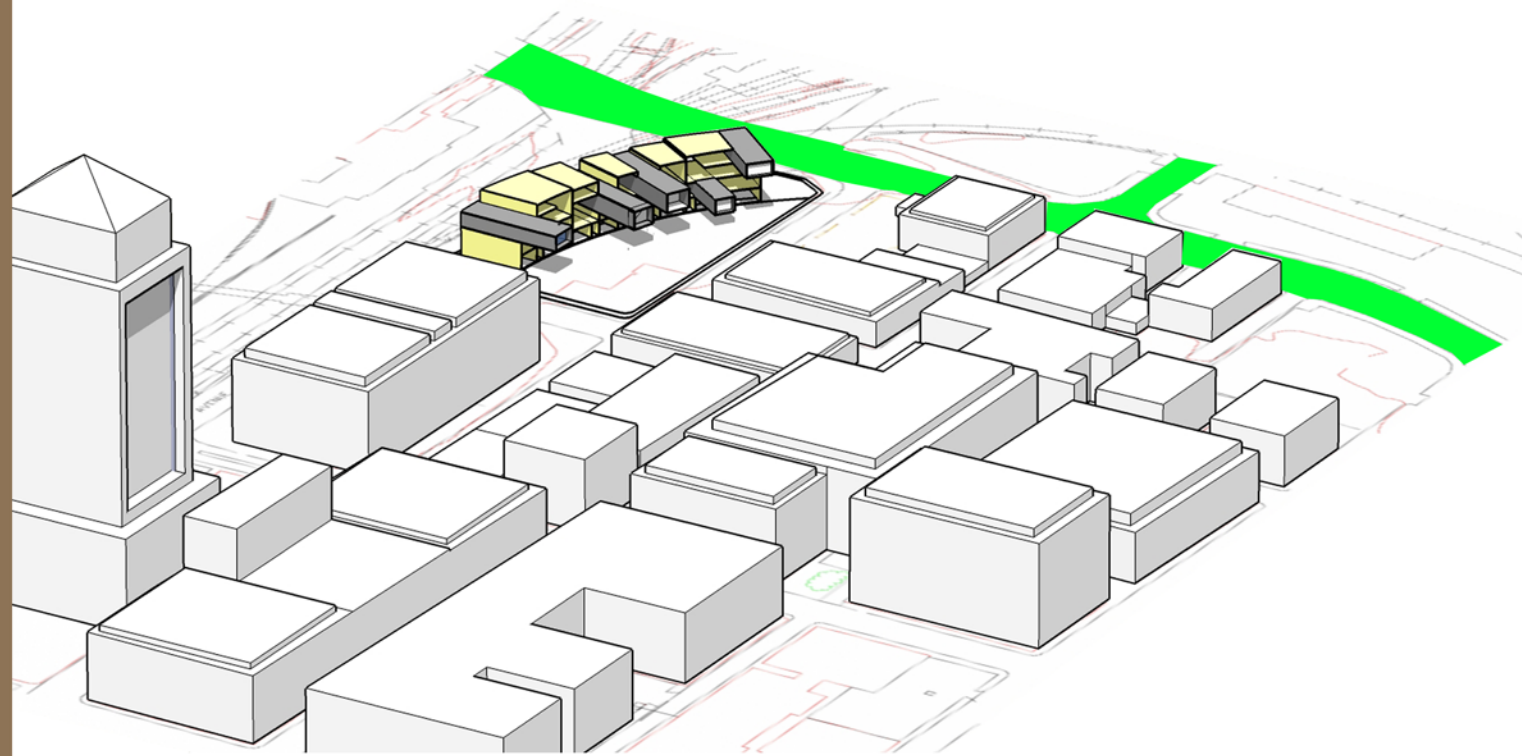


Picture of the site taken from Williamson Road

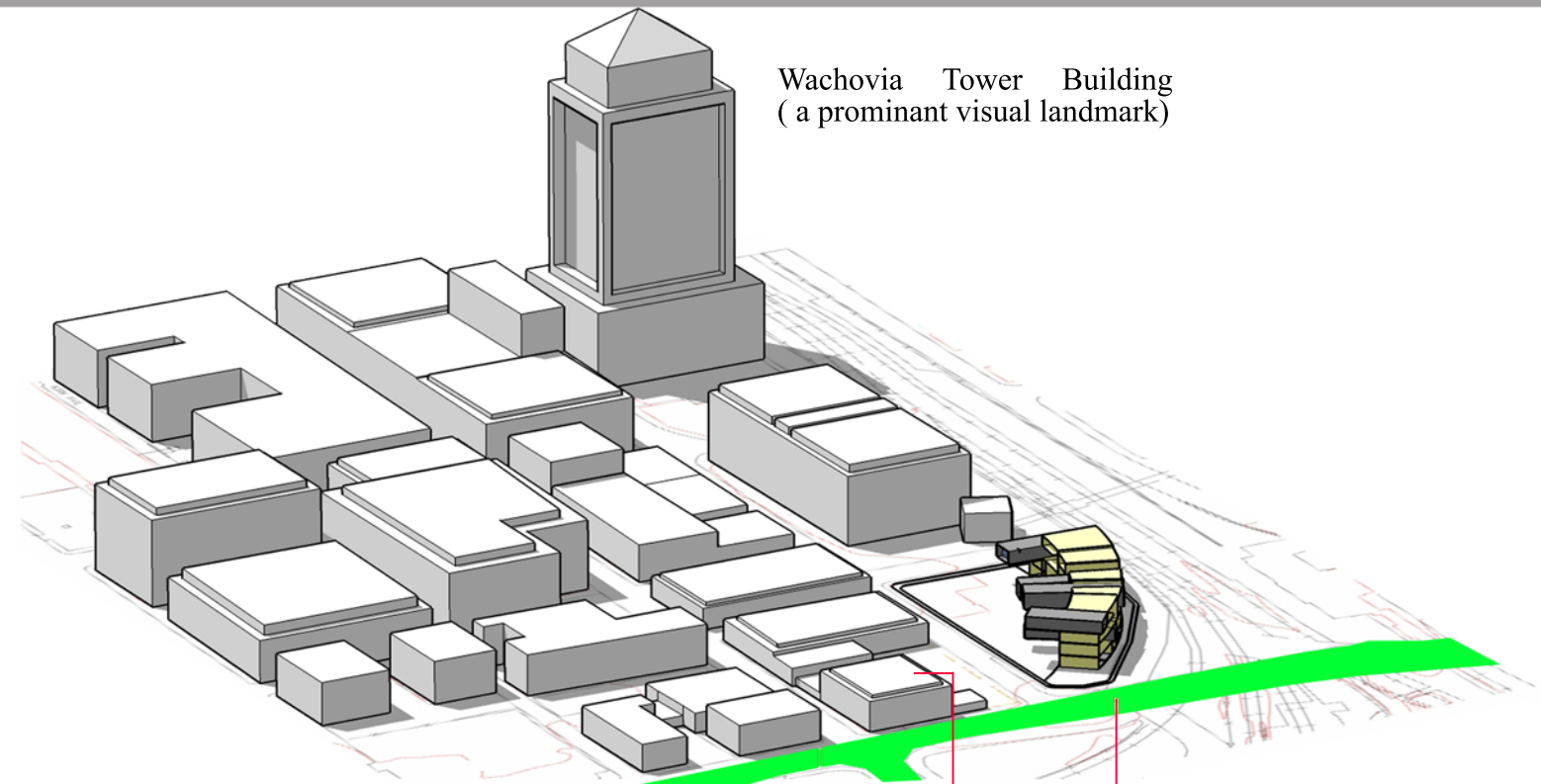
SITE AND THE CITY :

The site is located at one of the main entrances to downtown Roanoke and market square. The proposed building sets in contrast to the existing structures in the neighborhood of the site, establishing its own response to time. Although contrasting to the existing buildings the proposition is responsive to context in terms of scale and materials. The response to context is important to be in harmony with the urban fabric.

Due to its location the proposed building will act as a gateway to the city. Through its design it is intended to symbolize the gateway to the future of the city .



MASSING MODEL OF THE CITY:



MASSING MODEL OF THE CITY:

ROANOKE CITY:

As a beginning it is important to consider Roanoke's growth as both a constructed and social condition before making architectural decisions. Roanoke's growth was rapid during the twentieth century due to annexation of county property. Roanoke is located in the Blue Ridge mountains in the center of the Roanoke valley.

Roanoke is famous for its festivals such as the Local colors festival, the Strawberry festival and the Henry street festival. It also hosts festivals which include the visual and performing arts and sporting events. The city has existing museums such as the Virginia Museum of Transportation and Center in the Square. These museums are within walkable distance from the site. The city has its roots in arts and culture, although local artists don't have a platform to display their work. Musicians play on streets on weekends due to the lack of a public plaza in the vicinity of downtown. The proposed building should comprise of elements which contribute to the local arts by providing galleries and an urban plaza to exhibit work. The building will act as a catalyst to the growth of local artists.



Corner Condition of the Site at the Intersection of Williamson Road and Salem Avenue



A Williamson Road



B Picture of the Rail road on Norfolk avenue side of the site



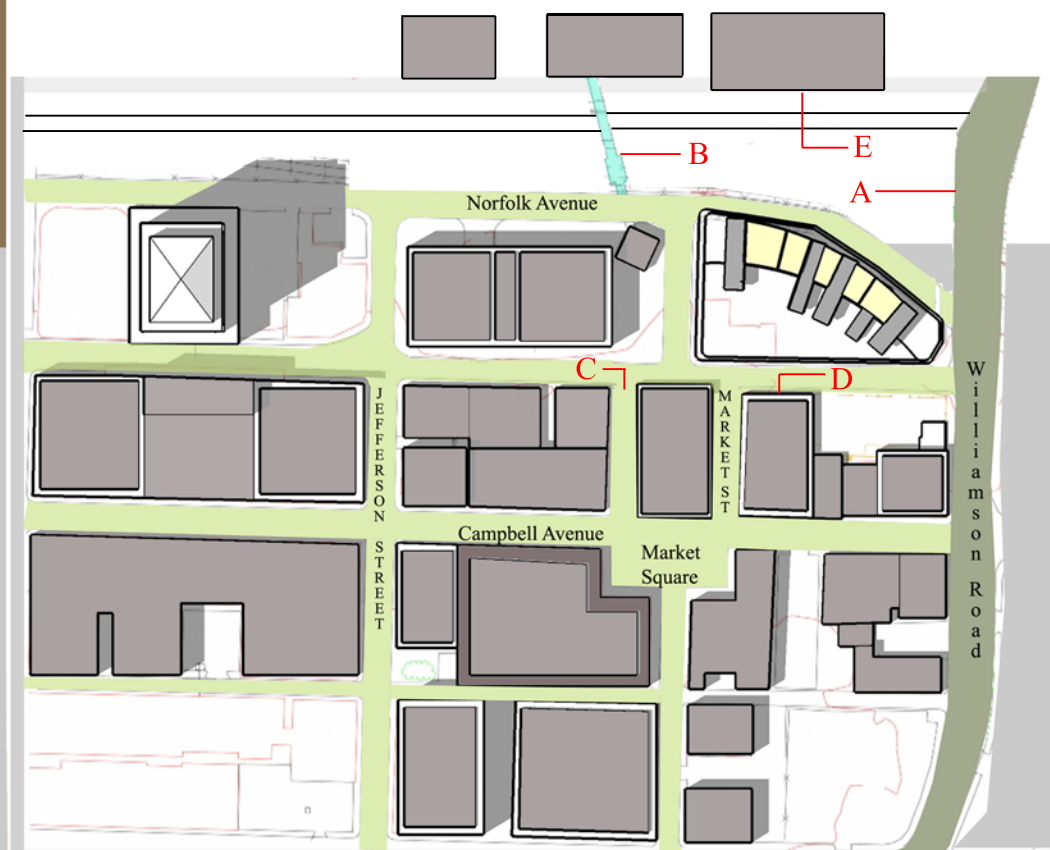
D Salem Avenue



C Picture of the Wall Street looking towards Market Square



E Hotel at Railroad side



SITE PLAN

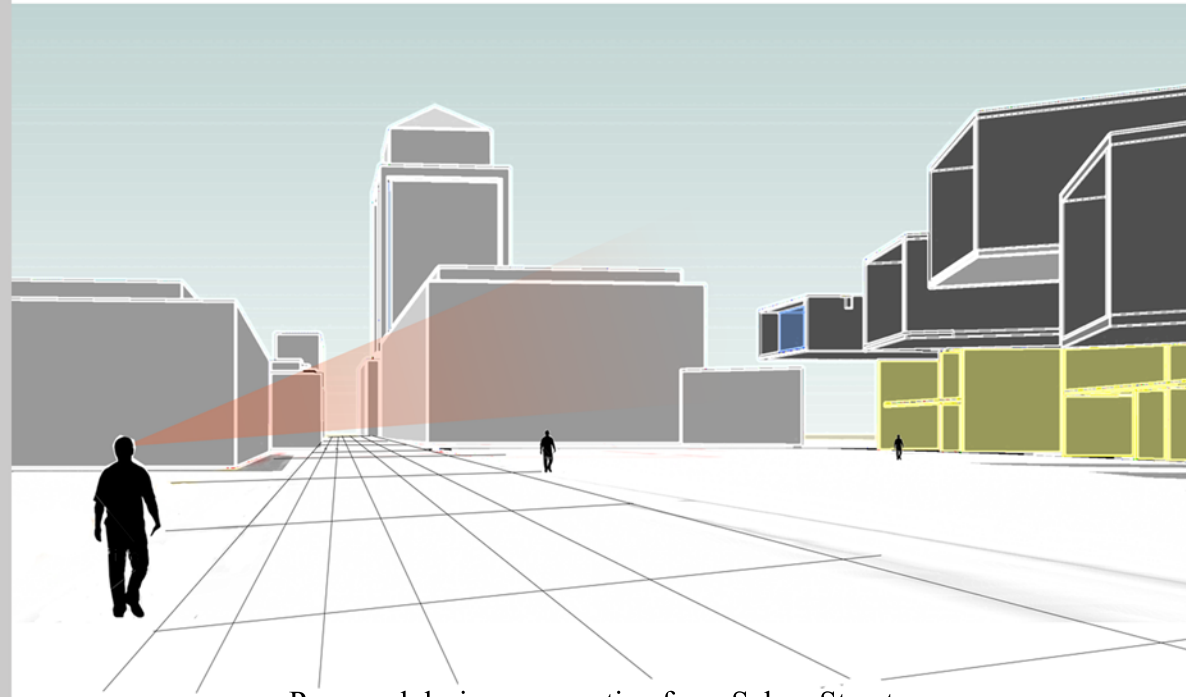
SITE NEIGHBORHOOD AND CONTEXT :

The Contextual response of the proposed design evolved from the neighborhood of the project site. The existing structures around the site enunciate the history of the city. The proposed museum is in sharp contrast with its neighborhood and presents a confrontation with existing conditions, yet the context is derived from the existing structures e.g. Rail road, Wall street front, Wachovia building tower in the background, Market square, etc. Scale and proportion for the proposed new building are derived from the surrounding. The height of the nearby buildings on Salem avenue informed the height of the galleries to provide visibility of the downtown area. The largest cantilevered mass marks the entrance to the museum and is derived from the perspective from Market street.

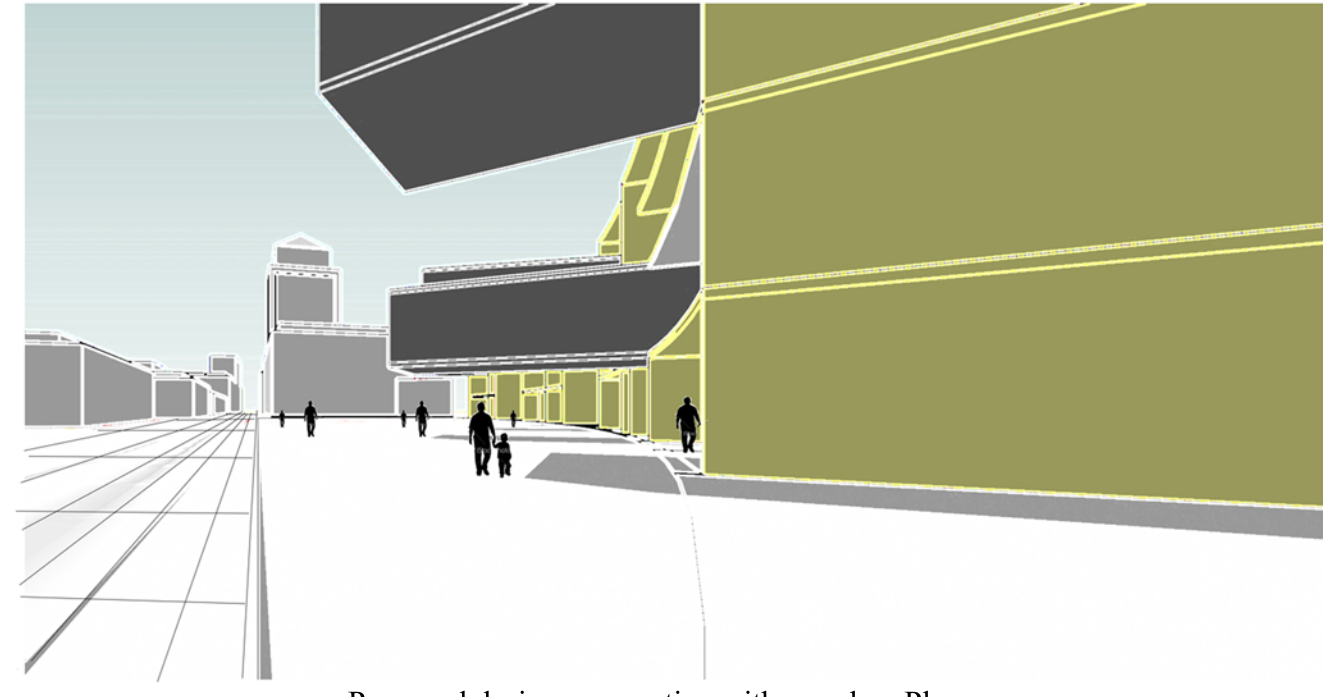
EXISTING SITE CONDITIONS :

The site currently has the Art Museum of Western Virginia, designed by architect Randall Stout. My thesis is a reaction to this new museum and what I believe to be a lack of sensitivity to the site and needs of the city.

The proximity of the site to the Market Square, Center in the Square Museum and Virginia Transportation Museum suggested the opportunity for a proposed urban plaza that would bring life to the area and support public interaction and consequently would likely have a positive impact on the downtown. Since Roanoke currently lacks open spaces for public interaction the urban plaza would provide such a space while also giving a grand entrance to the city. The attempt to introduce a plaza is a conscious effort to weave the building into the existing urban fabric.



Proposed design perspective from Salem Street



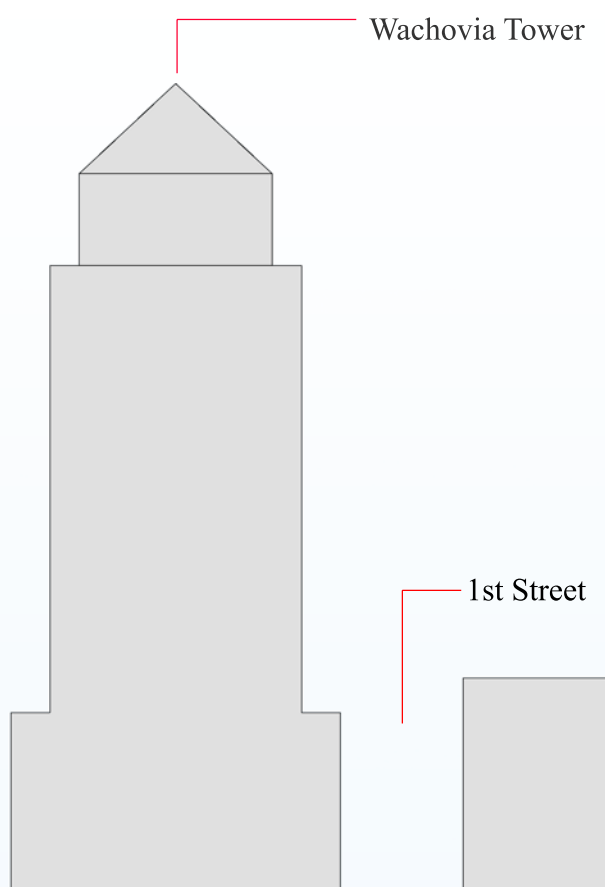
Proposed design perspective with an urban Plaza



Existing building designed by Randall Stout on the site
Perspective from Salem Street



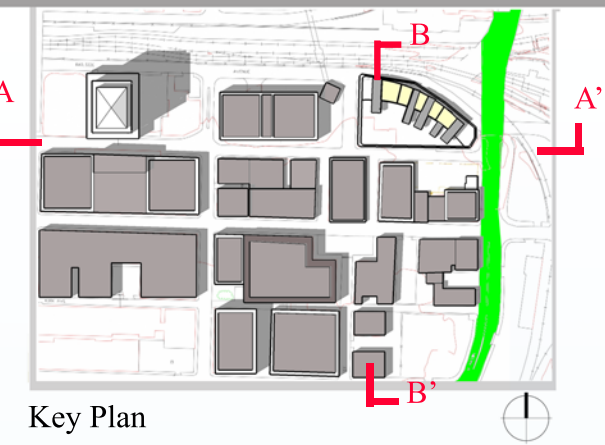
Existing Condition at the Site



Wachovia Tower

1st Street

Jefferson Street

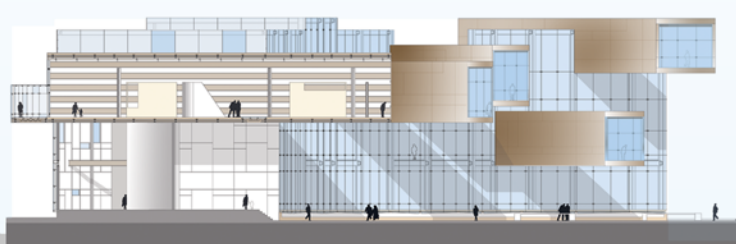


Key Plan

Williamson Road

SITE SECTION A-A'

Rail Road



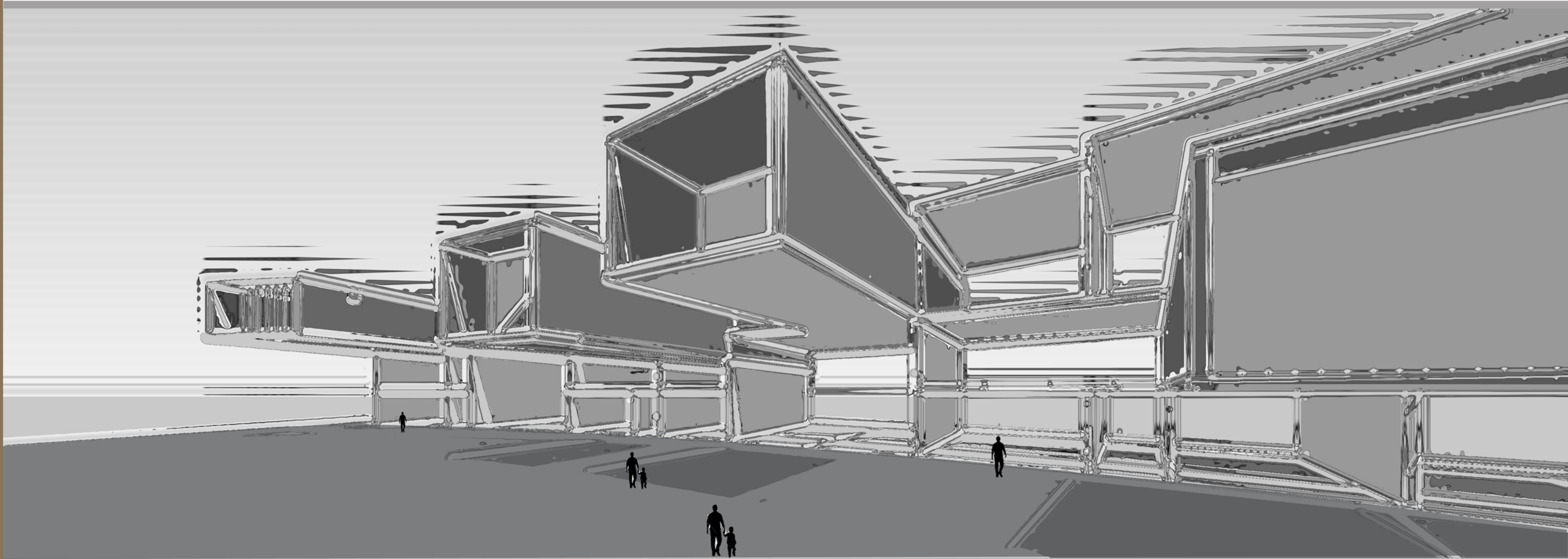
Salem Street

Campbell street

Market Square

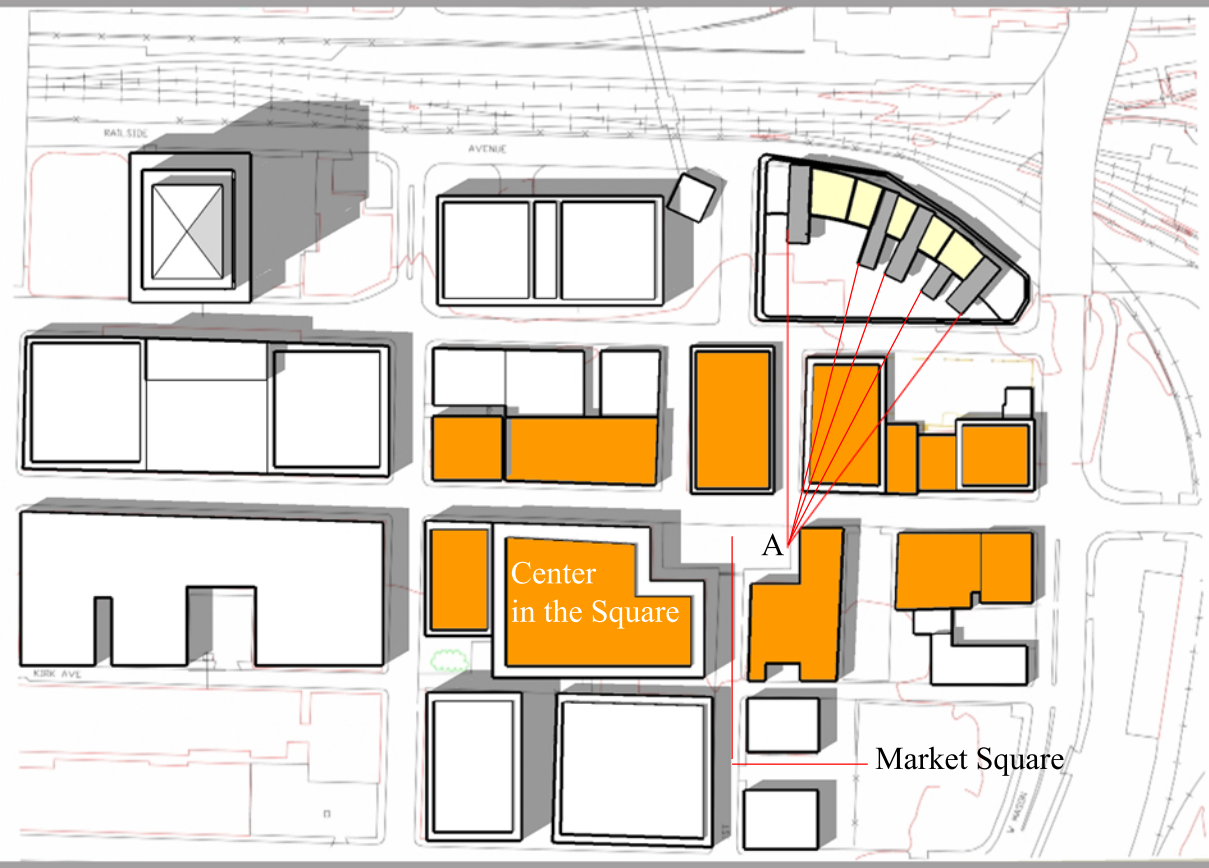
Kirk Avenue Sw

SITE SECTION B-B'



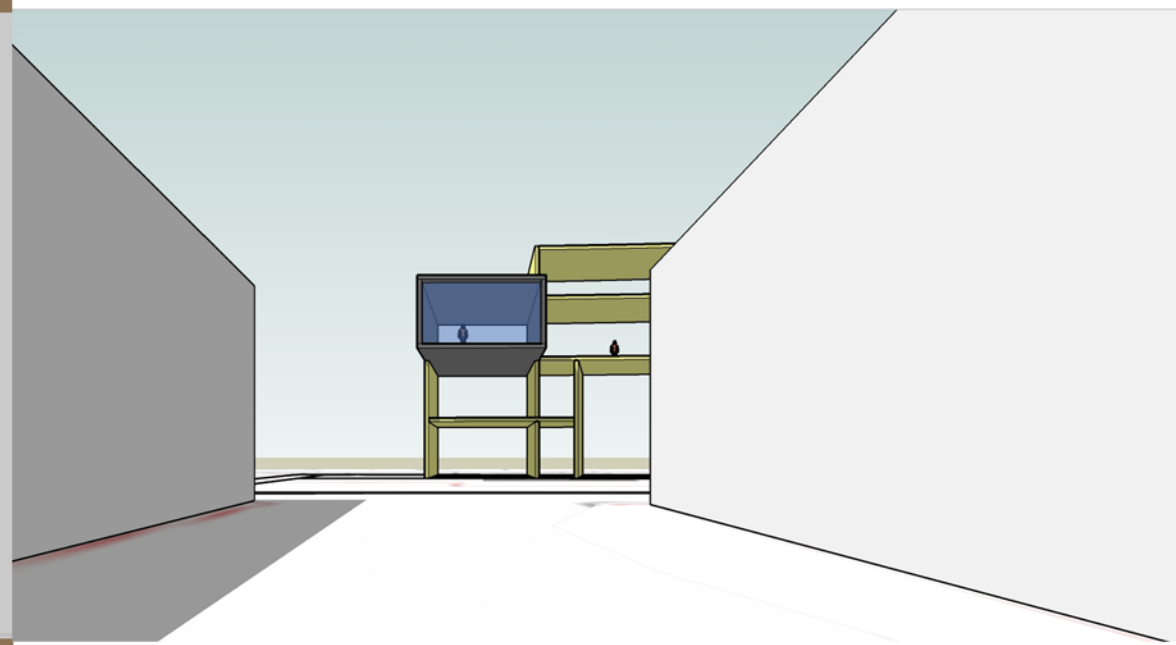
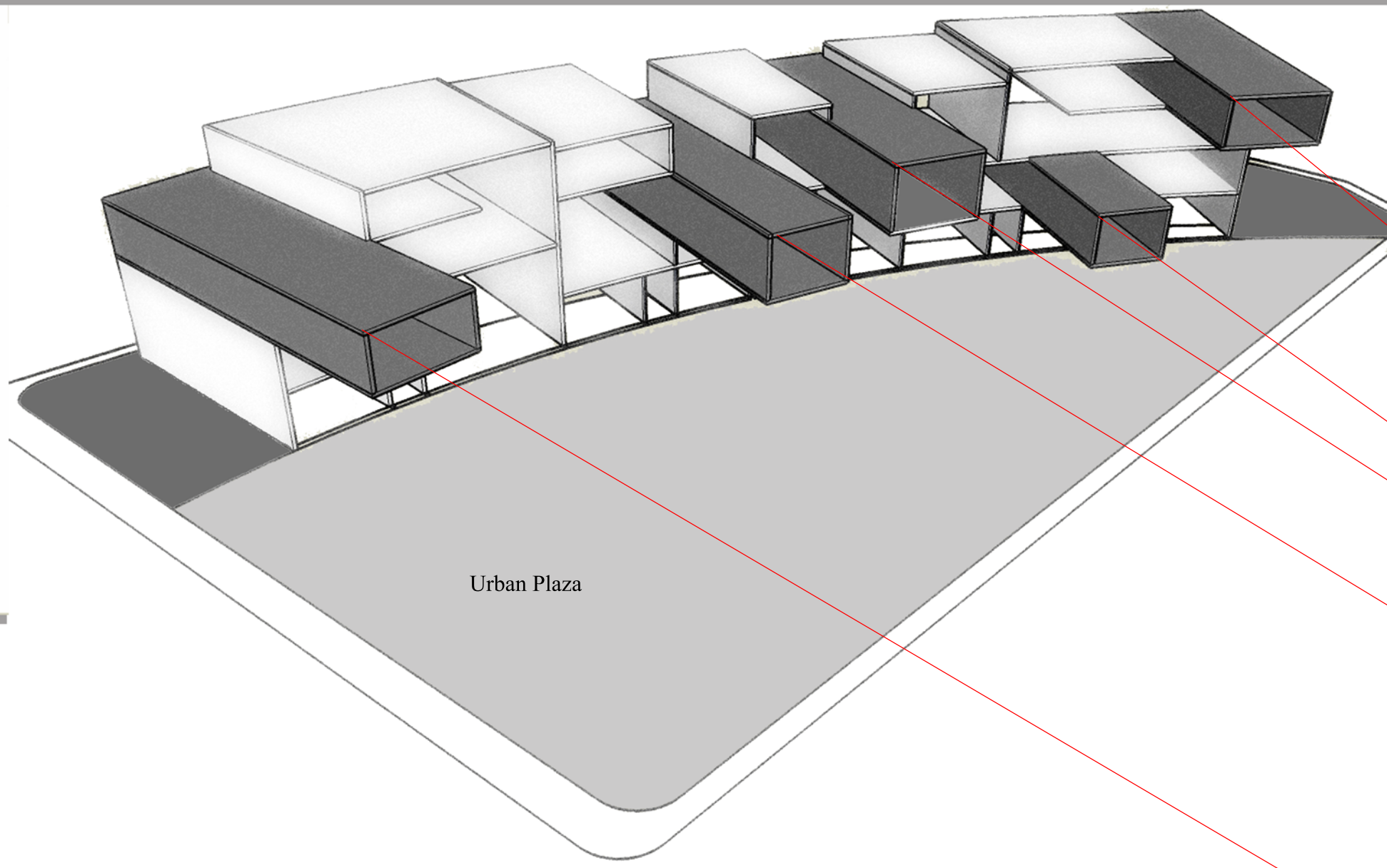
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Initial thoughts and Concept:
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SITE PLAN

■ Prominent Downtown area with Market Square and Center in the Square.

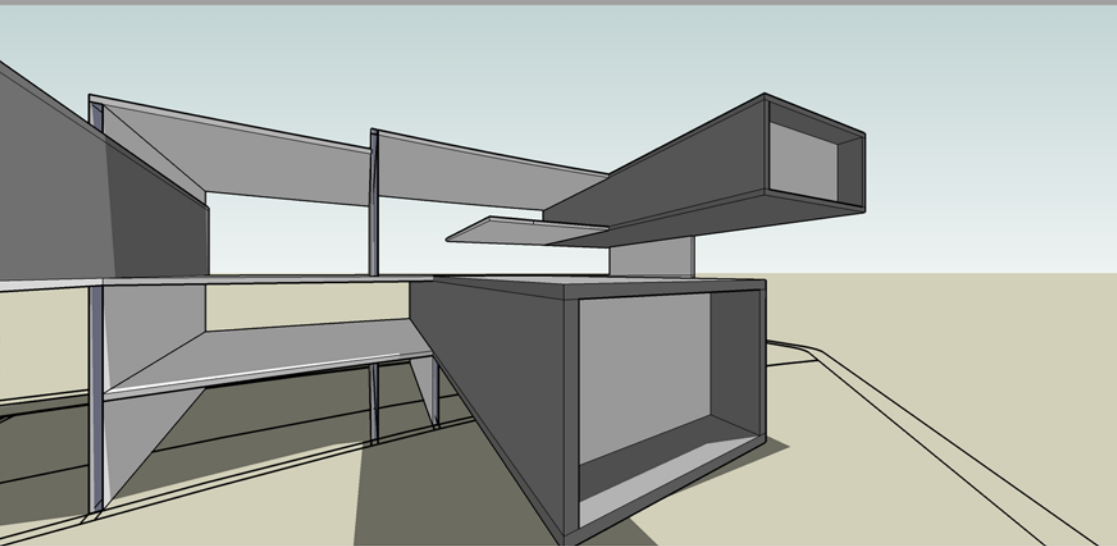
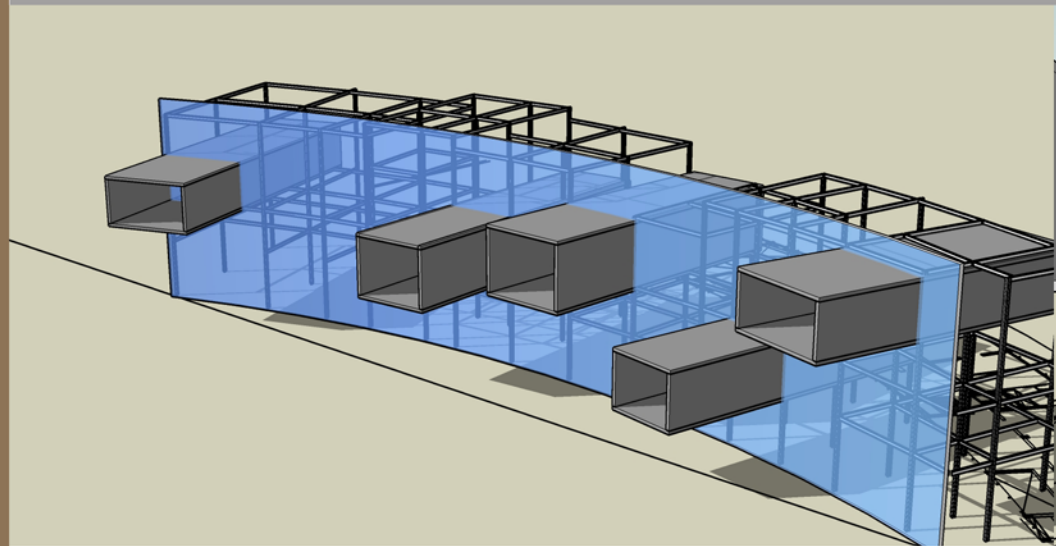


PERSPECTIVE FROM POINT A TOWARDS THE ENTRANCE OF THE MUSEUM.

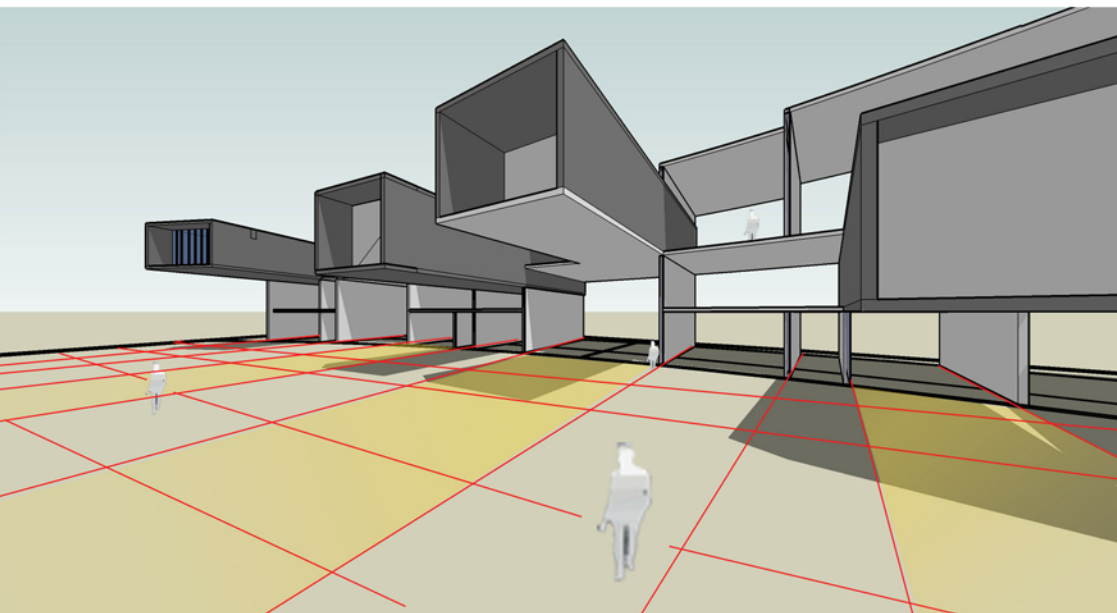
CONCEPT :

The building is conceptualized in response to the city, its neighborhood and the site. The basic shape of the building is curved in response to the curvature of the site plan. This allows for an urban plaza in front. Then cantilevered masses which radiate from the Market Square are inserted into the primary curving mass. The main entrance of the building is signified by the largest cantilevered mass. The visibility of the entrance from the Market Square helps draw people towards the building. In front the urban plaza will be used for public activities and as a platform for musicians to display their talent. The new building will boldly mark the entrance to downtown while the masses 'point' to the heart of the city.

The building massing is an exploration of different volumes of spaces. Visitors will experience compressed and expanded volumes of space while moving through the building. To this end the building was conceptualized as horizontal and vertical planes. The cantilevered masses serve as different art galleries. The view from each cantilevered mass is to different parts of the city. The building frames the city as a mosaic piece of art.

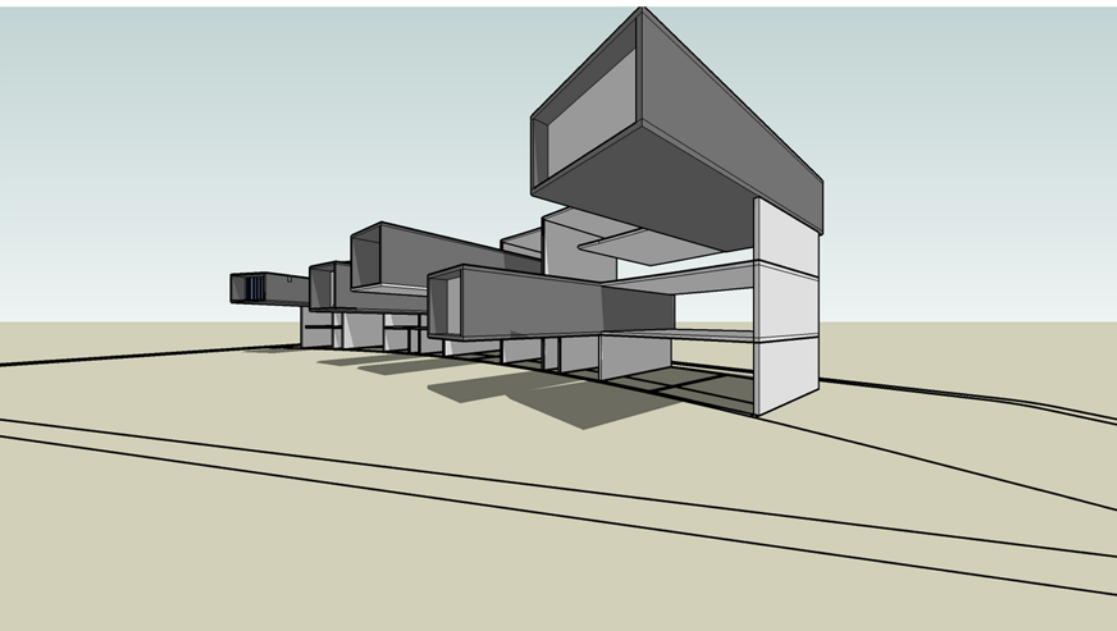


Framing the view of the city from a Cantilevered Art Gallery



CONCEPT :

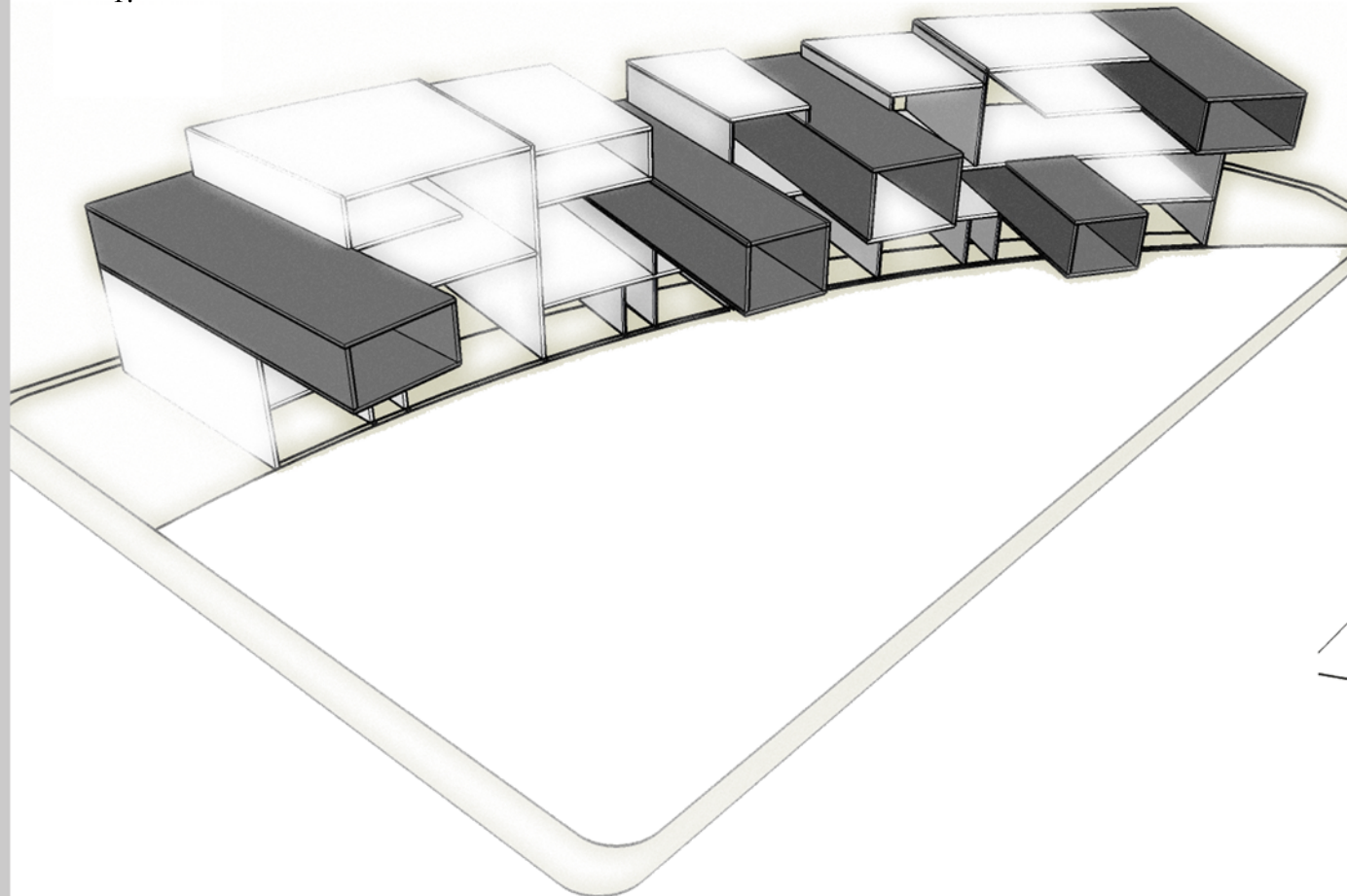
A Glass skin is used to create the appearance that the heavy cantilevered masses float within a lighter material. The effect is one of the heavy masses referencing the greater permanence of the city fabric within the more temporal site conditions. The result stimulates interest in the new museum drawing visitors from the Market Square. The flooring on the plaza extends under the cantilevered masses. The floor materials have color and texture so that the masses (Art gallery) above look as though they were generated from the site below. The effect is to join the building with the plaza and combine these two very significant elements.



STRUCTURAL SYSTEM :

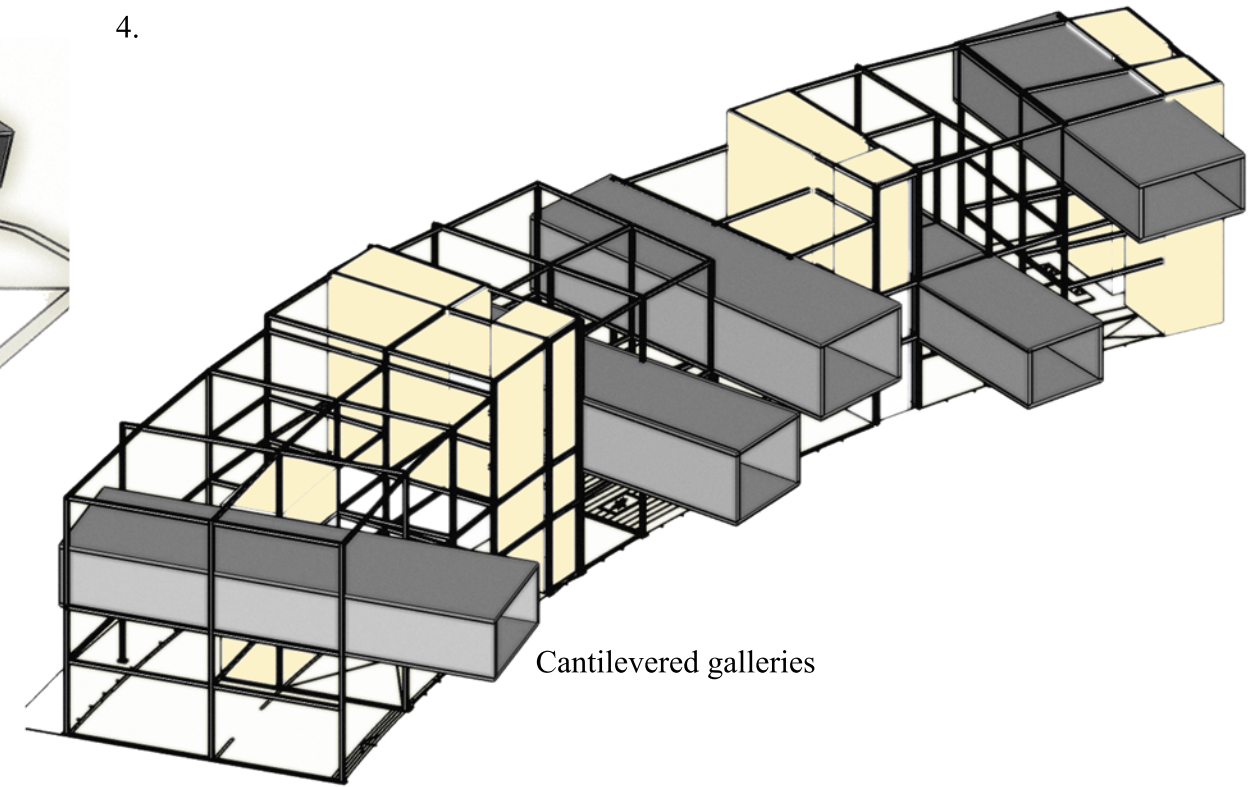
The primary structure of the building was resolved in response to the horizontal and vertical planes that give spatial order to the building. The primary structure consists of steel columns and girders. Core areas (staircase and elevators) were introduced to provide vertical movement to the cantilevered art galleries inserted into the primary structure. Since the shape of the primary structure is curved this will help resist the torsion and lateral forces acting on the building.

1.



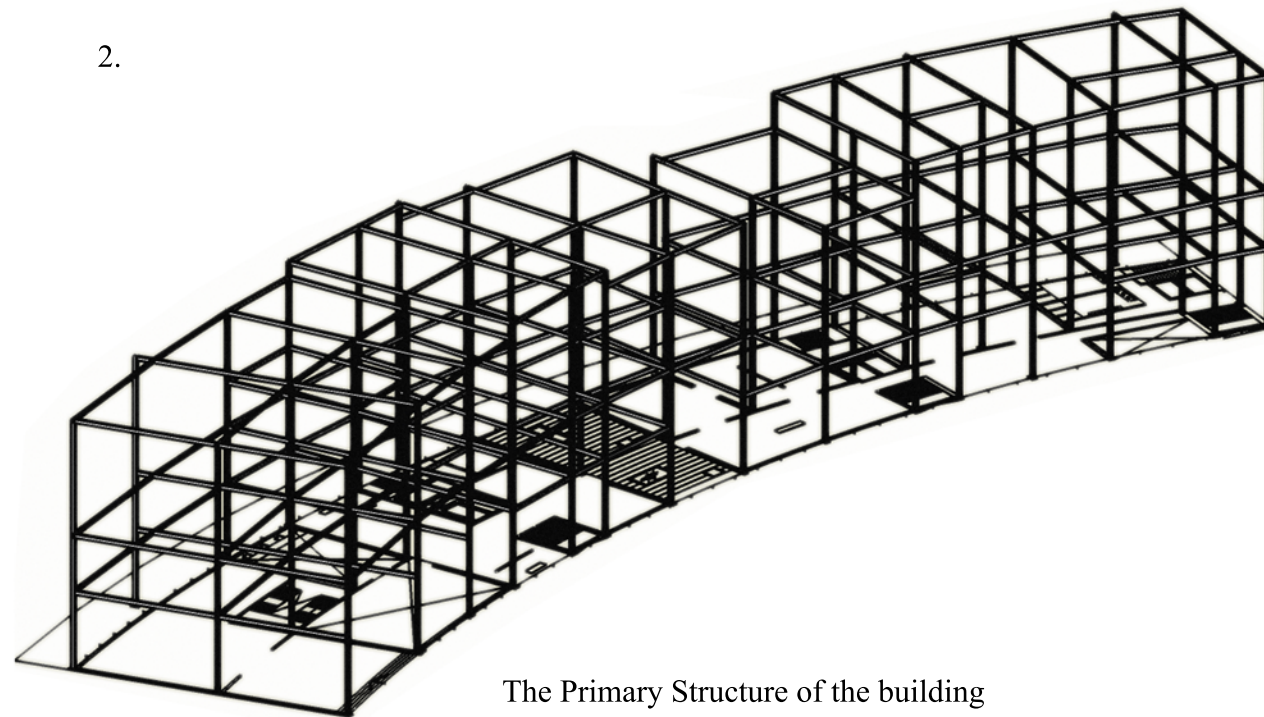
The planes of the building

4.



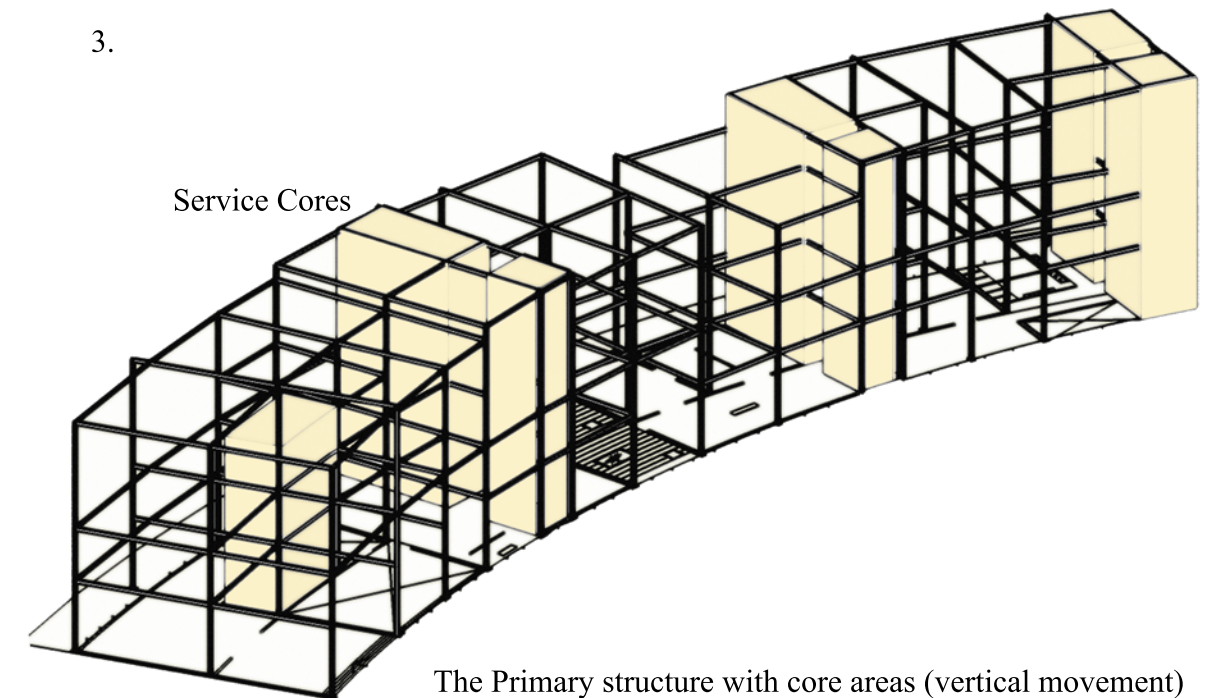
Cantilevered galleries and Service core areas along with primary structure

2.

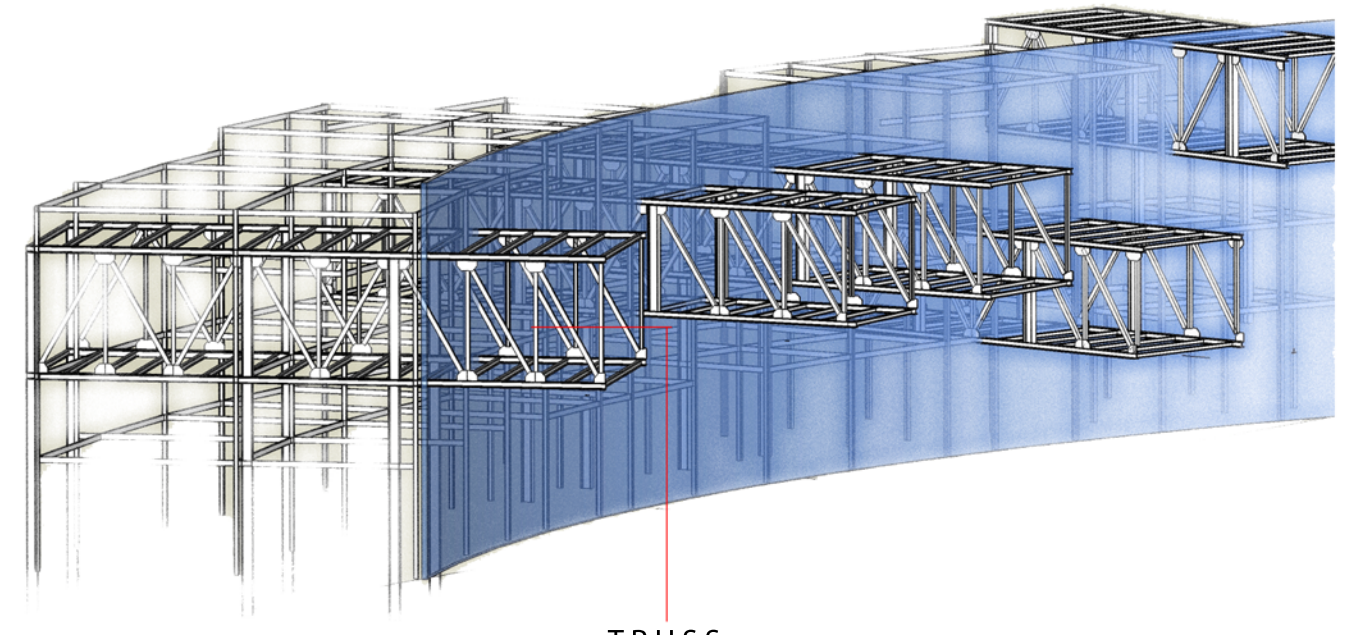
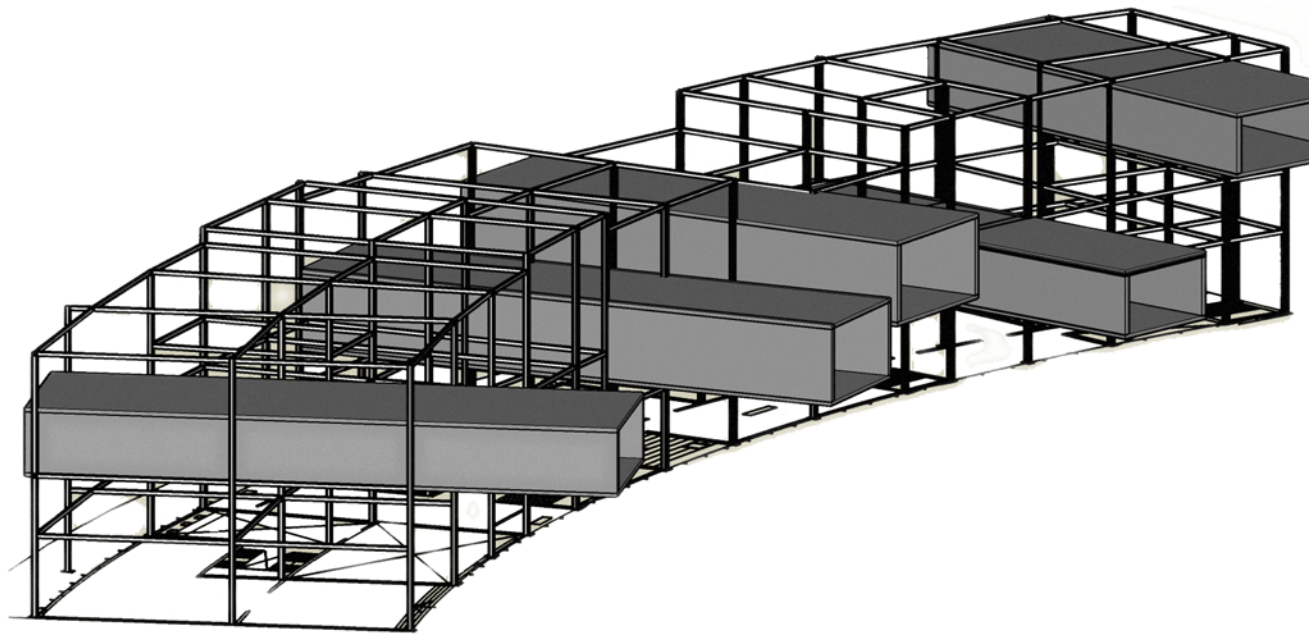


The Primary Structure of the building

3.



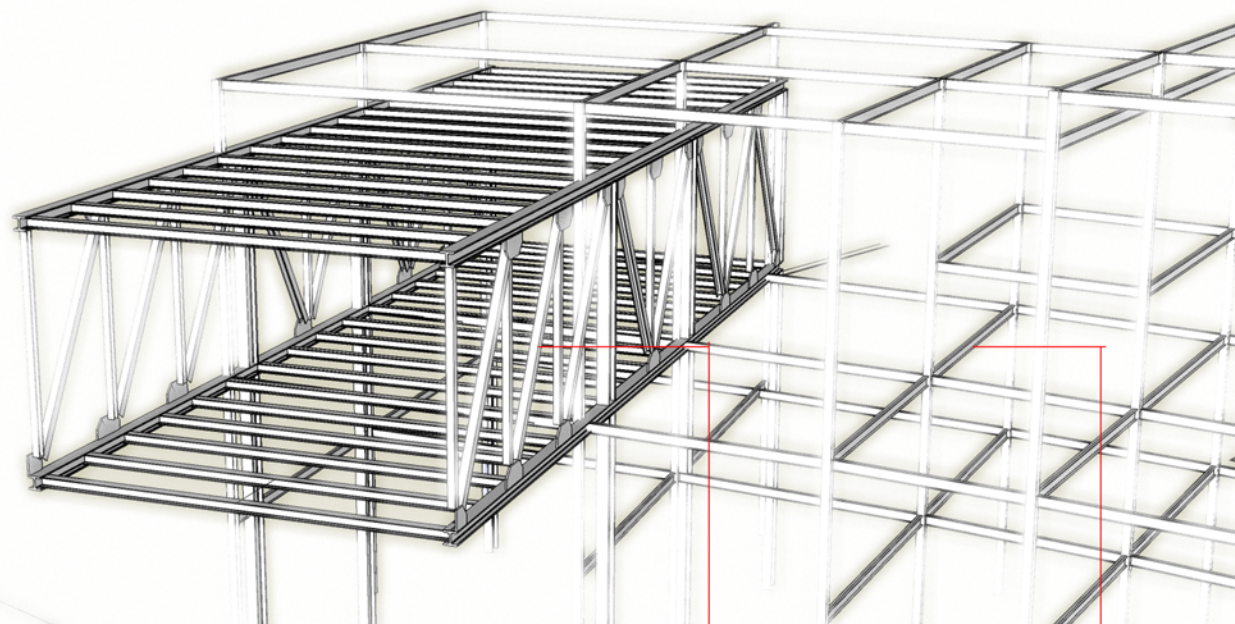
The Primary structure with core areas (vertical movement)



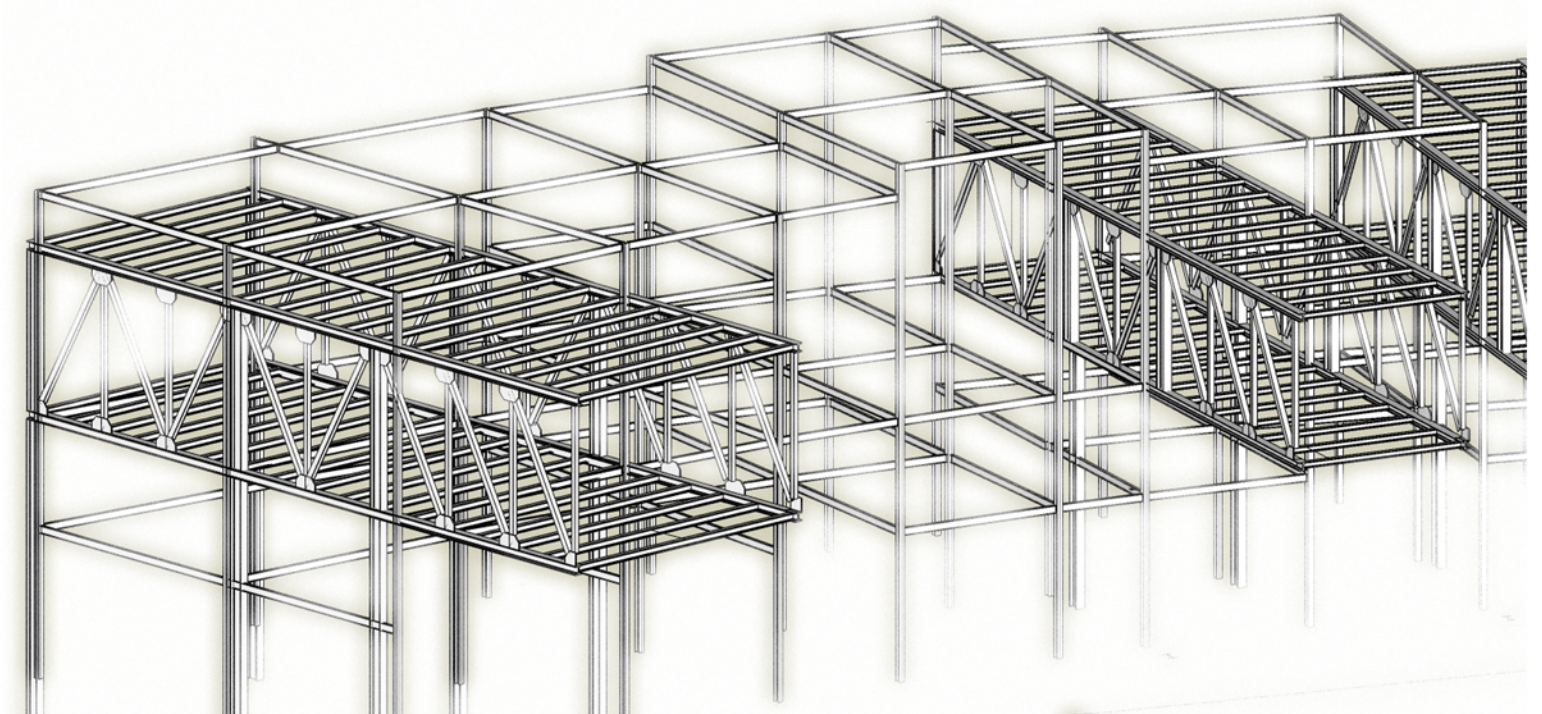
TRUSS

STRUCTURAL SYSTEM :

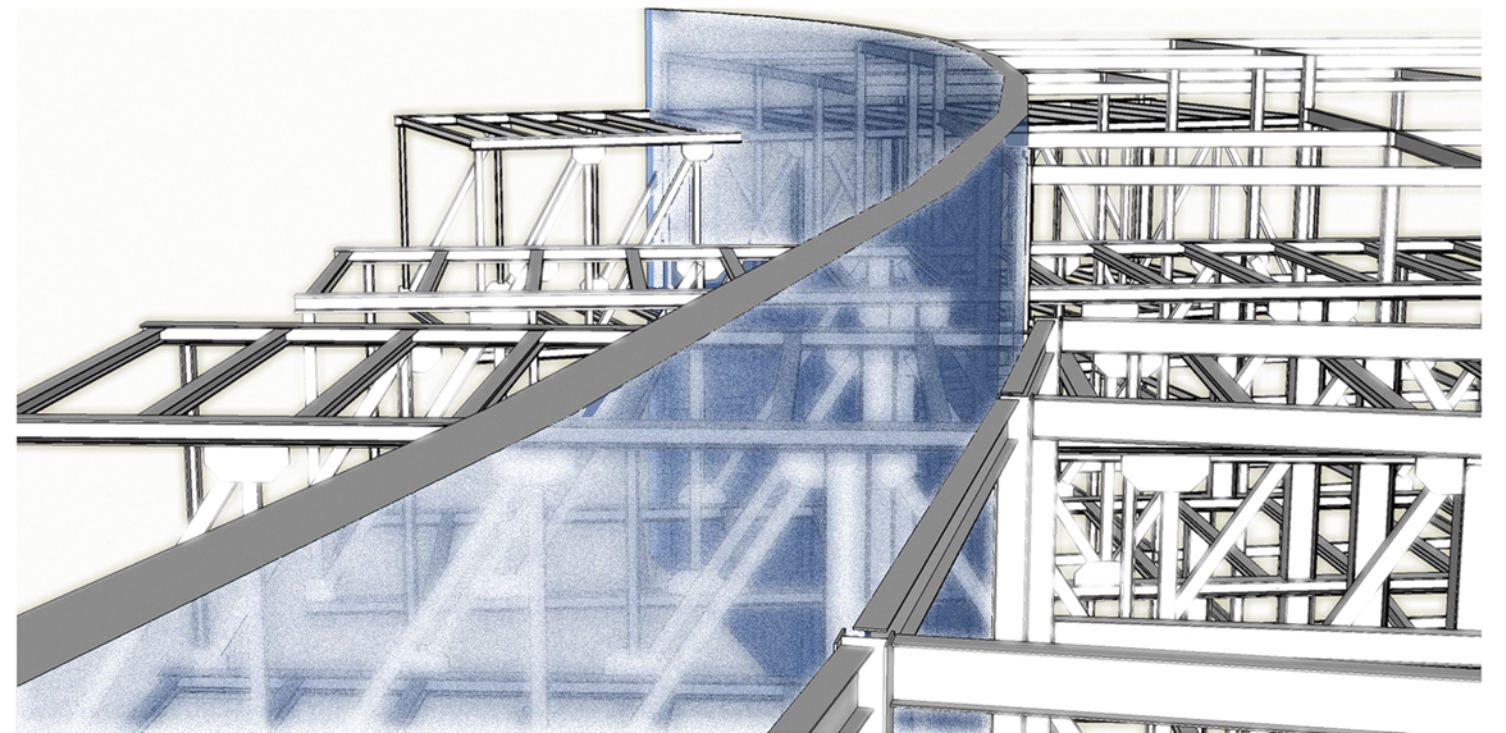
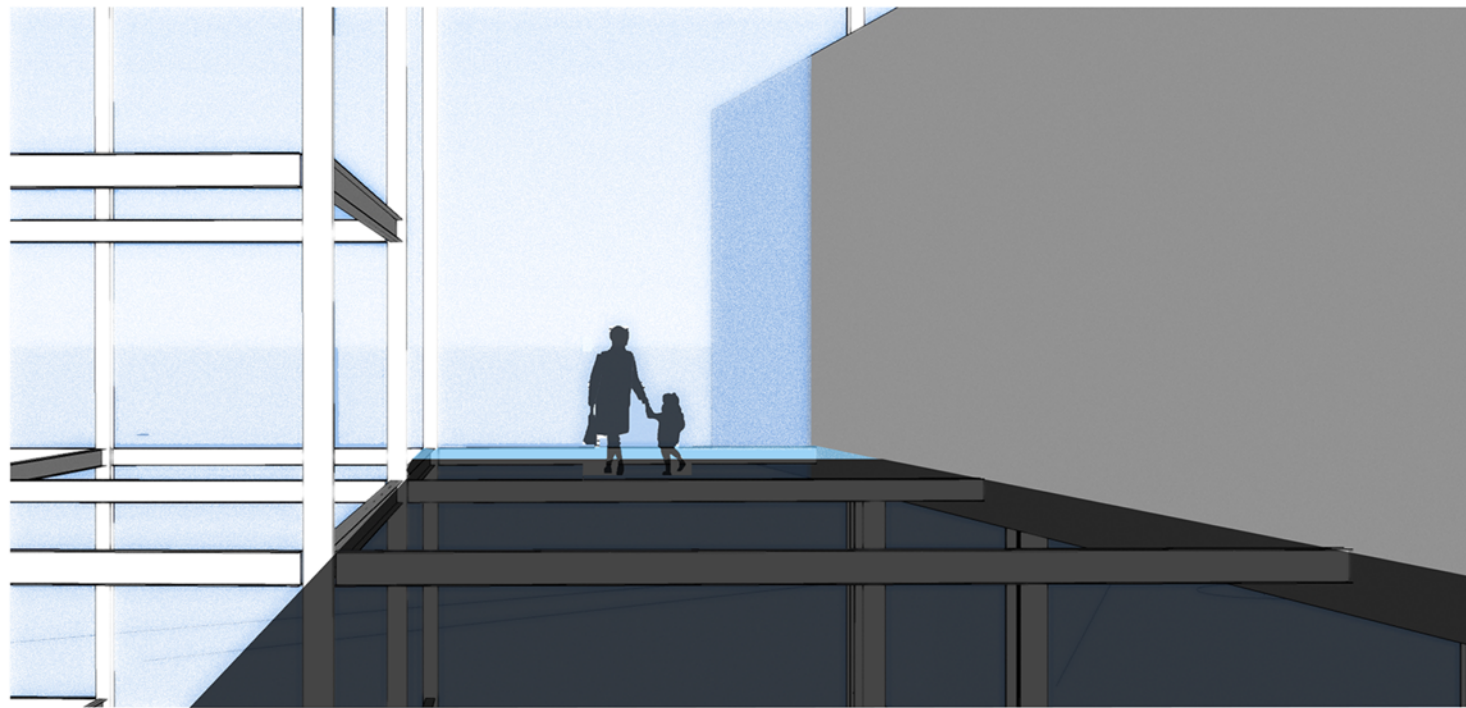
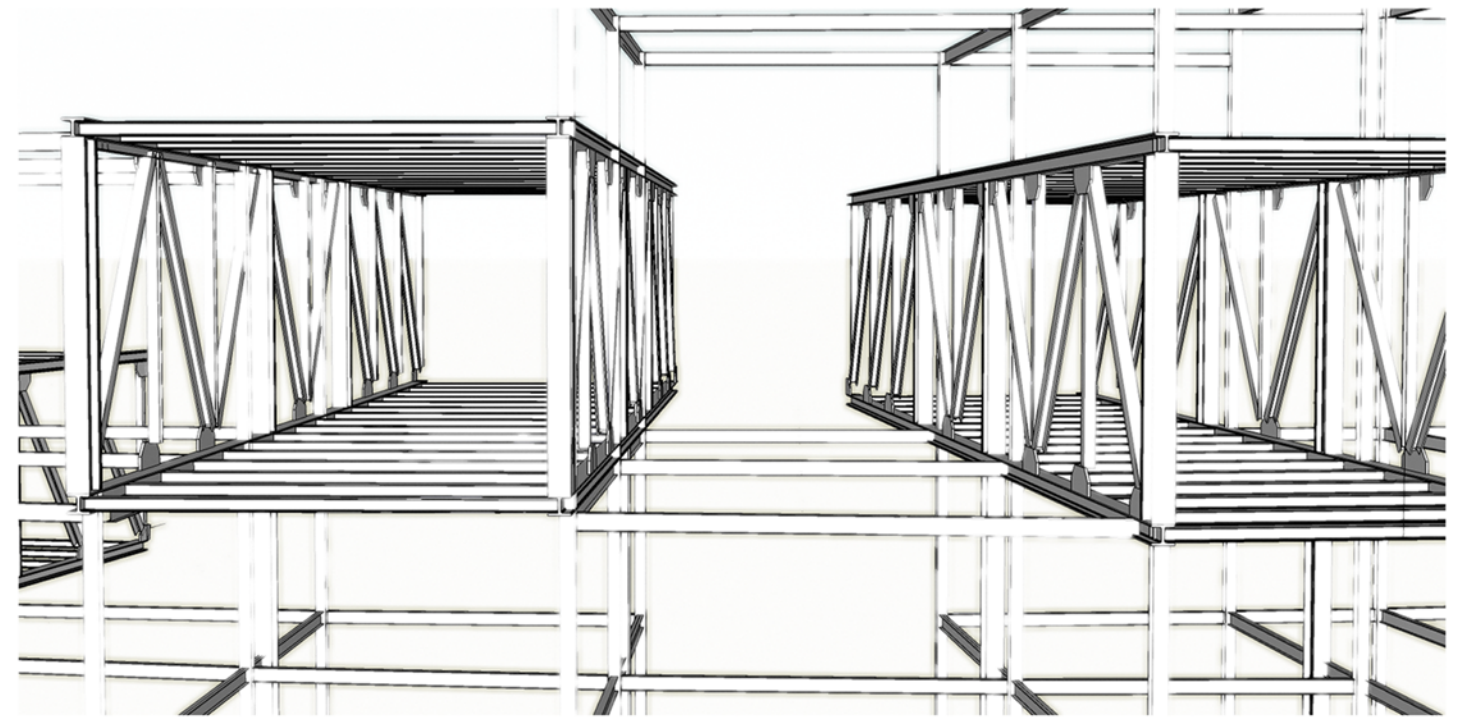
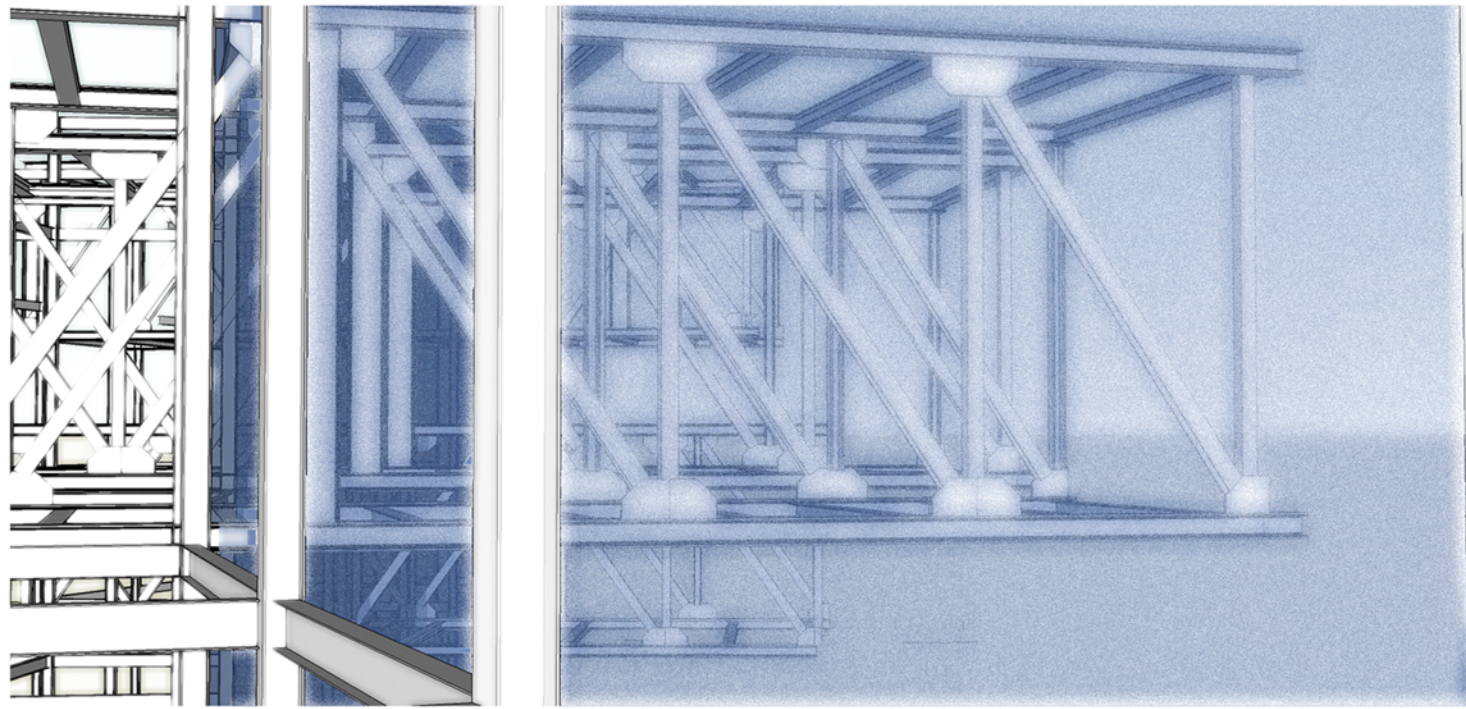
The structure of the cantilevered masses is secondary to the primary columns and beams. The trusses project out over the plaza and the cantilevers range in span from 33' to 44'. These secondary trusses act as boxes that are rigidly connected to the primary structure.

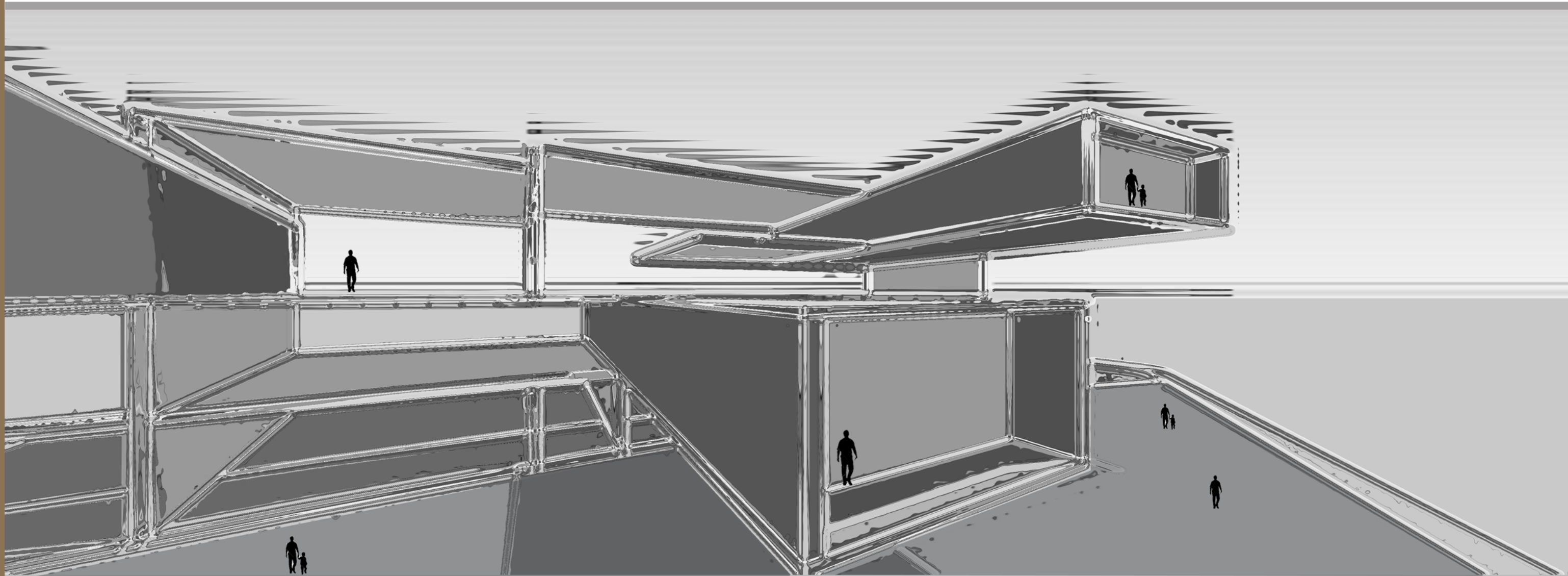


SECONDARY STRUCTURE



PRIMARY STRUCTURE

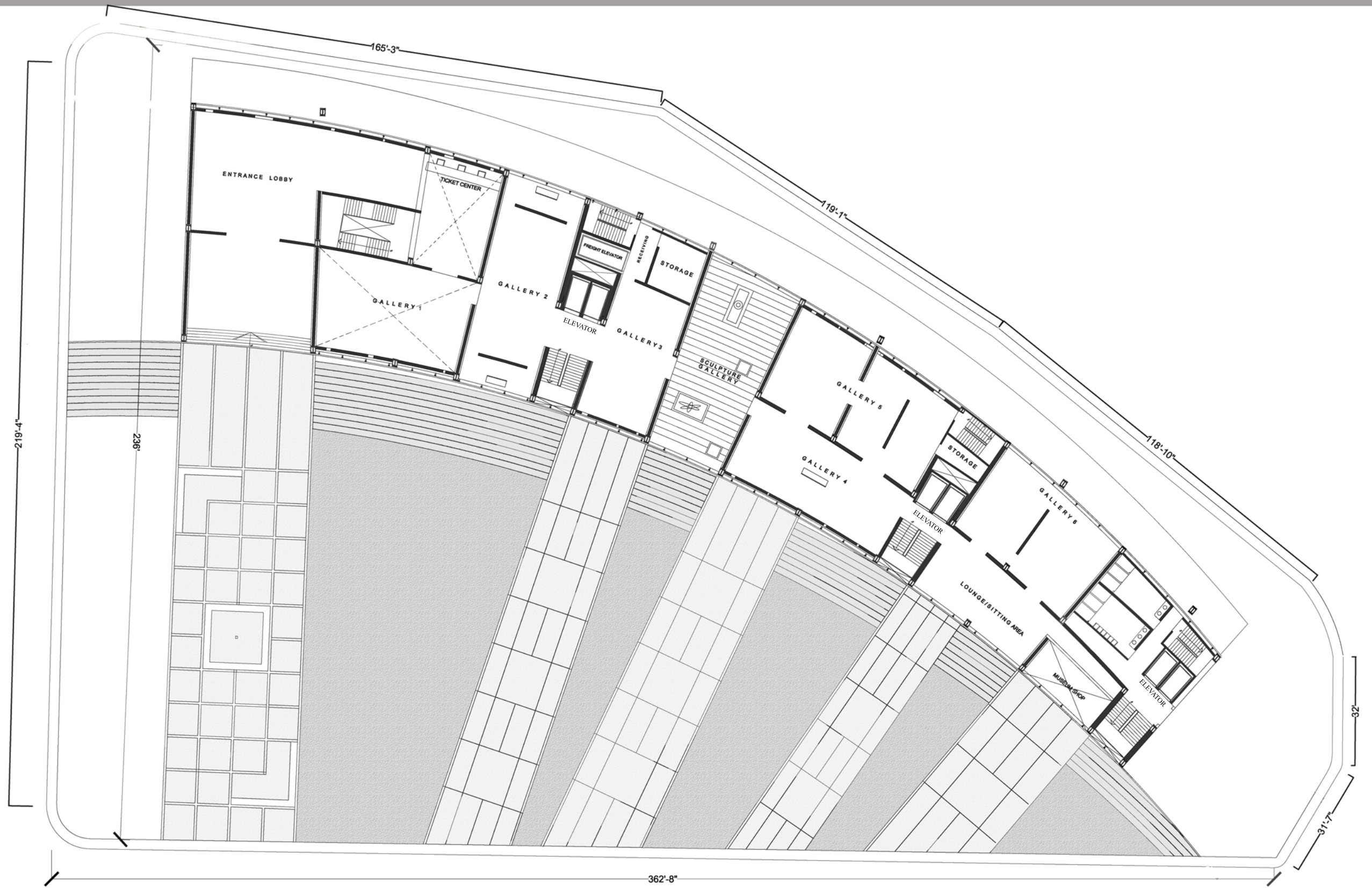




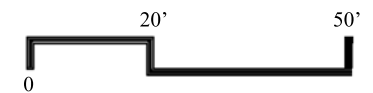
Building:

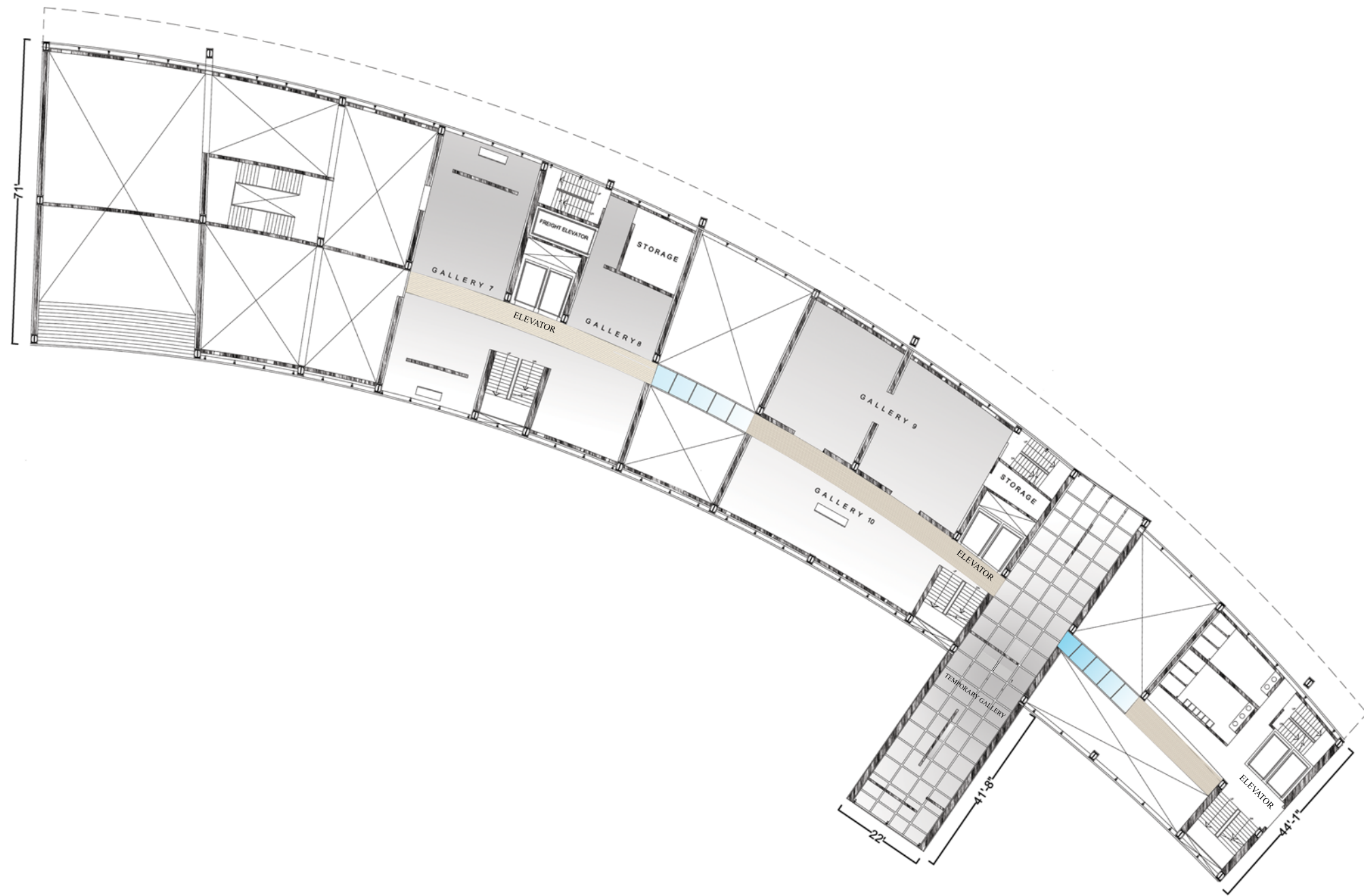
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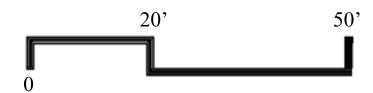


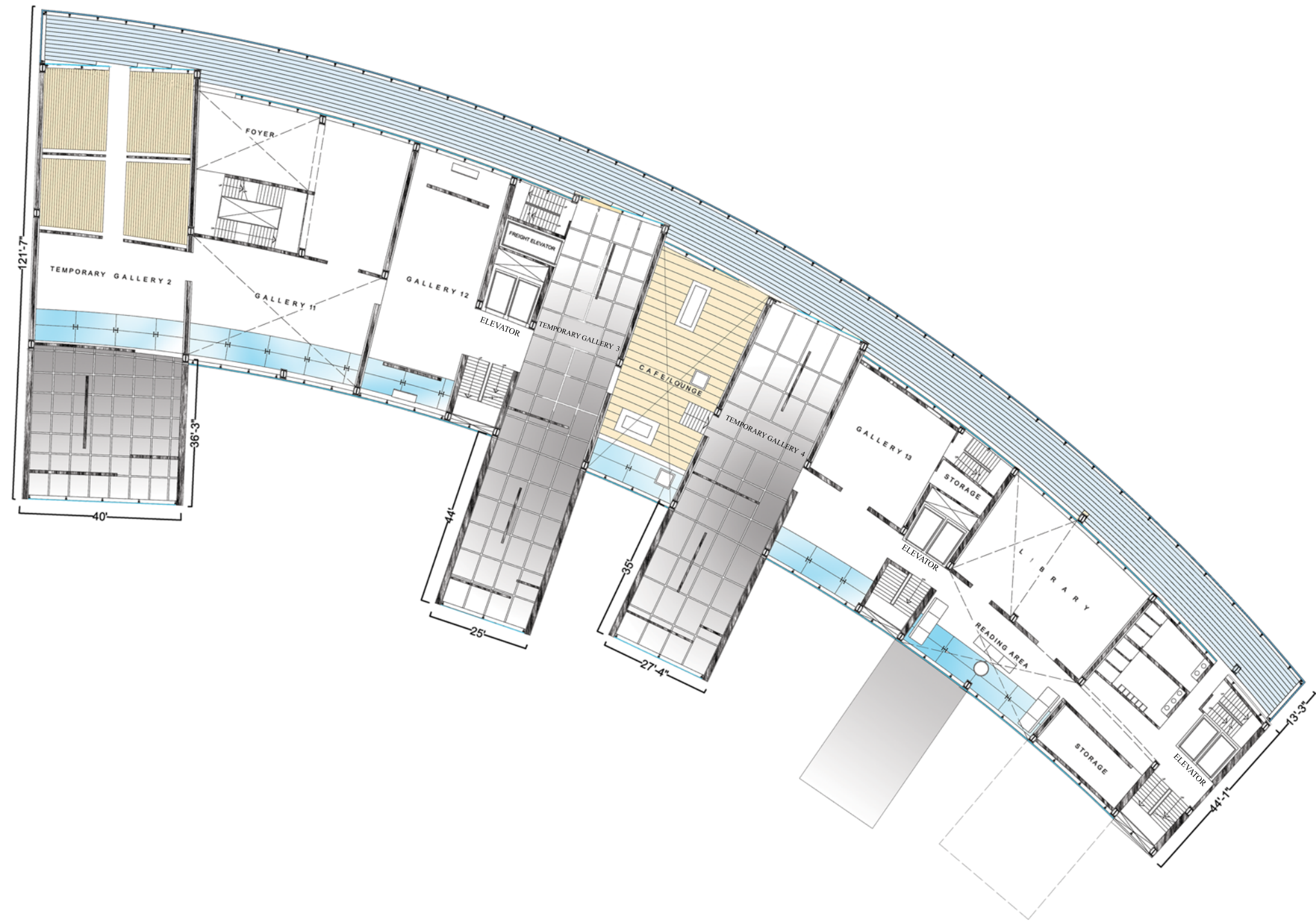
PLAN LEVEL 01



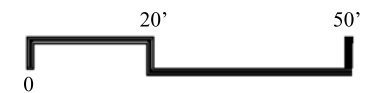


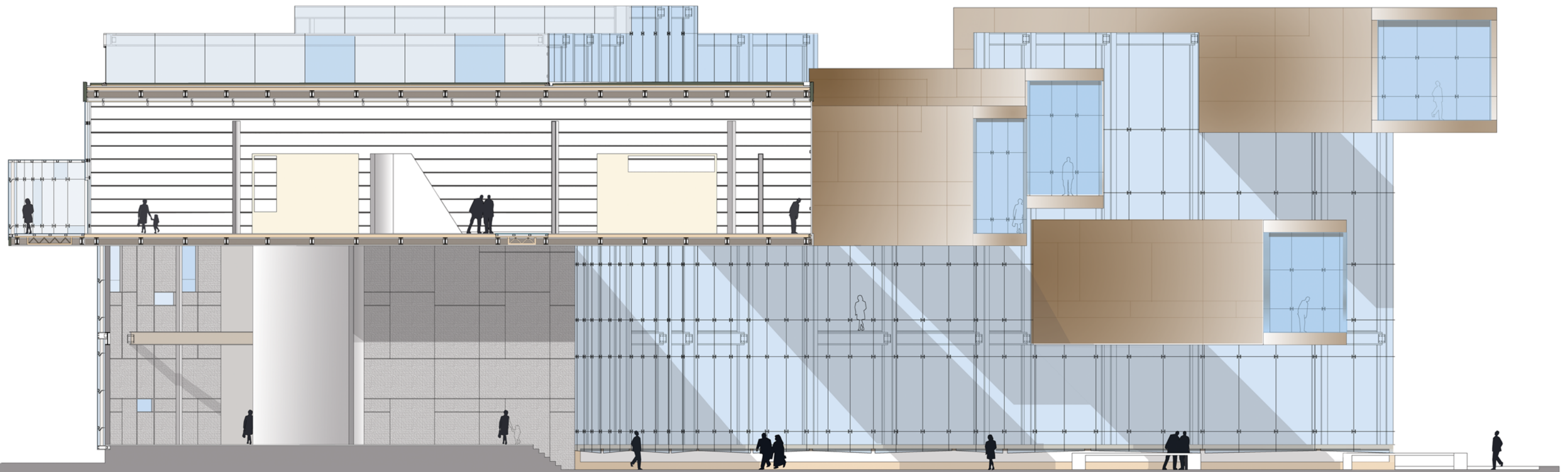
PLAN LEVEL 02





PLAN LEVEL 03



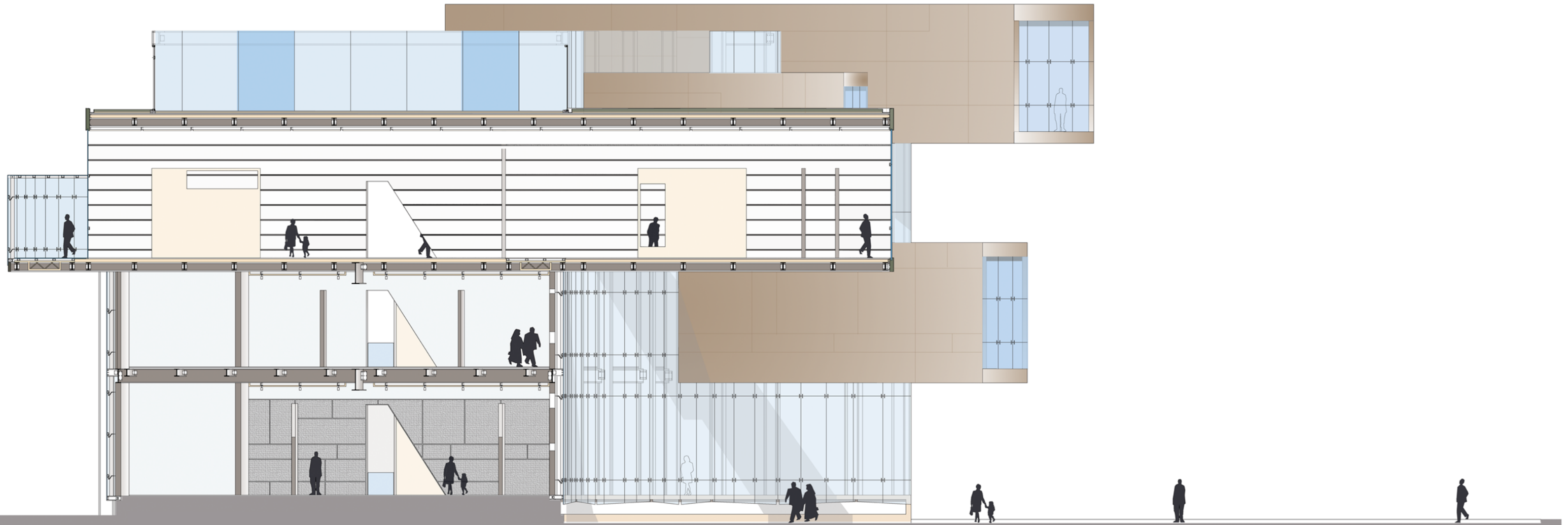


SECTION 1-1



KEY PLAN

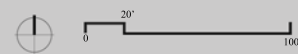


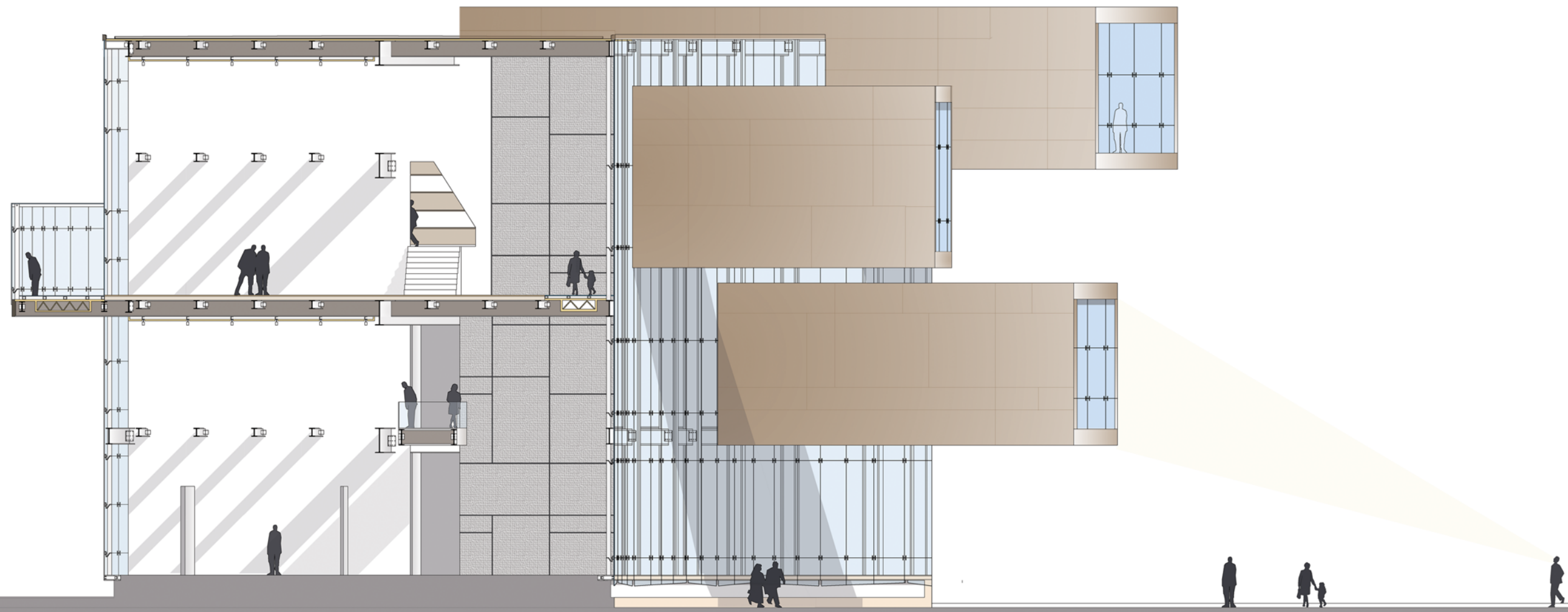


SECTION 2 - 2



KEY PLAN

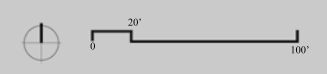


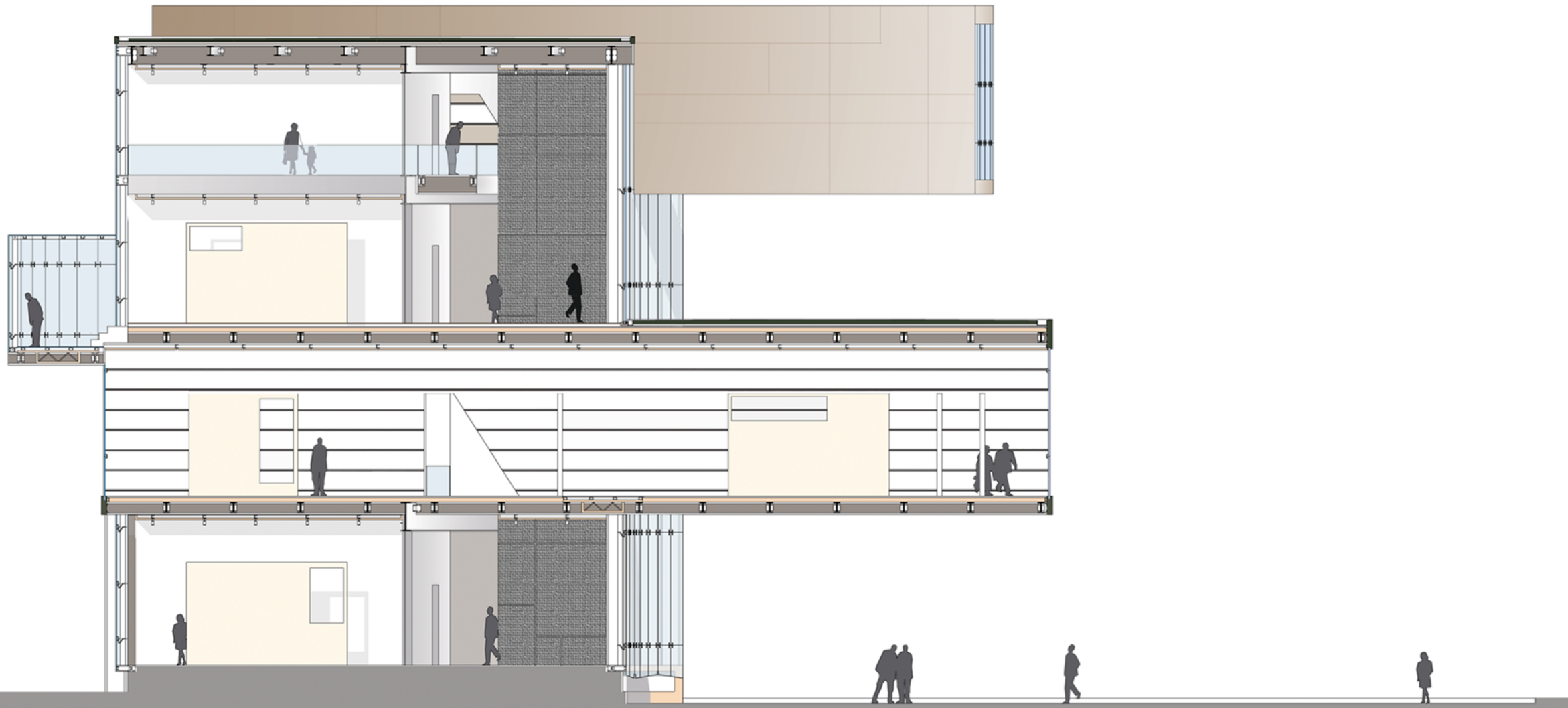


SECTION 3 - 3



KEY PLAN

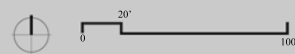




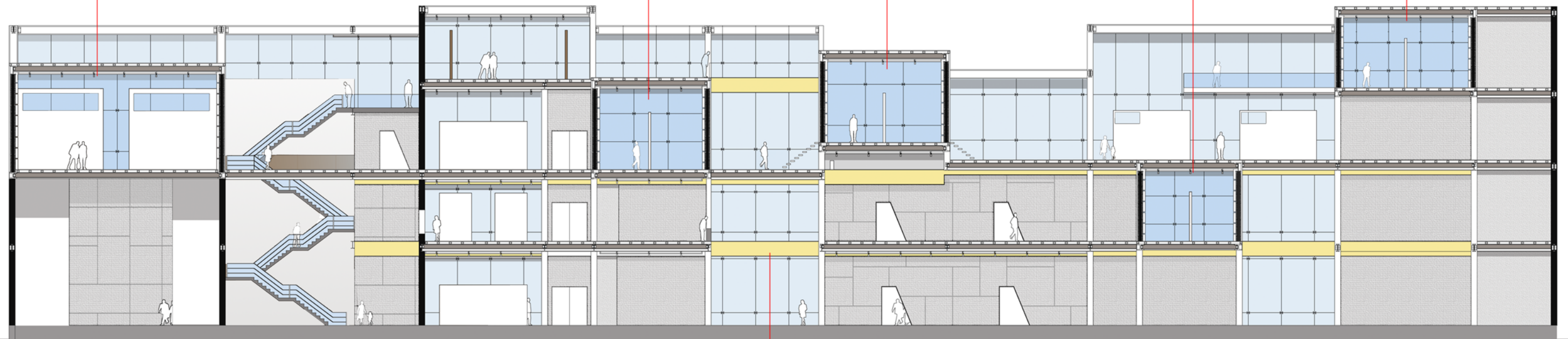
SECTION 4 - 4



KEY PLAN

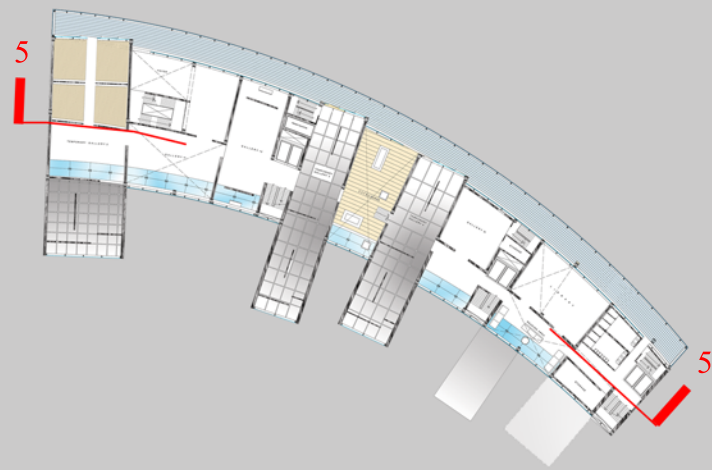


Cantilevered
Art galleries



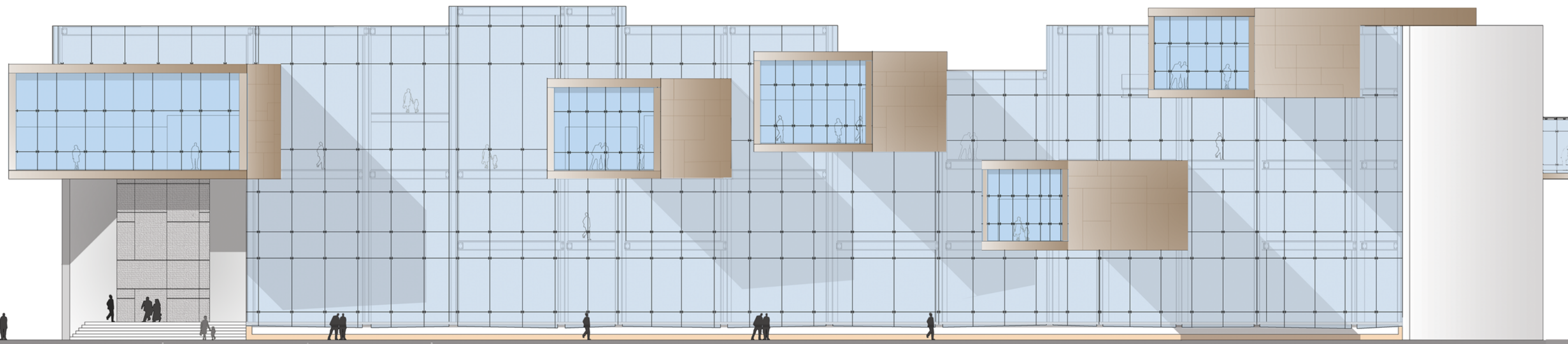
FLATTENED SECTION 5 - 5

The beam orients a person through the building.

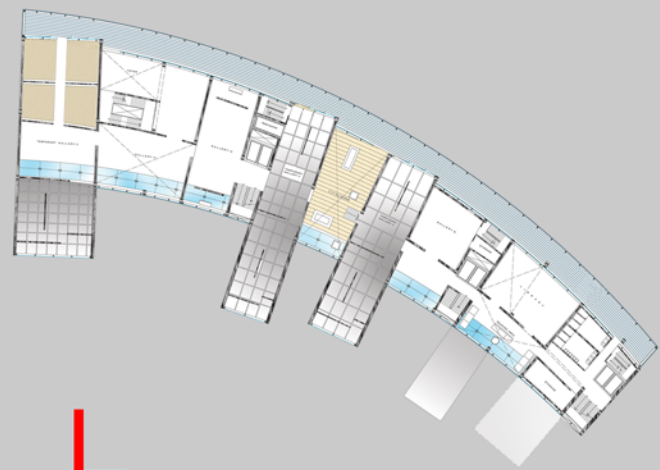


KEY PLAN

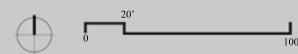


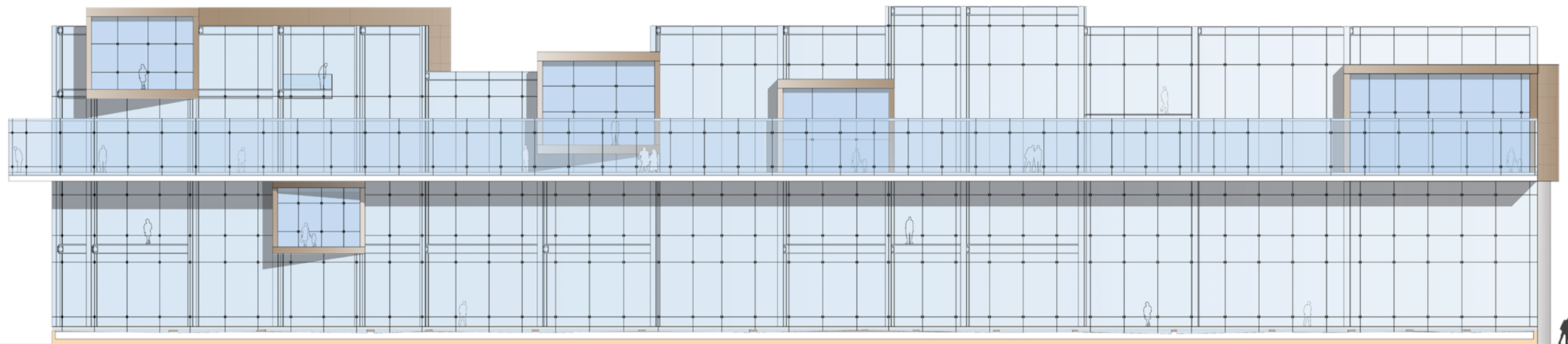


SALEM STREET ELEVATION

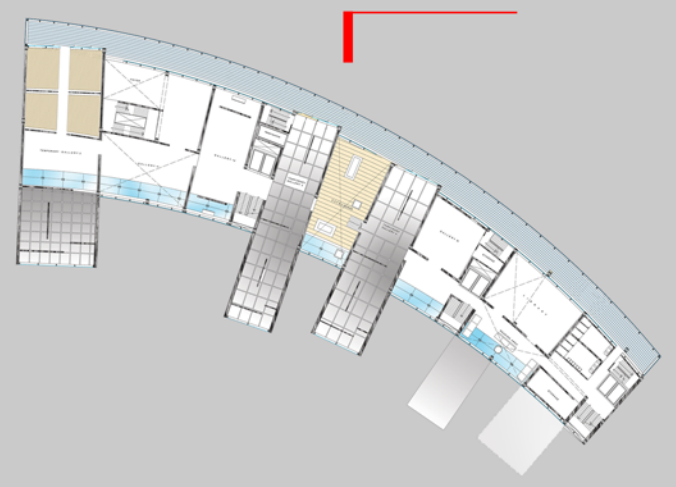


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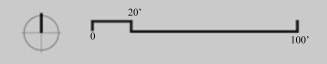


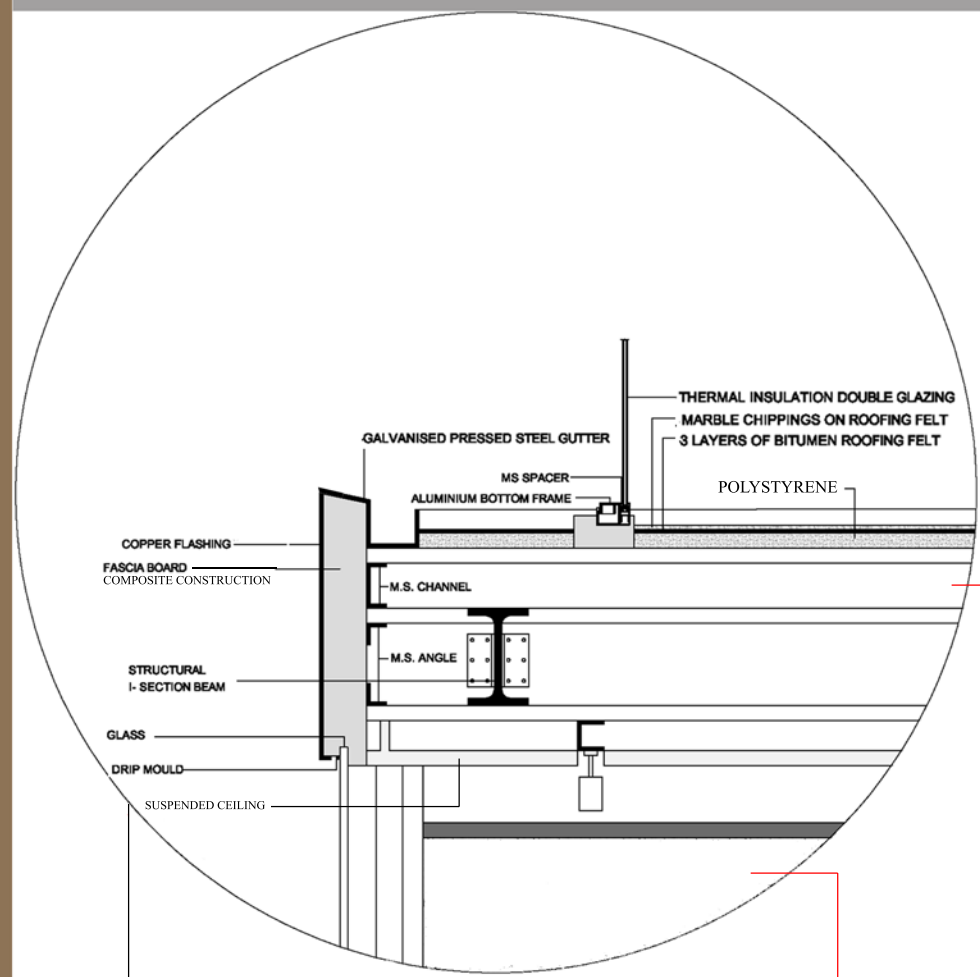


RAILROAD SIDE ELEVATION

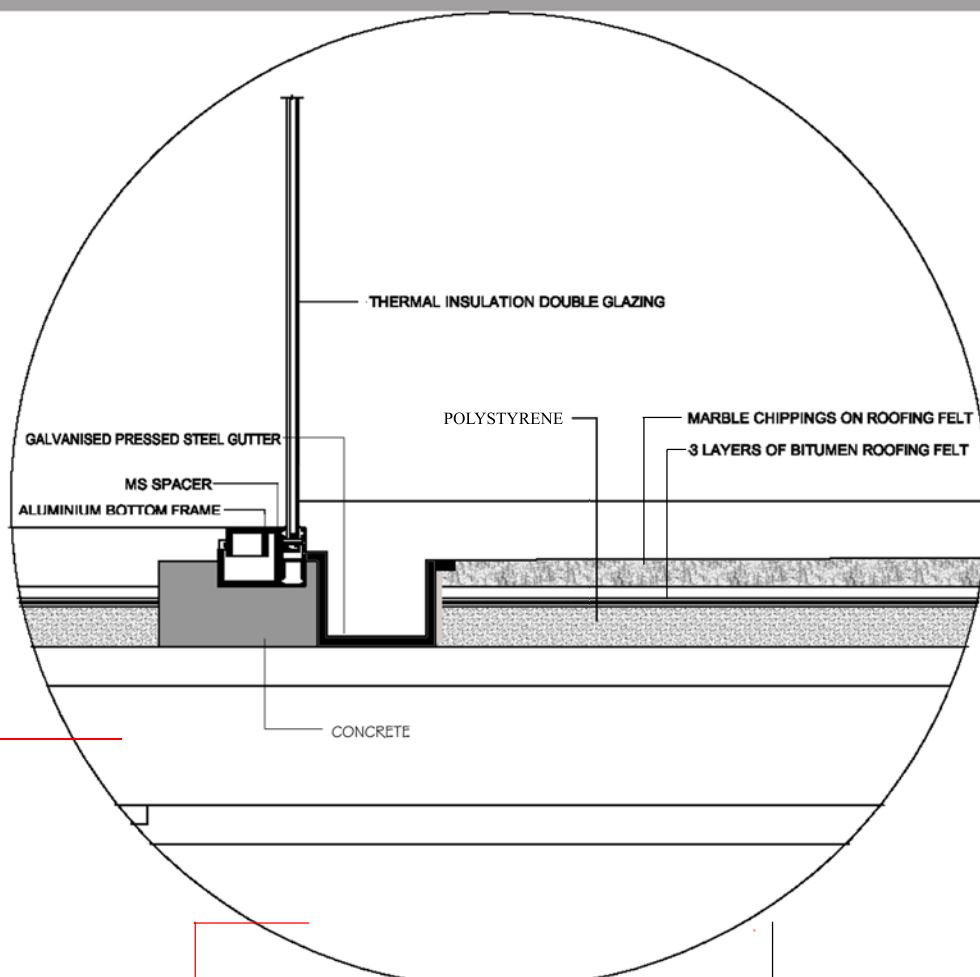


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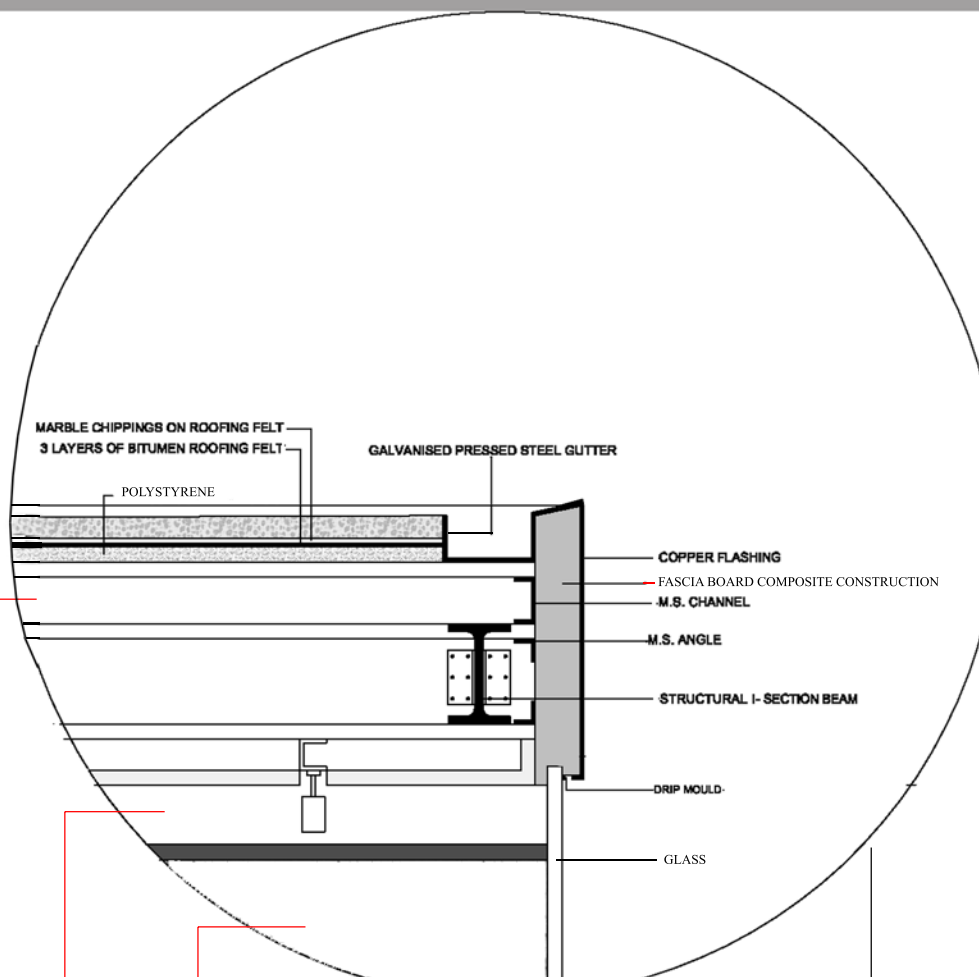




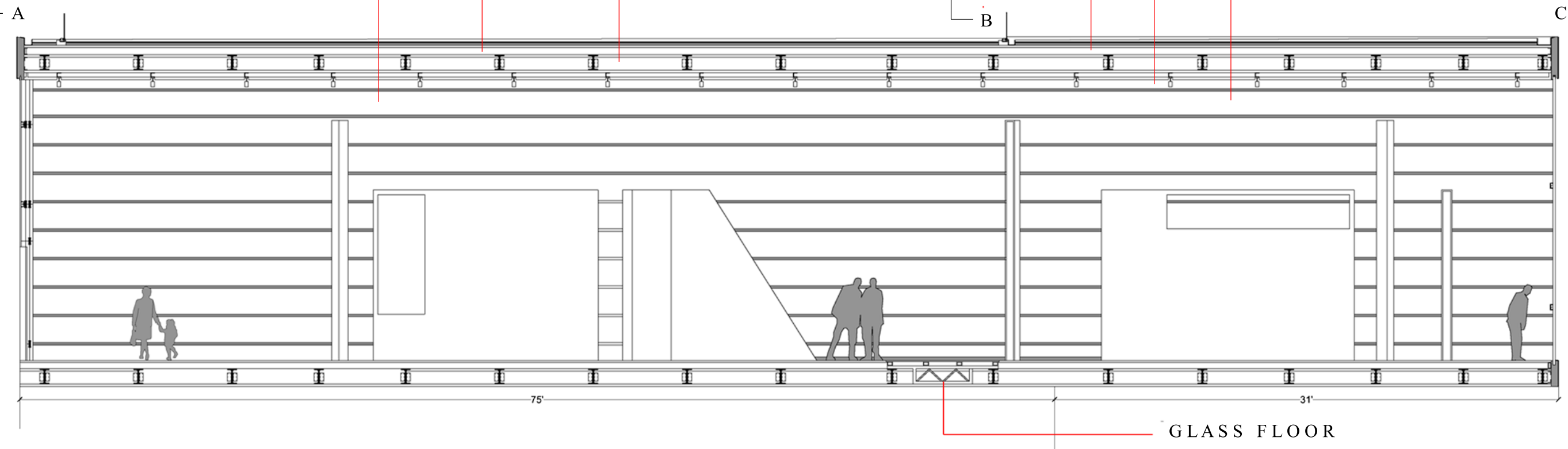
DETAIL AT A



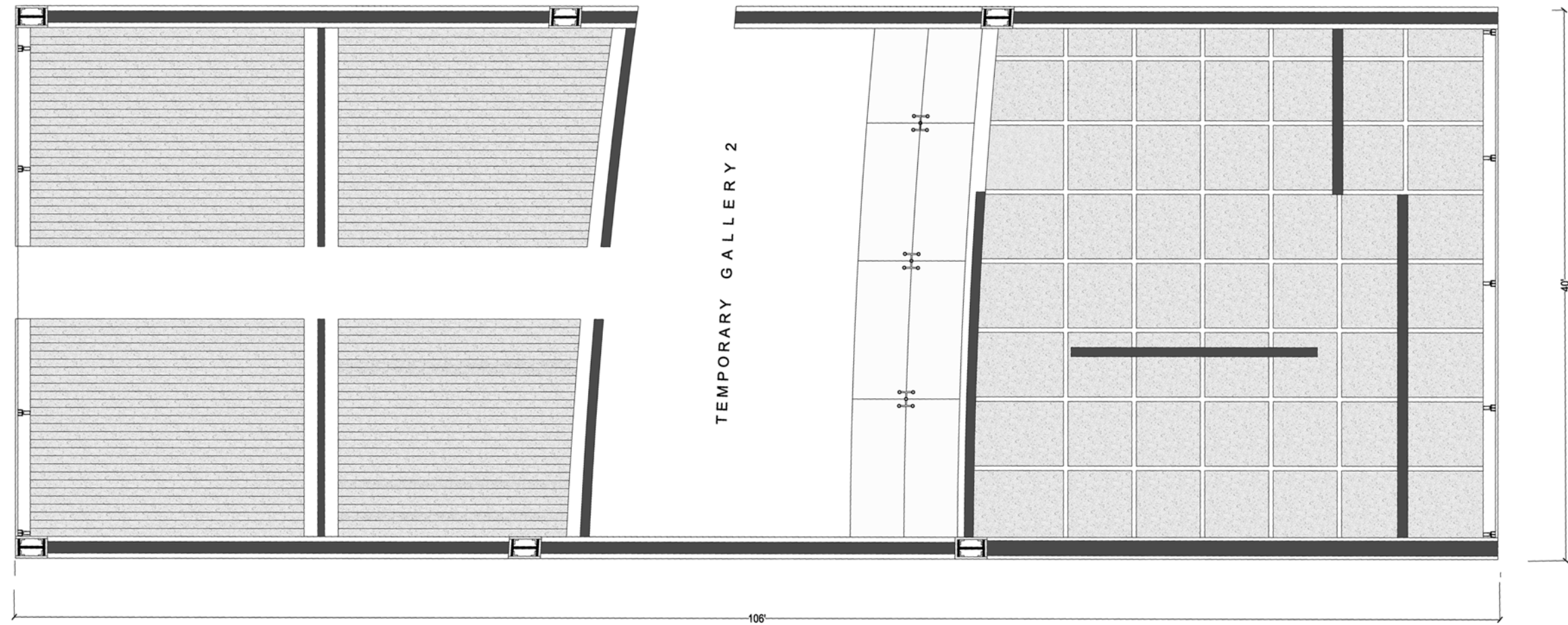
DETAIL AT B



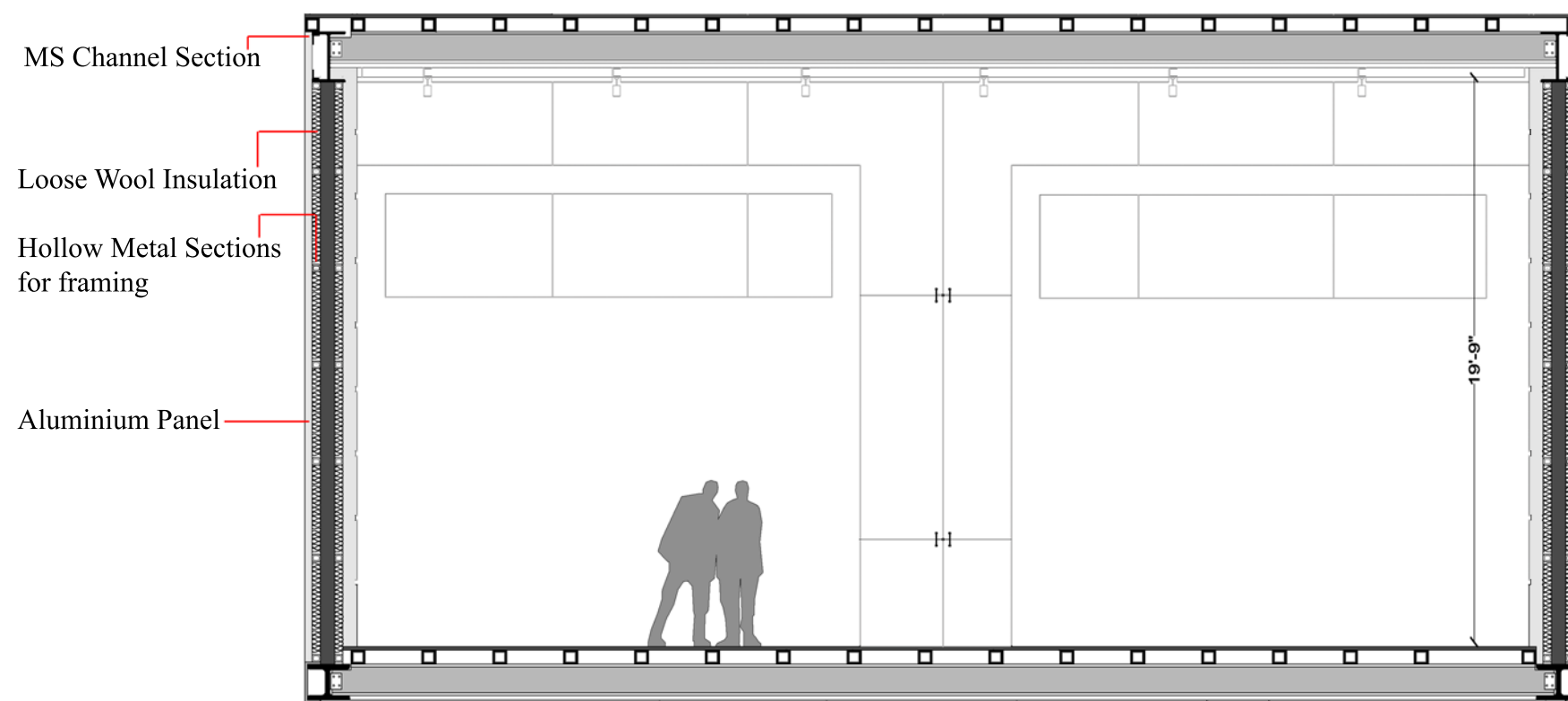
DETAIL AT C



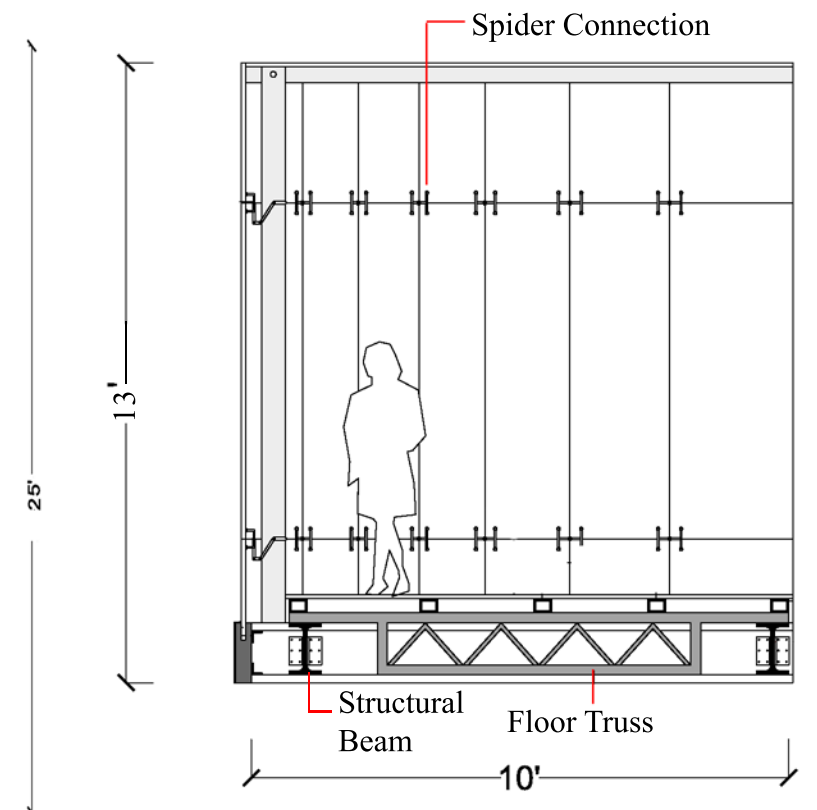
LONGITUDINAL SECTION OF CANTILEVERED ART GALLERY



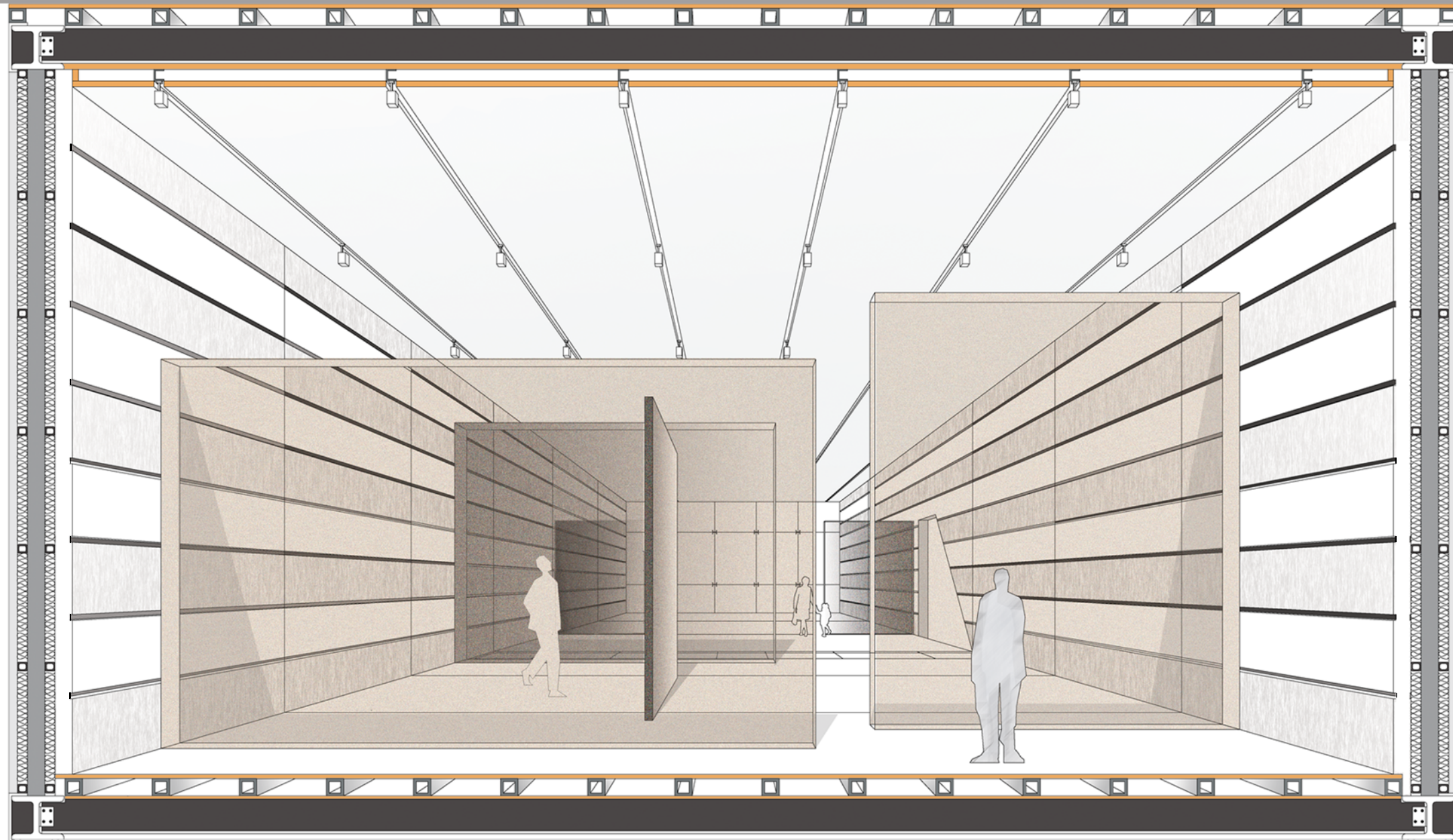
PLAN



CROSS-SECTION OF CANTILEVERED ART GALLERY



DETAIL OF GLASS FLOOR



ONE POINT PERSPECTIVE OF CANTILEVERED ART GALLERY

CONCLUSION

The proposed design attempts to bring the site and the city together to produce a Contemporary Art Museum which relates to both. The proposition at first may seem in contrast with its surroundings and presents a bold confrontation with existing conditions. The building massing is an exploration of different volumes of spaces which enables the building to frame the city for viewing as a work of art. So the museum not only hosts art but becomes a work of art connected to the city. Thus the site and the city are continuously borrowing from and complimenting each other. The building gives back to the city as much as it takes from it. The building marks the city's gateway to the future.