Architecture as Stage

An Urban Multiplex

by Tao Li

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ABSTRACT

Theaters used to an important civic space, and nowadays urban spaces have begun to be viewed as theatrical spaces. Theaters as well as cinemas are primarily shared spaces. As online viewing of films has become more prevalent, it is pertinent to explore how a shared experience can be enhanced. An outdoor theater where neighbors could gain access by foot, an atrium where previewviewing, discussion and gallery viewing could happen concurrently, are a few examples of what this multiplex offers.

The multiplex is located at Van Ness Metro Station facing Connecticut Ave in Washington D.C. The Multiplex comprises eleven movie theaters with seating capacity ranging from 35 to 150, an outdoor theater, a restaurant and several roof terraces.

ACKNOWLEDGMENT

This thesis would not have been possible without the guidance and the help of several individuals who in one way or another contributed and extended their valuable assistance.

I owe my deepest gratitude to my family.

I am heartily thankful to my thesis committee. Jaan Holt, my thesis chair, spoke of architecture in a poetic way, which has left a tremendous impact on my perception of architecture. James Ritter, for the encouragement and all the wonderful insights, and Marcia Feuerstein, who greatly supported me during the completion of the project.

To my friends and mentors- Rok Seong and Carolina Dayer.

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SITE SELECTION

The site was chosen based on a number of criteria: the need for a multiplex due to the lack of movie theaters in the area; location in a commericial artery with easy access to the metro station; proximity to residential neighboorhoods as the mutliplex is meant for the public. The site needs to fit the scale and height of the multiplex, which accommodates multiple screens. Ultimately, the site at UDC-Van Ness Metro station was chosen. It faces onto Connecticut Avenue Northwest, a main artery with restaurants and shops. The area is characterized by large-scale commercial buildings with small-scale residences. A number of embassies are located closely to the site, which could host crowds for foreign film festivals in the multiplex.

Site Location

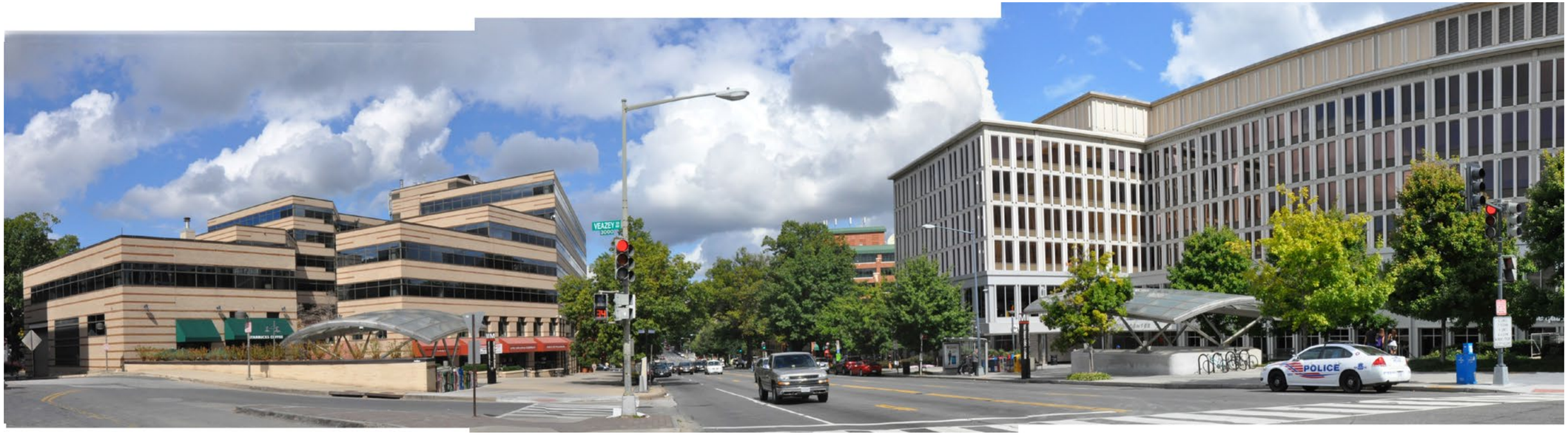
The map shows the location of the multiplex. It is an urban site that faces onto Connecticut Avenue Northwest at the Van Ness-UDC Metro Station. It is bounded by Van Ness St NW to the south, Veazey Terrace NW to the north. To the west, the site is adjacent to David A. Clarke School of law building, University of District of Columbia.

A glimpse to the history of the area gives us a clue of what type of architecture could have a positive impact on the neighborhood. A few blocks north of the multiplex's site at 4455 Connecticut Avenue NW is a commercial landmark- Van Ness Square. Now an abandoned mall, it once housed the ice skating palace, bowling alleys, WMAL-TV studios and other retail and office space. Residents and workers from nearby government agencies enjoyed the amenity Van Ness provided.

Now, the area lacks public destination and amenities that allow the community to gather. Buildings that occupy a single block does not activate the streetscape. For example, the Intelsat headquarters building sets back very far from the street; planting areas in front of Van Ness Square break the building's connection to the pedestrians. The Van Ness area abutting the site feels uninviting and anonymous.

Van Ness Square

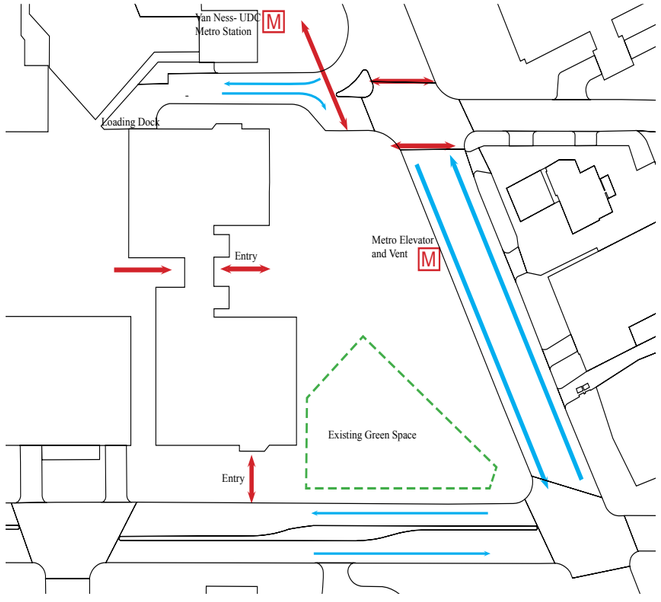
Intelsat Headquarters on Van Ness St NW

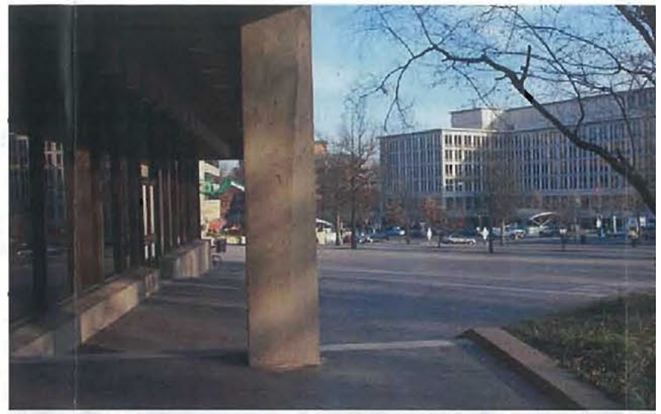


Views at Veazey Terrace

Site Analysis

The circulation diagram indicates pedestrian flow surrounding the site. Van Ness-UDC metro station to the north demands entry to the multiplex from the north. Given the condition of the site close to the UDC academic building, the challenge became designing the multiplex in such way that maintains circulation and visual connection to the UDC academic building. Intergrating green space with the multiplex was also considered in regards to the existing landscape on the site.



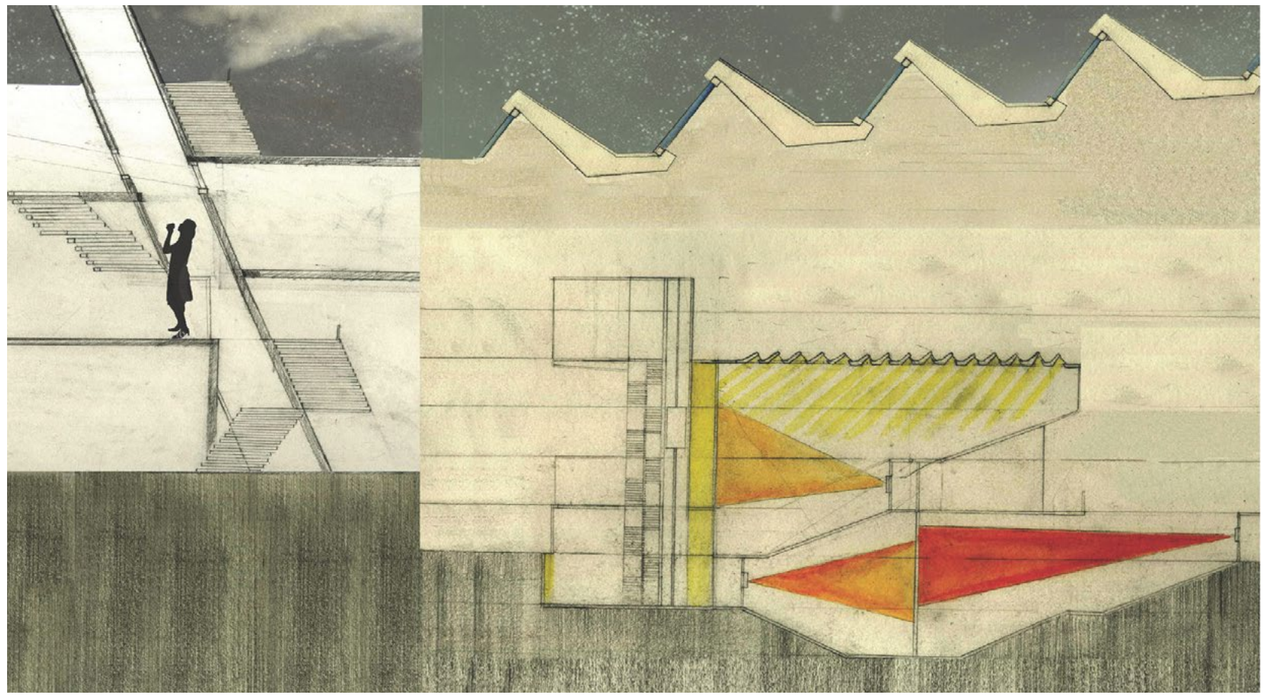


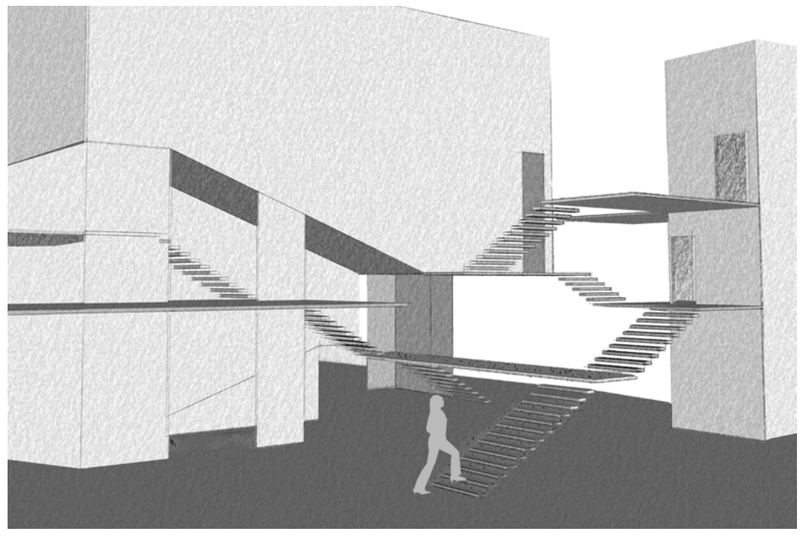
EARLY EXPLORATION

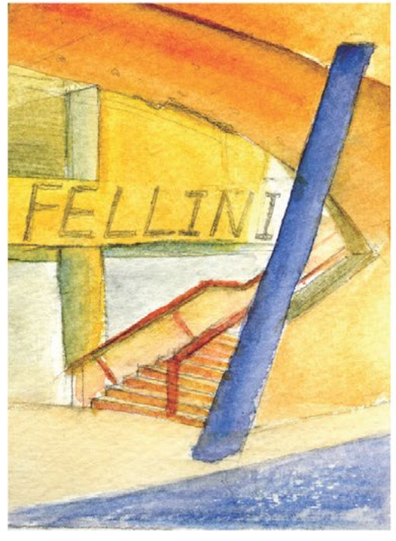
Watching movies is a corporeal experience. We live our experiences through our body and senses. My early exploration of the thesis included attempts to intergrate senses with architecture. While trying to understand a bodily experience, I started to think about walking up a staircase as an example. When we are walking on a staircase, we are more aware of the geometry of the stairs as we are conscious of each step we take.

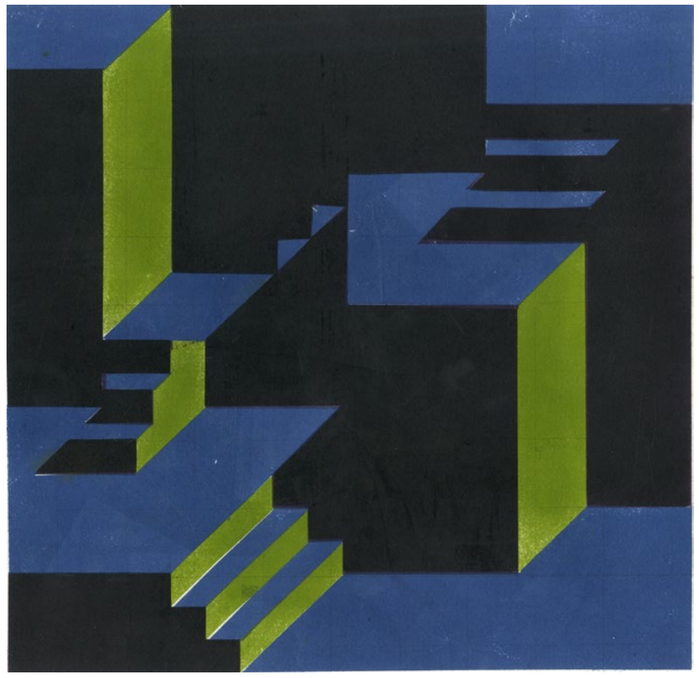
A Bodily Experience

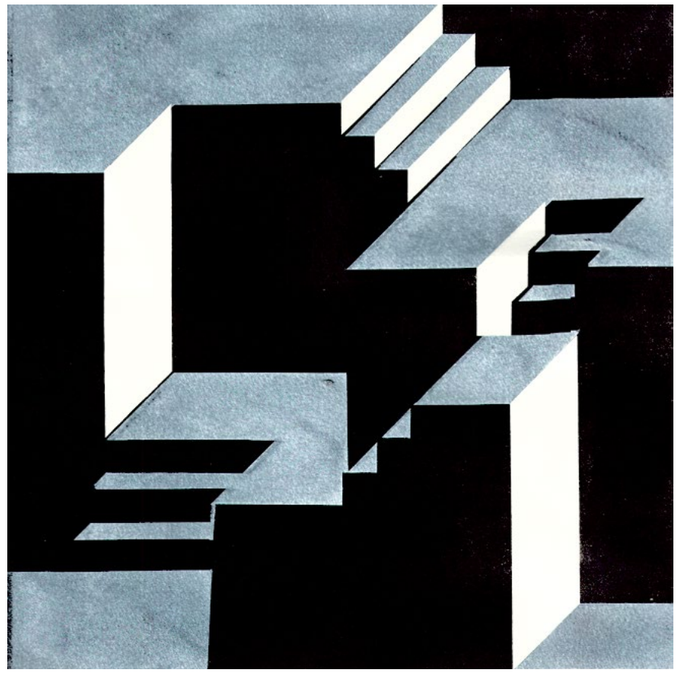
The drawings to the right show that stairs morph into skylights and vice versa. When stairs turn into skylight, the surface of the run is turned into an angled plane to reflect light off the surface. skylights filter through the roof and reveal the character of the grand auditorium. The watercolors on the bottom suggests circulating around the multiplex as an event. Balconies are included as a platform to overlook to the atrium and to the city outside. The vigorious and interconnected character of the stairs brings about a unique circulating experience.



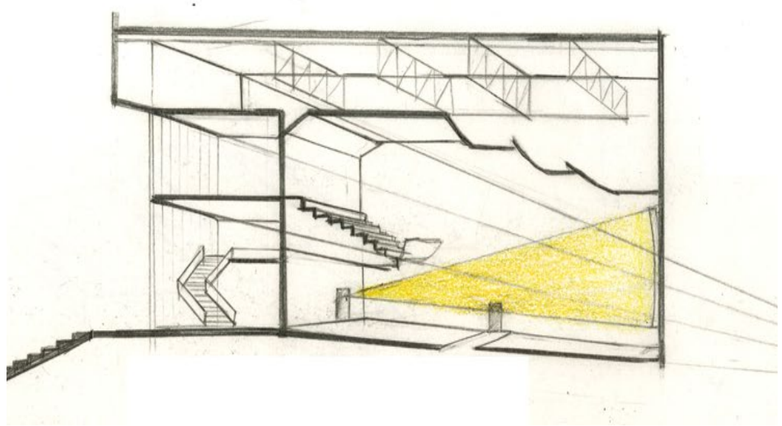


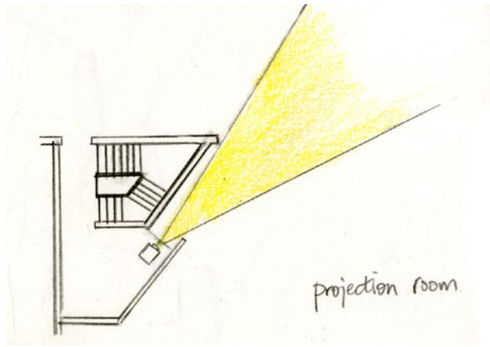


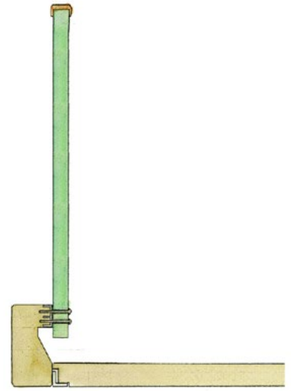


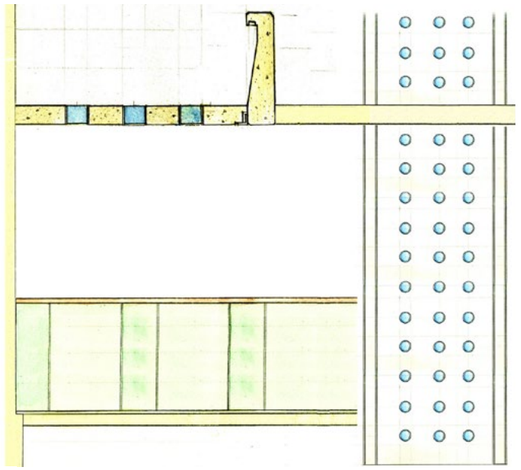


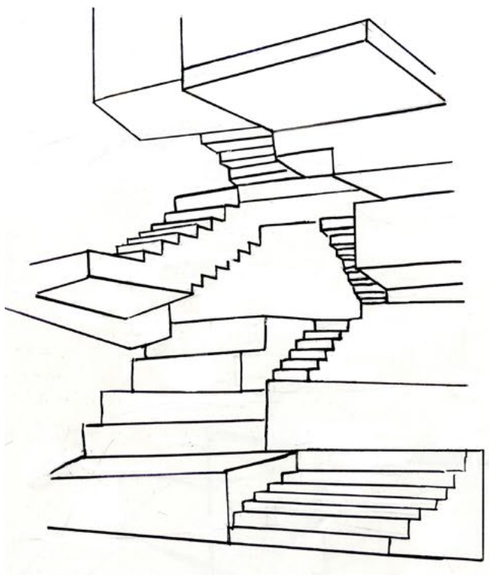
Stairs (print making)

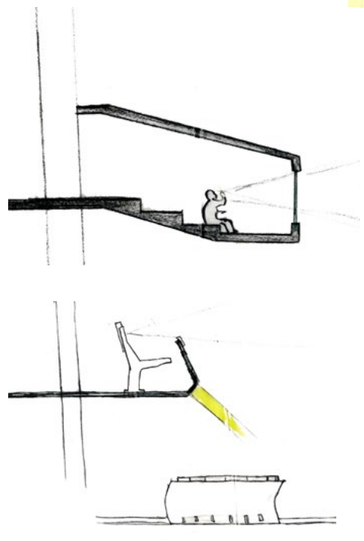












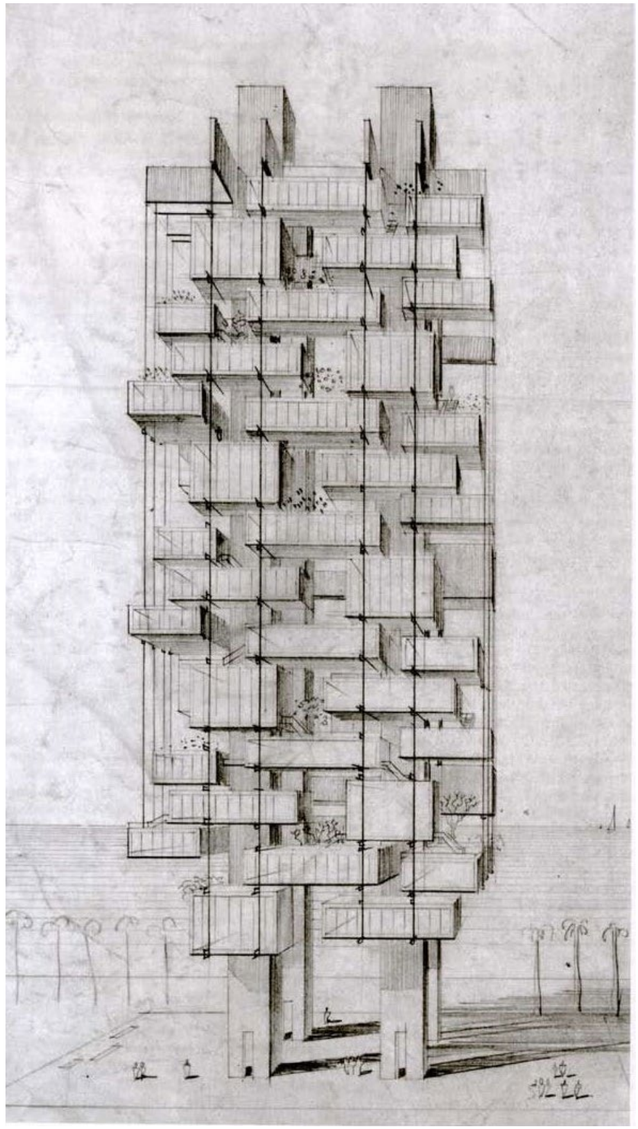
Early Sketches

Generosity of Structure

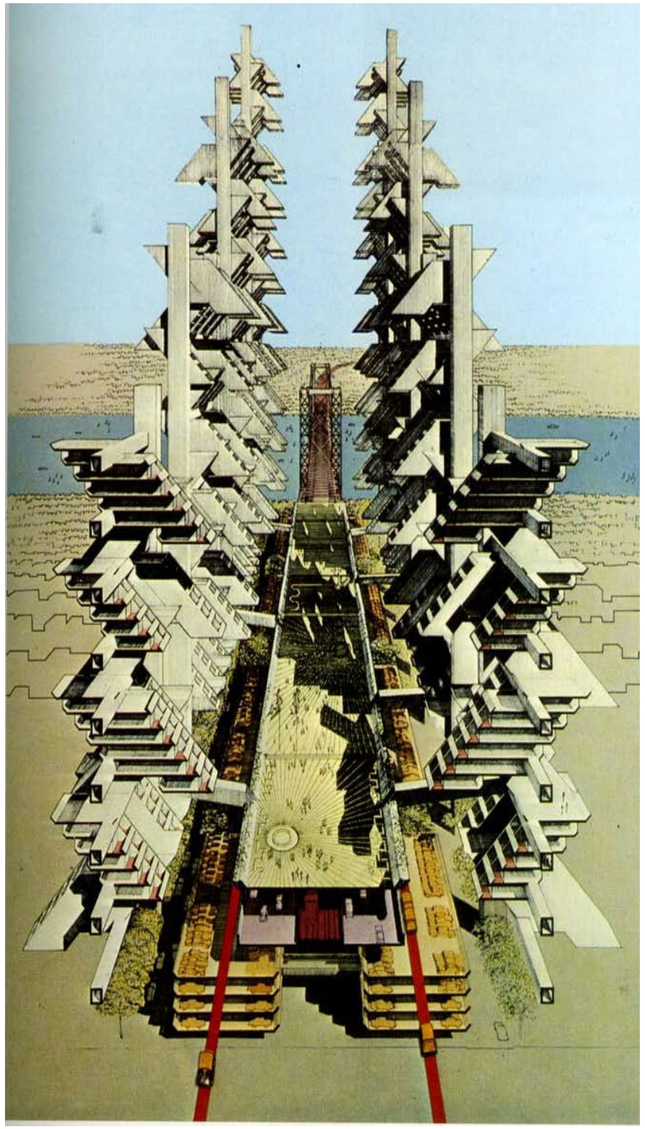
I intended to have nine theaters with seating capcities ranging from 30 to 50. I imagined this part of the building run by the student body at UDC and the community. Educational documentaries and indie films could be shown there. Foreign film festivals could be held here. The desire was to have an assembly of small theaters of similar scale with some degree of transparency to the main street.

Paul Rudolf's writings on megastructure inspired me to organize the small theaters with a series of walls. Megastructure is by definition a structural framework into which a small structural units can be slipped on. He utilized a composition of hills and valleys for apartment complex in his proposal for New York City. The lower units of the apartments climb up the hill and merge with the upper units. "The lower building and the higher builing are made into one- so the scale is same". The valleys can be made into the hill for communal spaces.

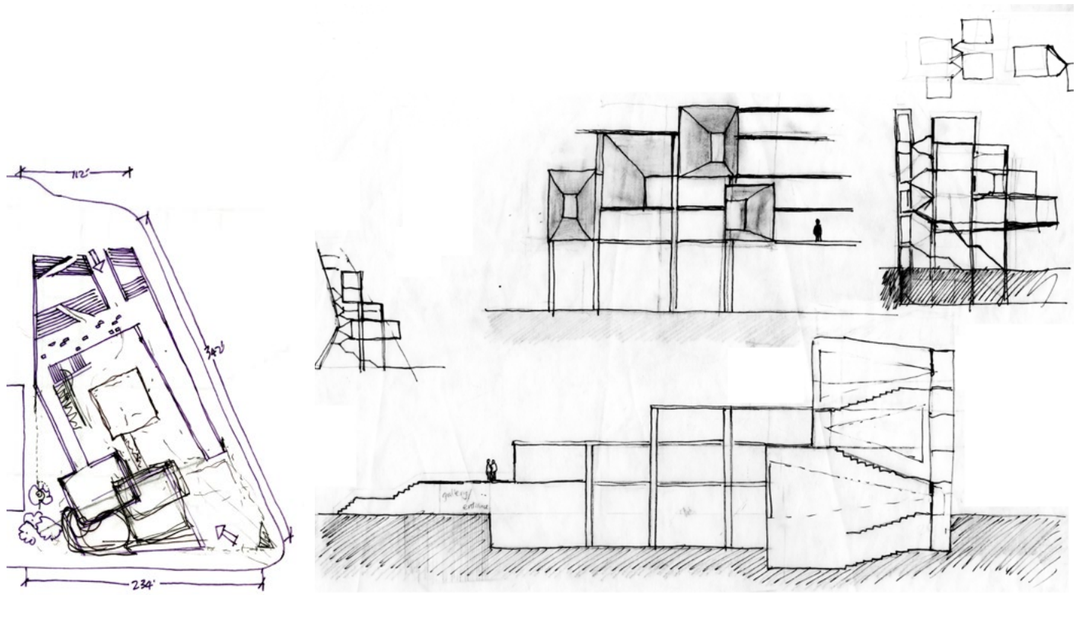
Regardless of the debate on whether megastructure destructs or renews an urban city, I learned this type of structure is suitable for programs of similar scale. The generosity of structure enables floor height of slipped-on units to be different. Furthermore, the plugged-in units could be prefabricated off-site which increases flexibility of use.



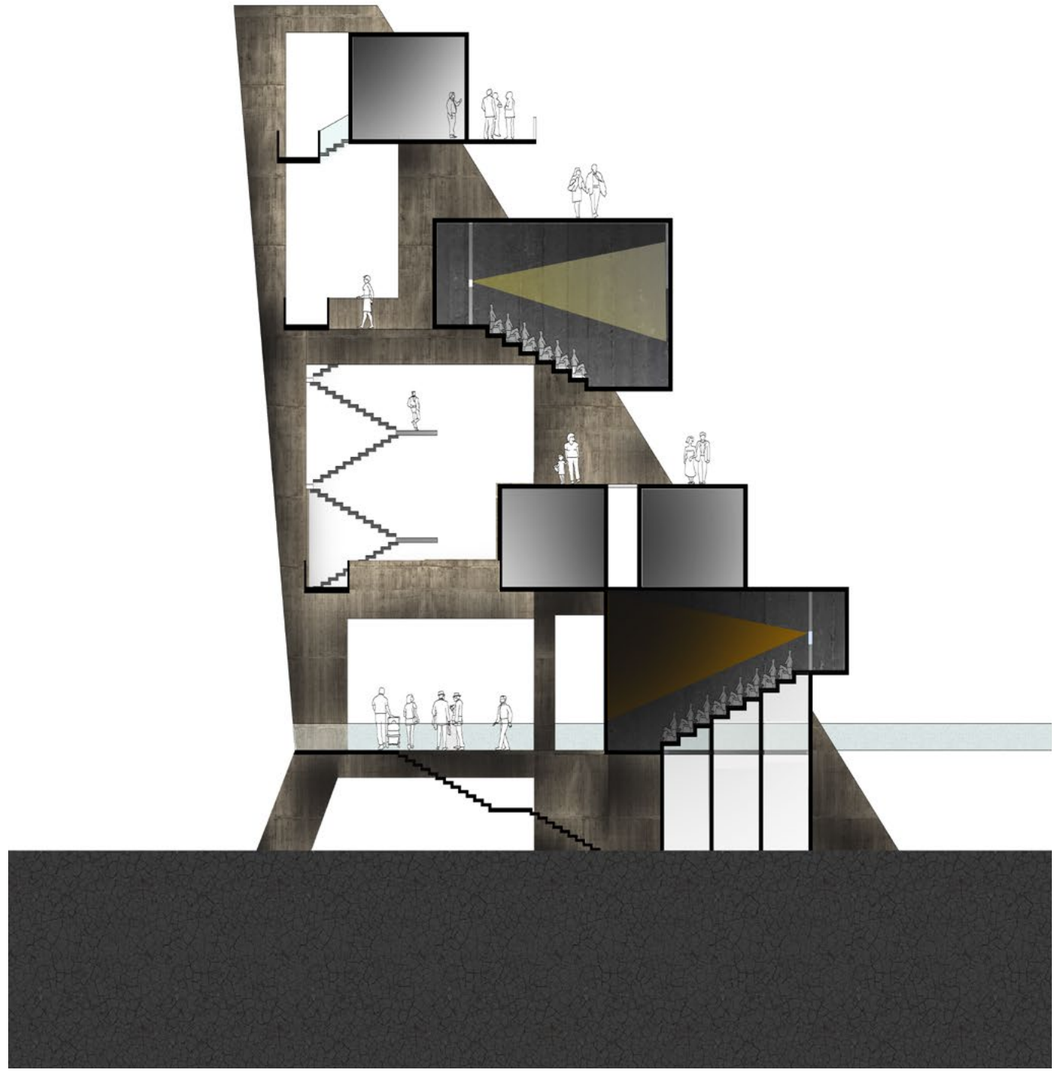
Rudolf, Trainer Tower (Sarasota, Florida, project, 1954)



Rudolf, City Corridor (New York City, 1970)



The drawing to the right shows one of the concrete walls that hold smaller rooms. It was envisioned to be around seventy feet tall, appoximately the same height as the buildings nearby. The steel framed rooms are inserted between the walls. The outside wall of the rooms that faces onto the street could have projection of movie previews. Therefore, moviegoers could occupy the roofs of the rooms and enjoy the view to the street as well as watching movies from the screen. On the ground floor, additional structures supporting the theater could become exhibition walls of a gallery that showcases cinema and other visual arts. When the walls were placed in one direction, this part of the building would be opague from one view and transparent on the other direction. Light enters from one side and bounces off the wall, which results a game of light, shadow and darkenss.

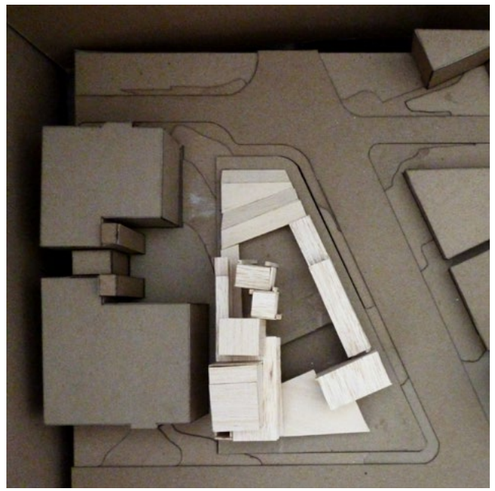


Design Development

The first model emphasized an entrance hall beneath the grand stair on the north side. The second model reclaimed the visual connection to the university building's entrance by not constructing on the land in front of it. In both schemes shown by the two models, I was interested in entering the multiplex under the weight of a movie theater.

The first scheme introduced an entrance under a theater at the southeast corner. The second scheme emphasized on walking through the multiplex as an eventful journey.

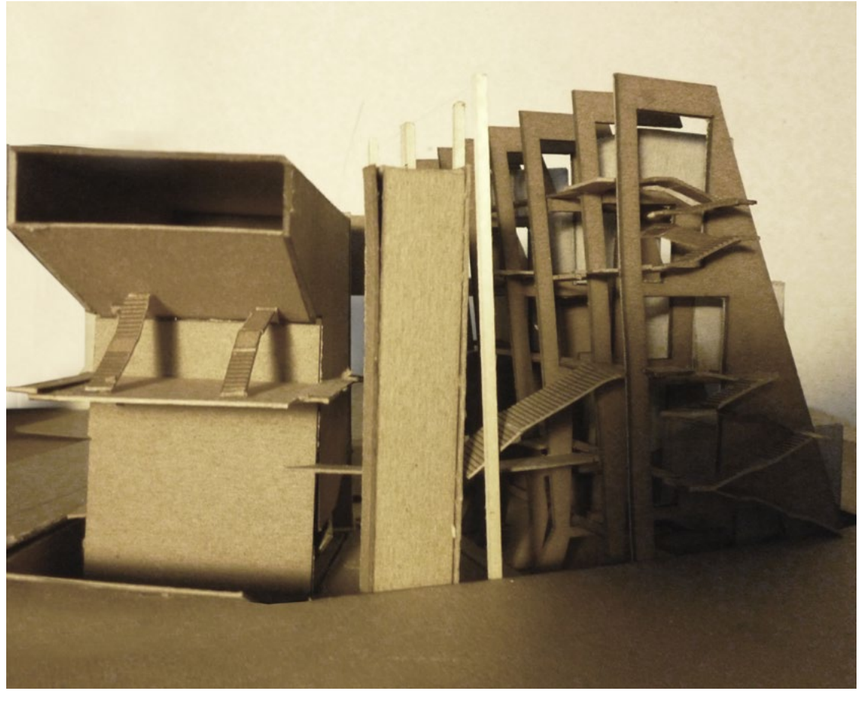
I began to think about when walking in the multiple what would people like to experience. I recognized the opportunity to have circulation along the central space while negotiating between views to the outside and the ones to the inside.

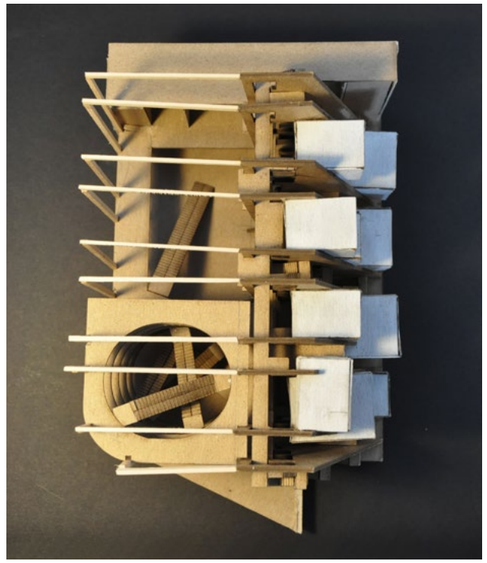


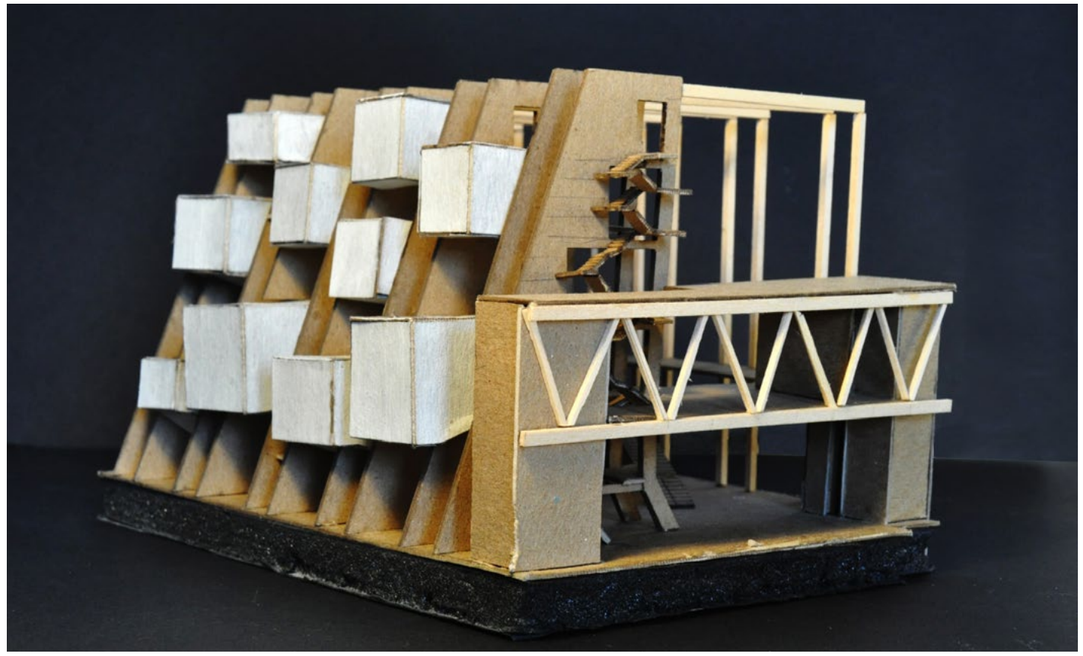
Model One

Model Two

Model three witnessed the small-theater part of bulidng taken in shape. Circulation elements such as elevators and fire stairs are introduced to the configuration. The massing of the restaurant was then envisioned to be at the top floor with views to the open space and Connecticut Ave NW. I reconized from these schemes the obstrusiveness to the university building on the west side. My solution was to bury the theaters on the west underground. Moreover, visitors that dine in the restaunt only should be taken into account. Thus a secondary lobby could be included close to the north entrance.



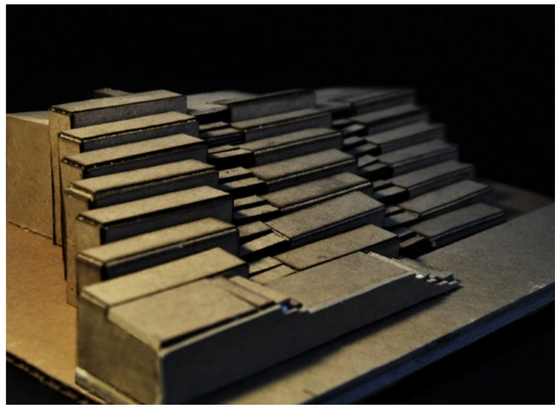


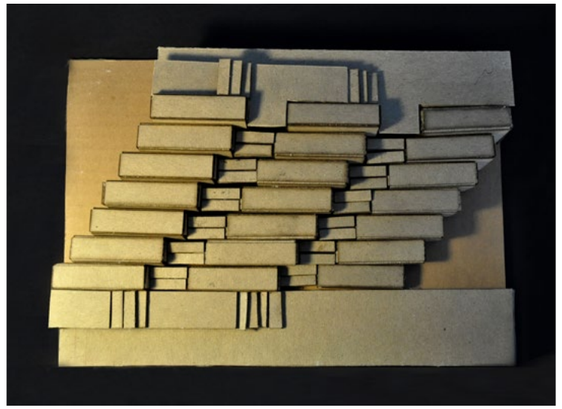


Model Four

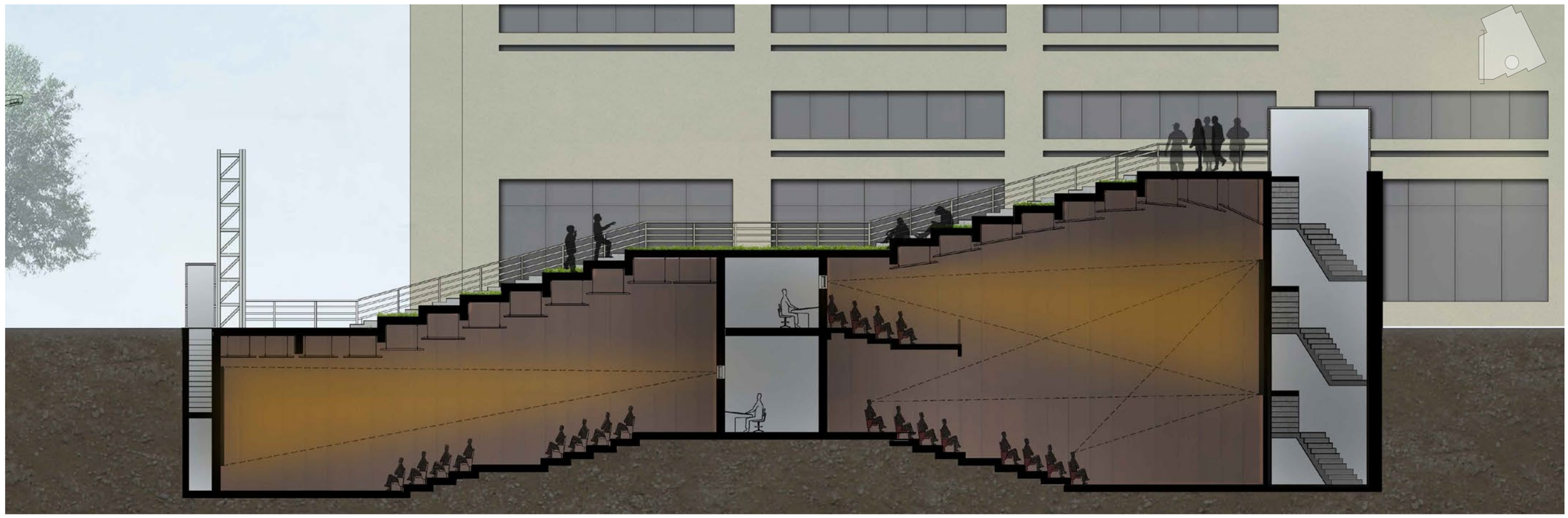
In model four, the restaurant volume was lowered to the second floor to frame the north entrance. The second floor was then considered to be the main floor with food and drink concessions. The second floor is reached by an extrodiarily long and dramatic escalator ride up from the floor below grade. Escalators that carry people up and down were grouped and inserted into round openings of floors. These escalators were intended to point at different directions and this enables views to open up.

The main theater with its ceiling rise up only to the second floor was further studied after completion of model four. The outdoor theater occupies the roof the main theaters. Slopes and stairs were intergrated with grass growing on the top. After careful research, I determined the slope ratio to be one to three, on which grass is able to grow. This ratio carried through to the one for stair rise and run and allow people to sit and enjoy a movie comfortably.





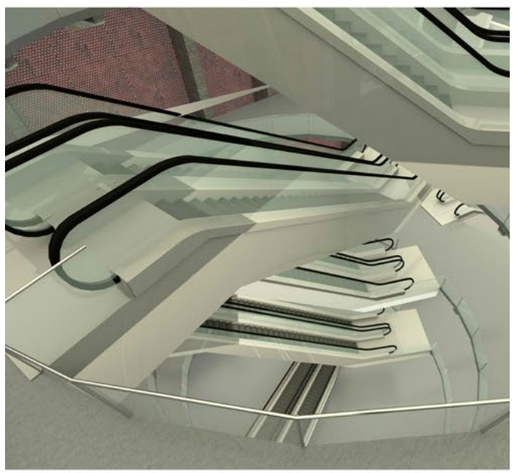
Explorations of Outdoor Theater

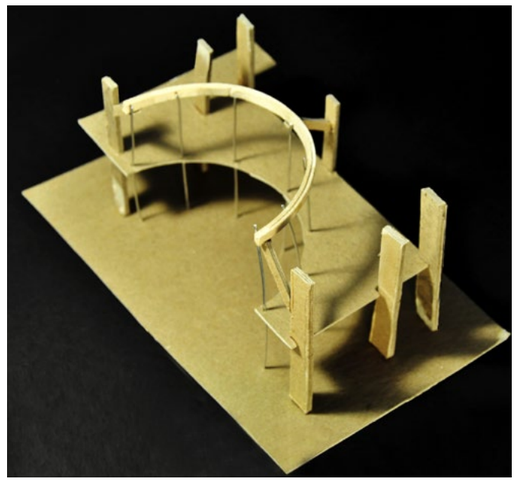


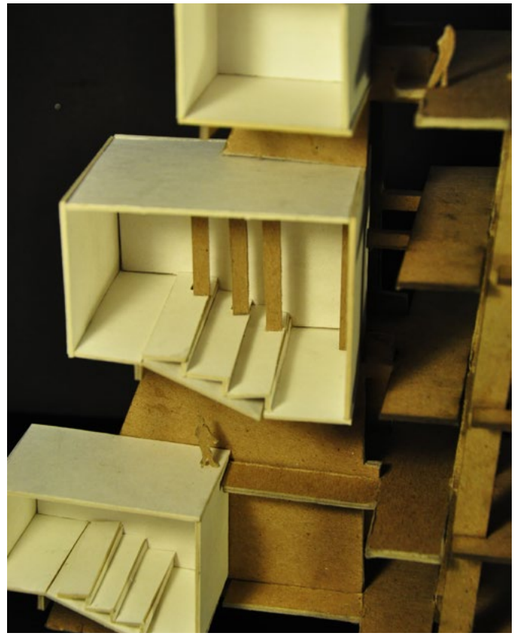
Section of Outdoor Theater and main theaters

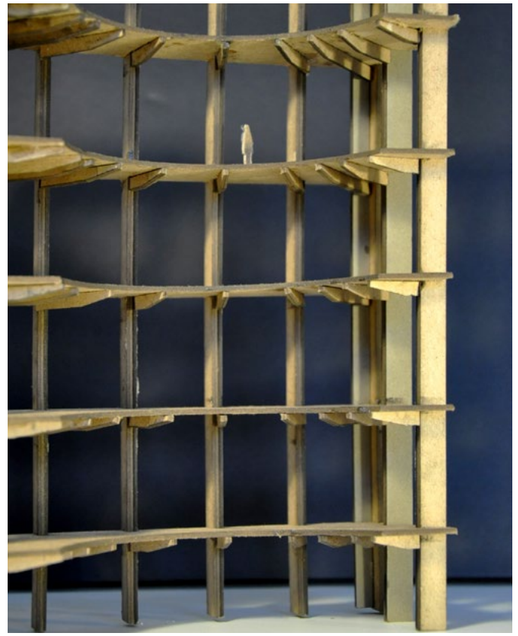
Structure of Round Opening

The initial solution for structural support of the round opening was to hang the floors on edge beams from the ceiling as shown in the photo below. As heavy traffic is concentrated in this area due to the set of escalators within the periphery of the circle, more structural support needed to be present. The final solution was utilizing beams radiating outwards from the center of circle. Rings of reinforcements would be concealed in each floor slab. In each slab, there would be two rings of reinforcement joining the edge beams in force. The outer ring of reinforcement would be in tension, and the inner ring would be in compression.



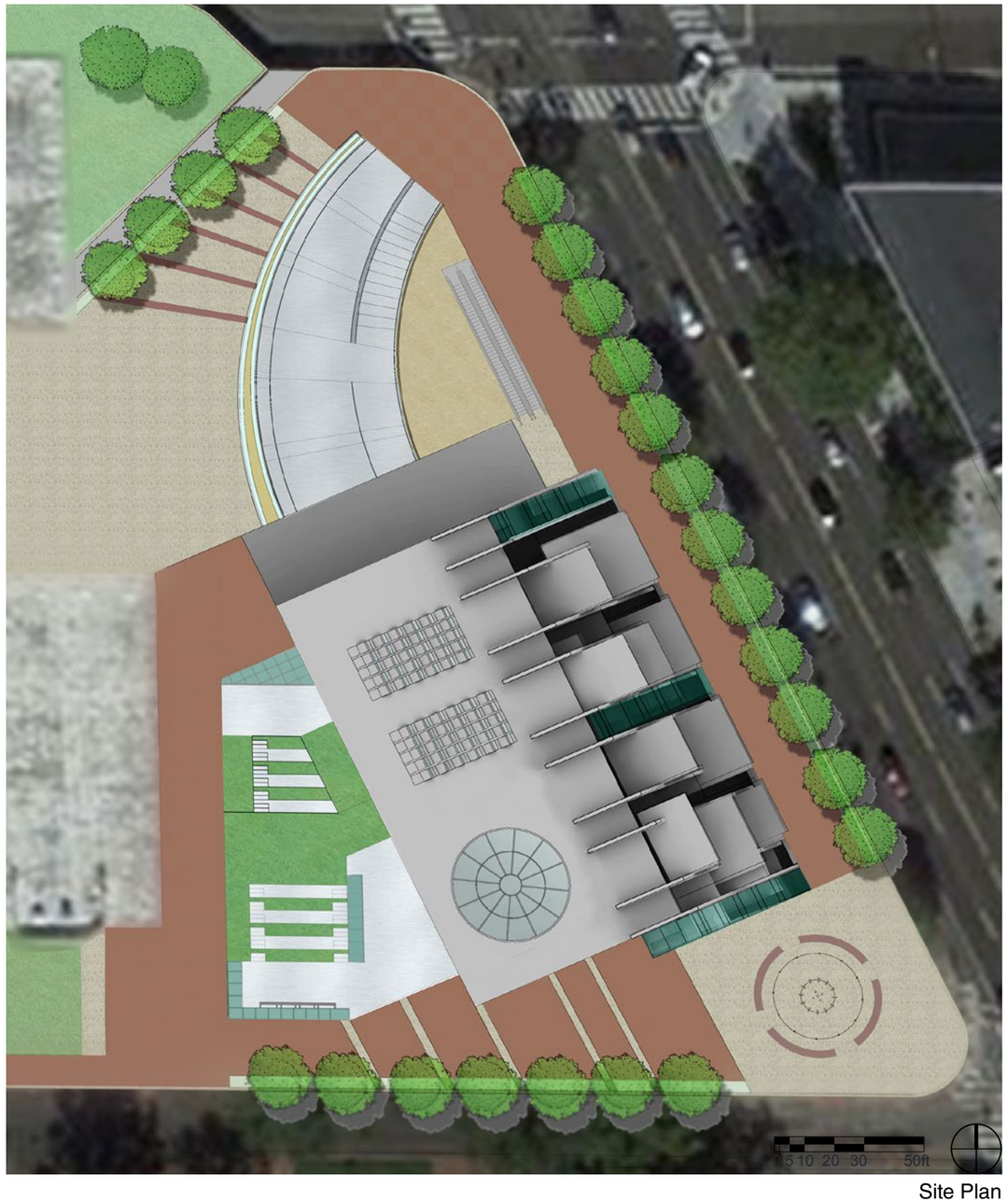




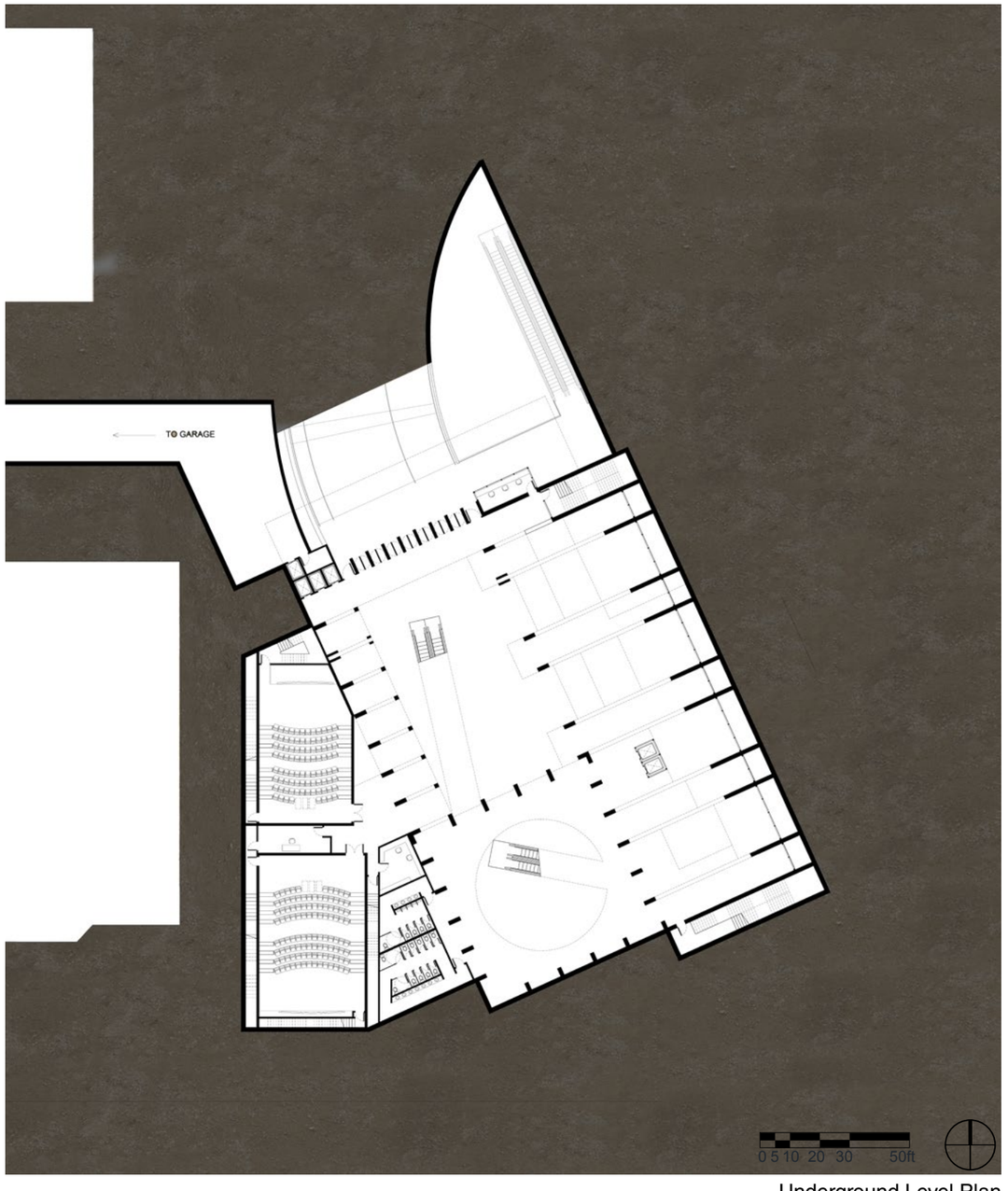


FINAL PRESENTATION

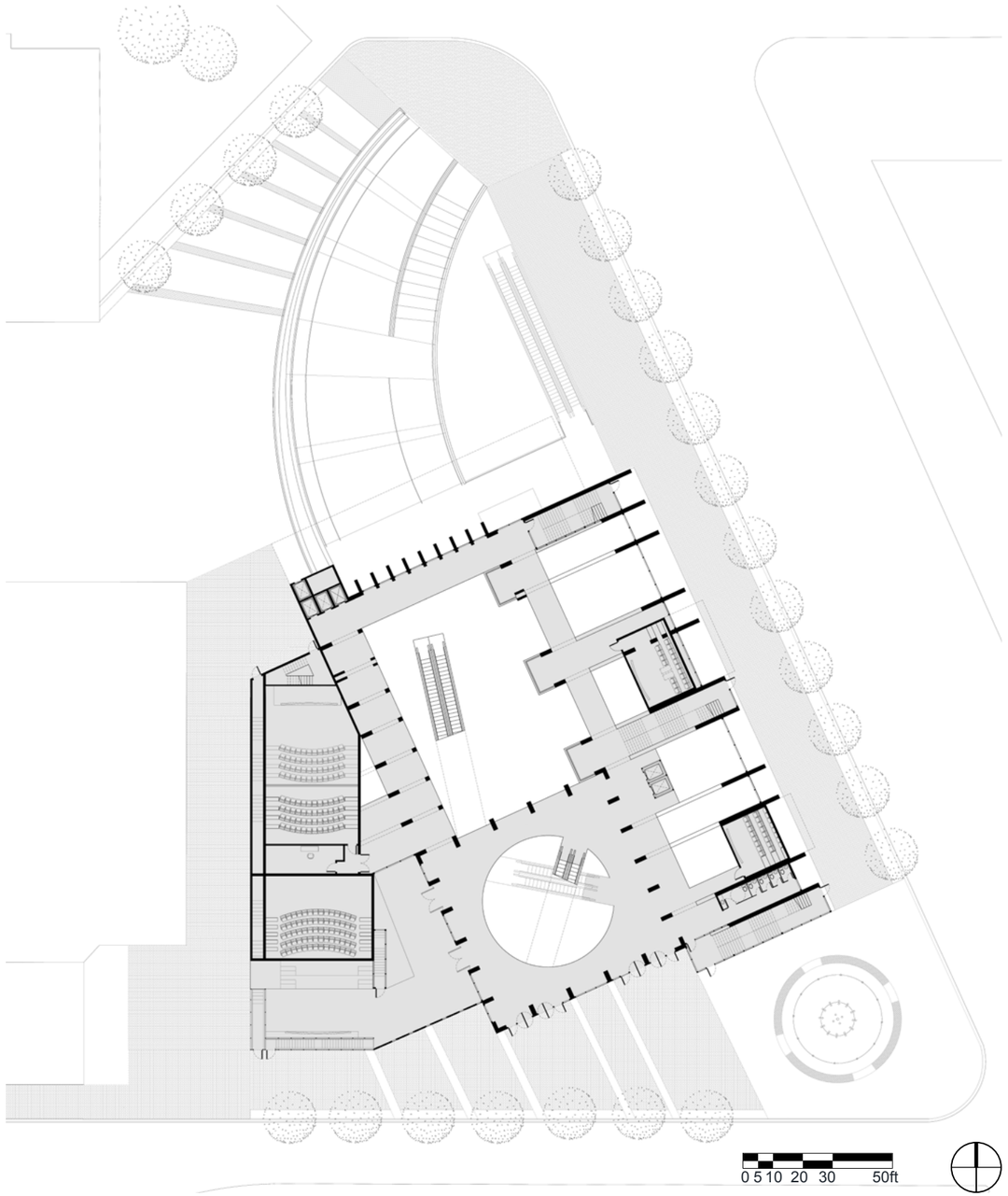
Final presentation includes site plan, floor plans, sections, perspectives and detail of a small theater's screen wall. The screen wall is composed of two layers of opague glass. This enables a inverted and obscure view of the screen to be visible from the street. Copper screen would act as light filter. Copper ages and fits in the context of a historical neighborhood. A ramp to the entrance with water wall feature on the side was also incorporated to enhance entering experience and provide amenities for the community. The water wall also connects the upper ground where the univeristy 's entrance to the lower ground leading to the multiplex's entrance.



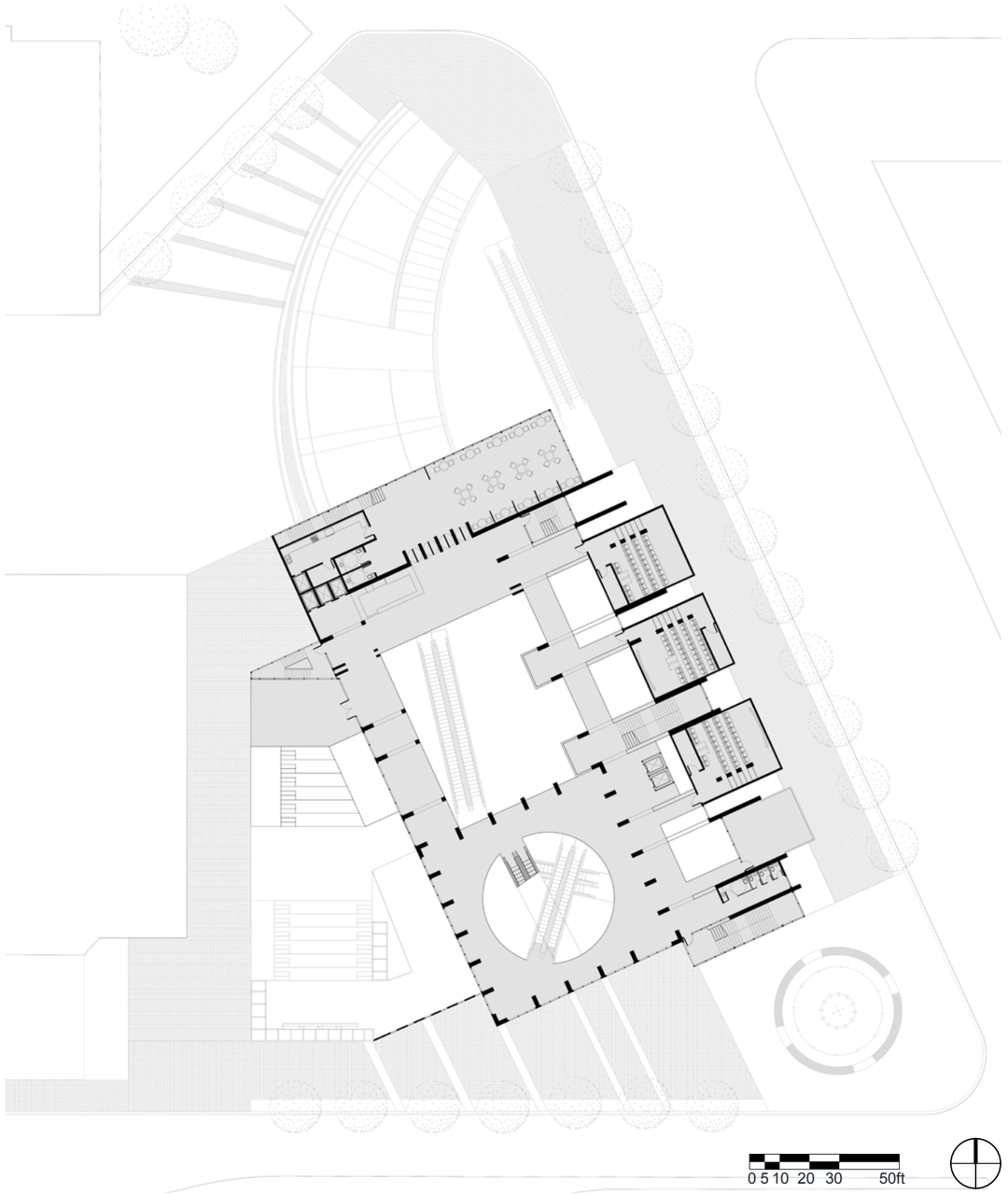
Site Plan



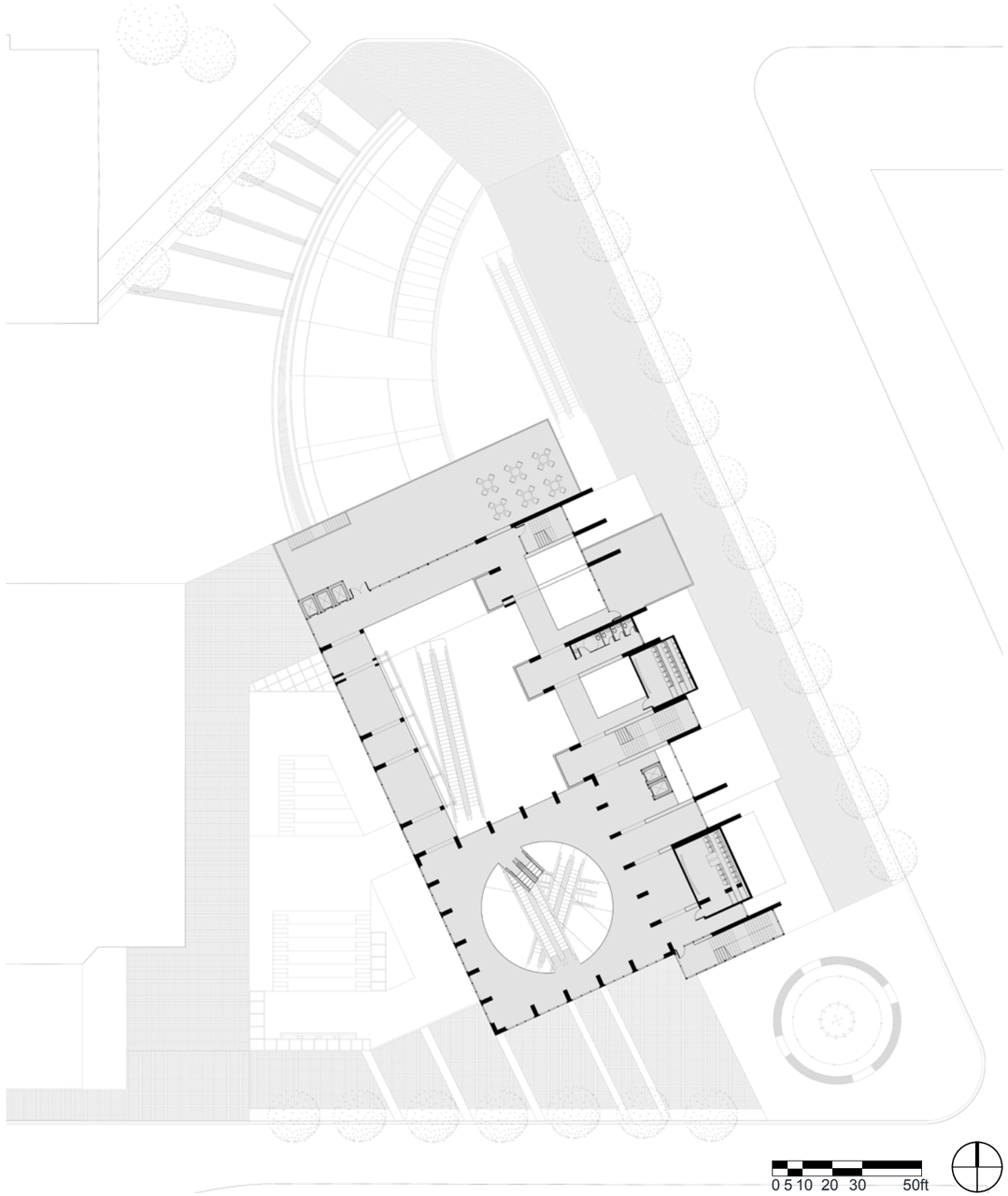
Underground Level Plan



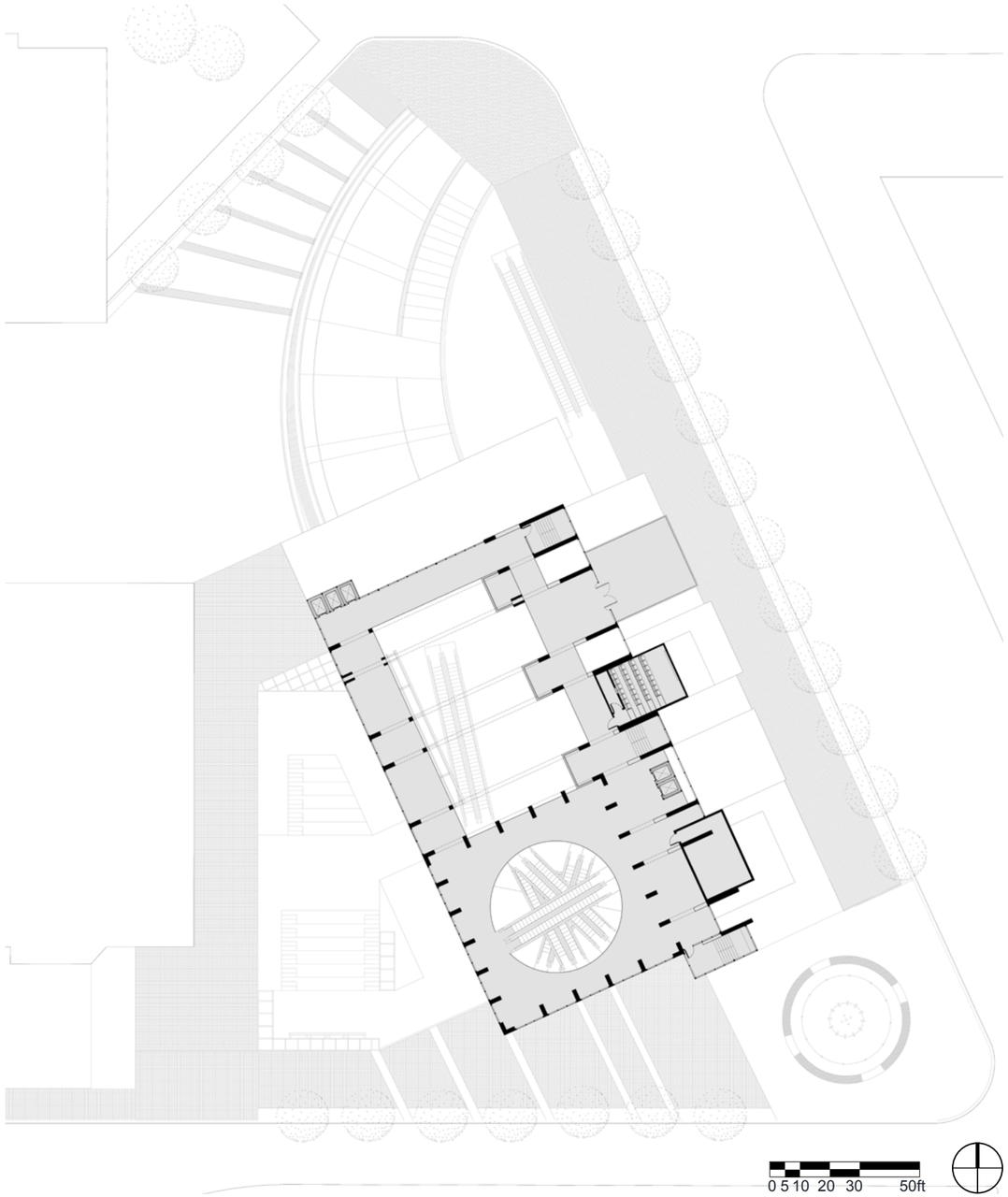
Ground Level Plan



Restaurant Level Plan



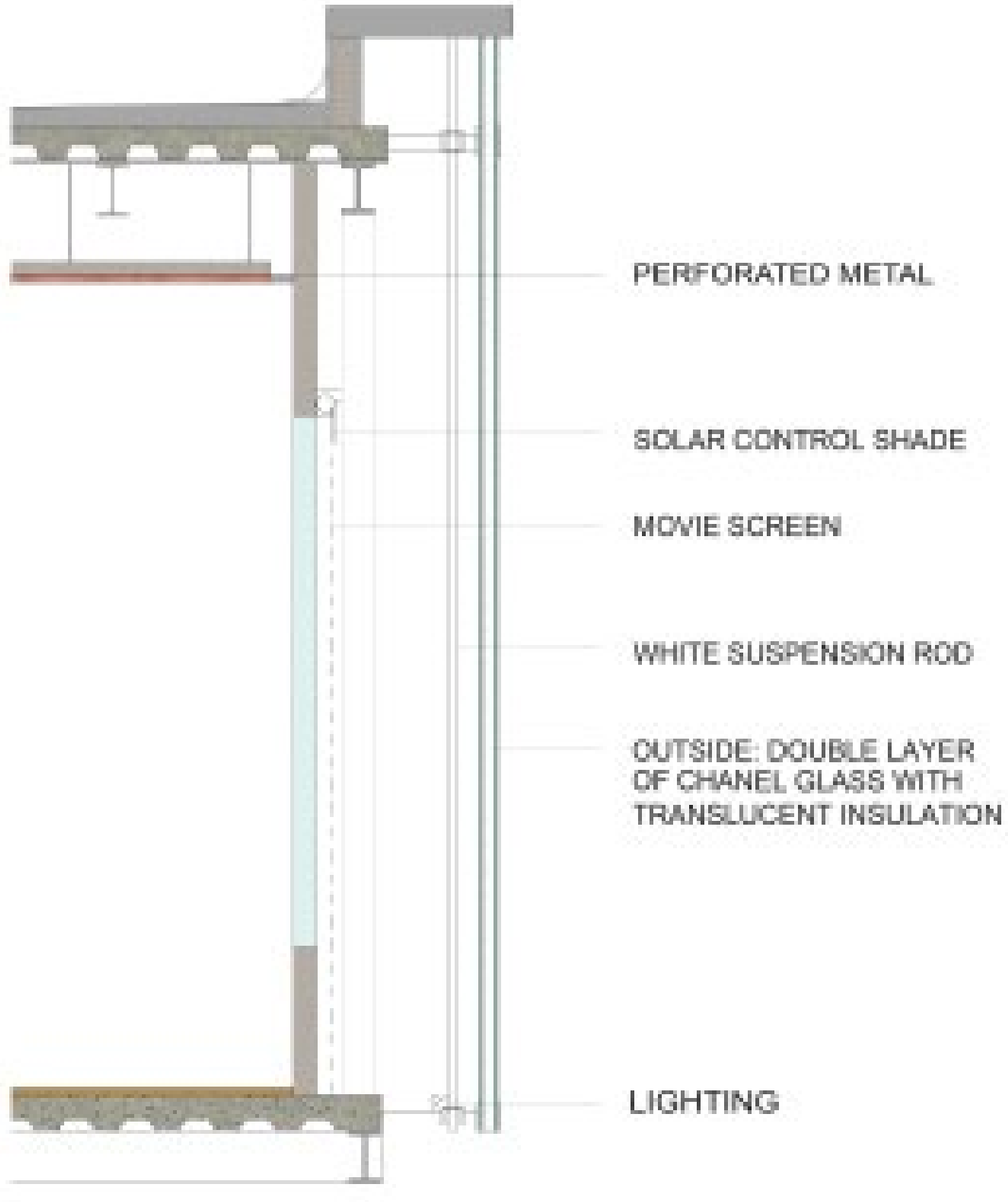
Third Level Plan



Fifth Level Plan

North Entrance

View From Balcony Inside Movie Theater



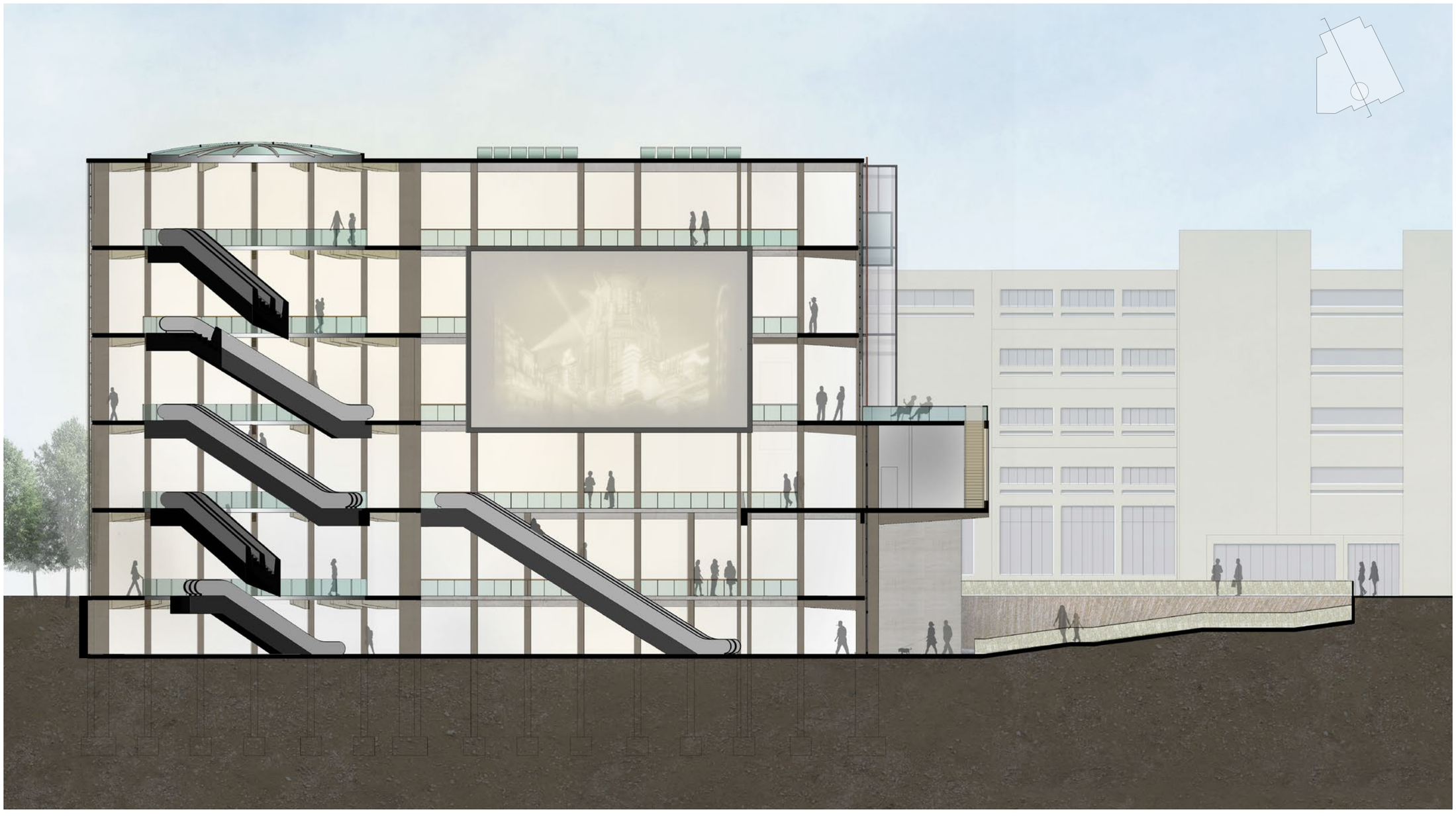
Screen Wall Detail

0 2 4 8 12 20ft

Cross Section

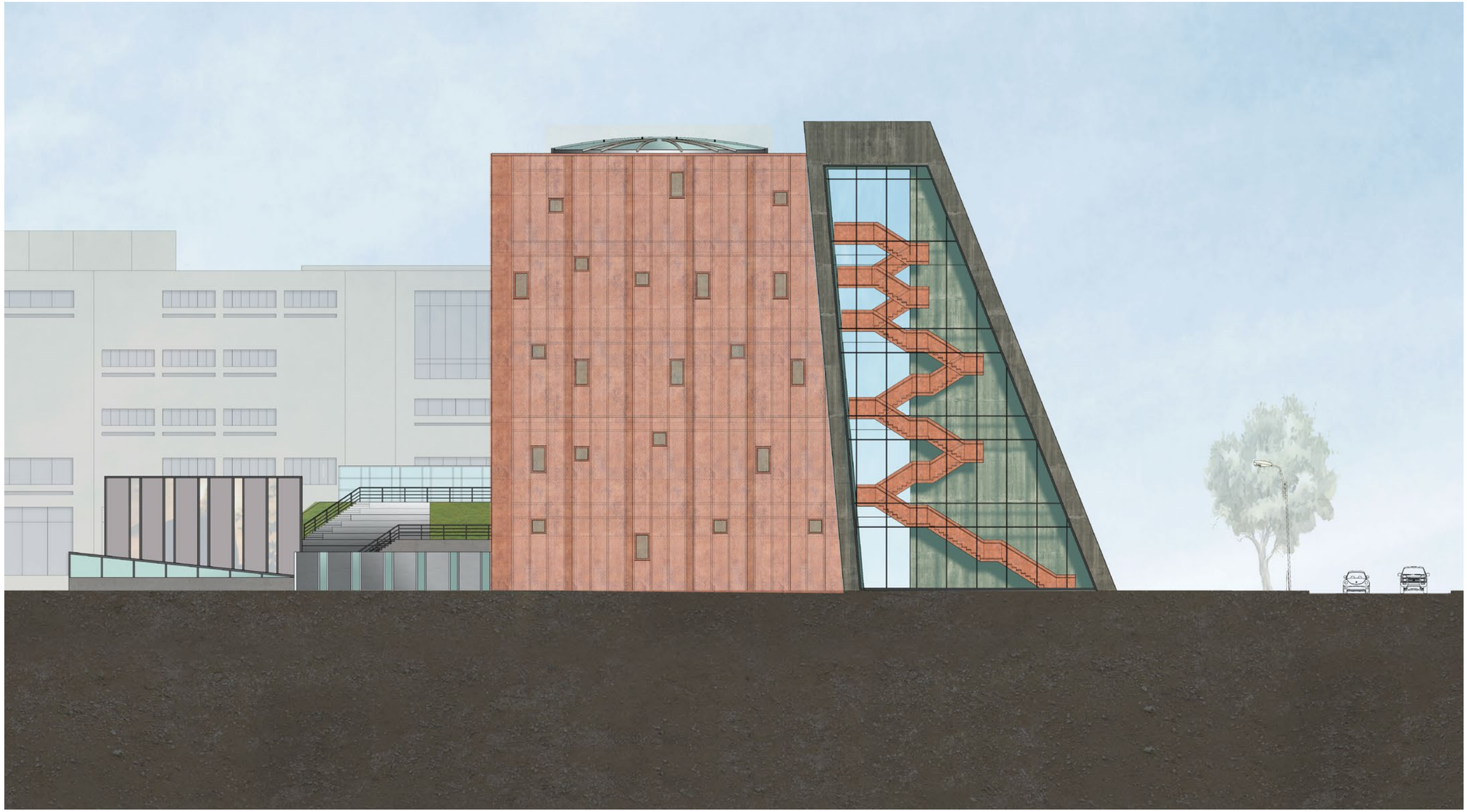
0 3 6 12 18 30ft

Section Through Theaters and Metro Station Access



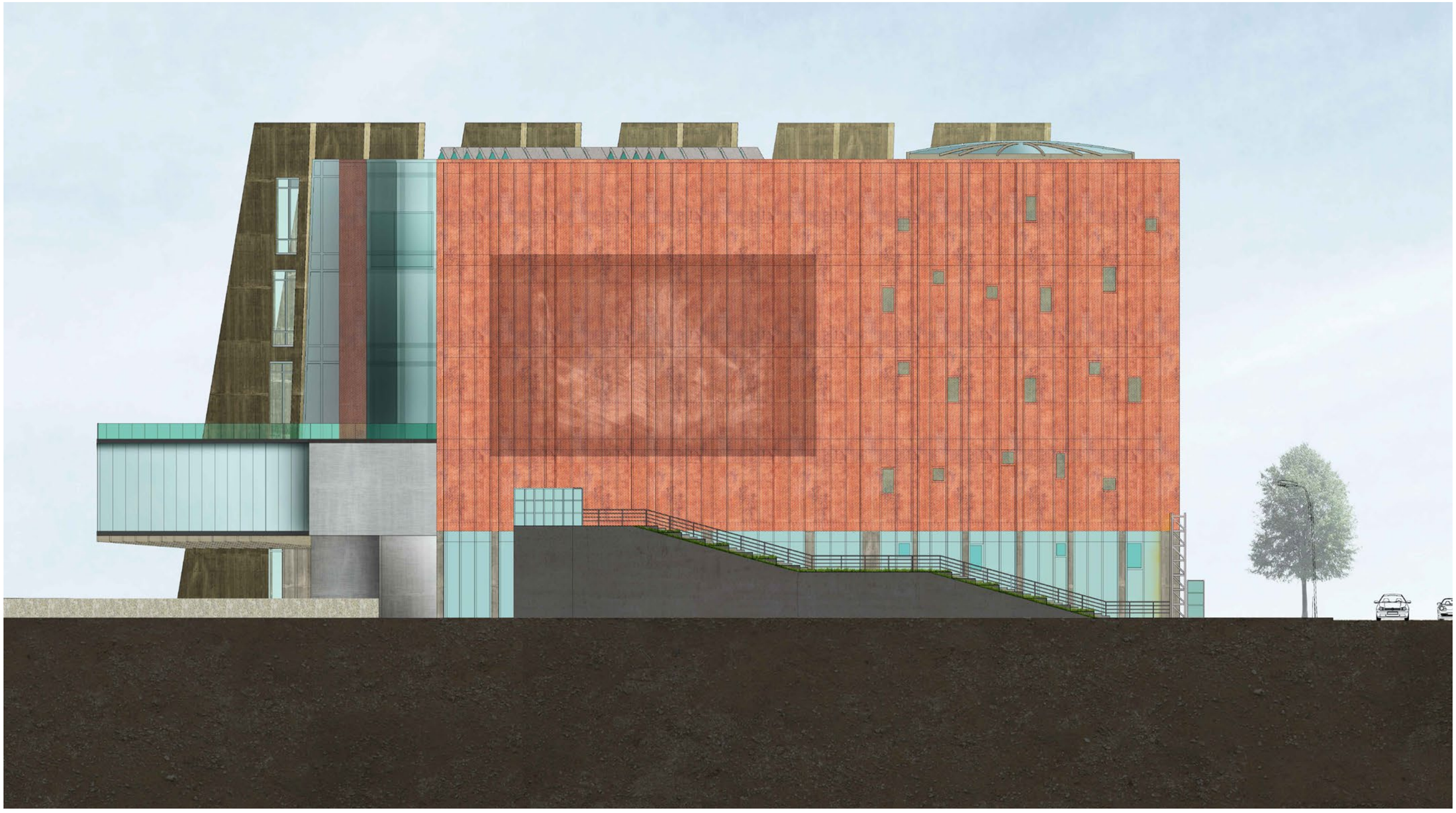
0 2 4 8 12 20ft

Section Through Atrium



0 2 4 8 12 20ft

South Elevation



0 2 4 8 12 20ft

West Elevation

0 2 4 8 12 20ft

East Elevation

0 2 4 8 12 20ft North Elevation

View at Southeast Corner

Images Cited

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Page 13, *Rudolph, Trainer Tower*; *Rudolph, City Corridor* from book "the Architecture of Paul Rudolph", Yale University Press, July 2010, 2014

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