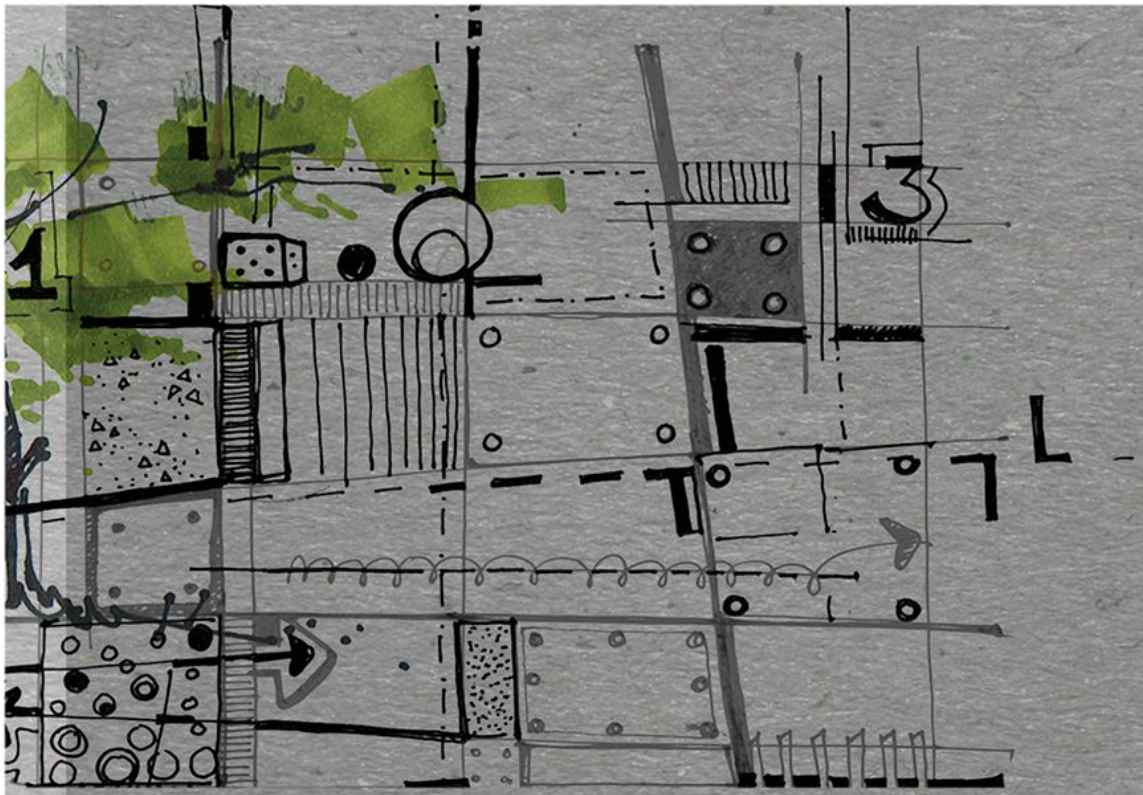
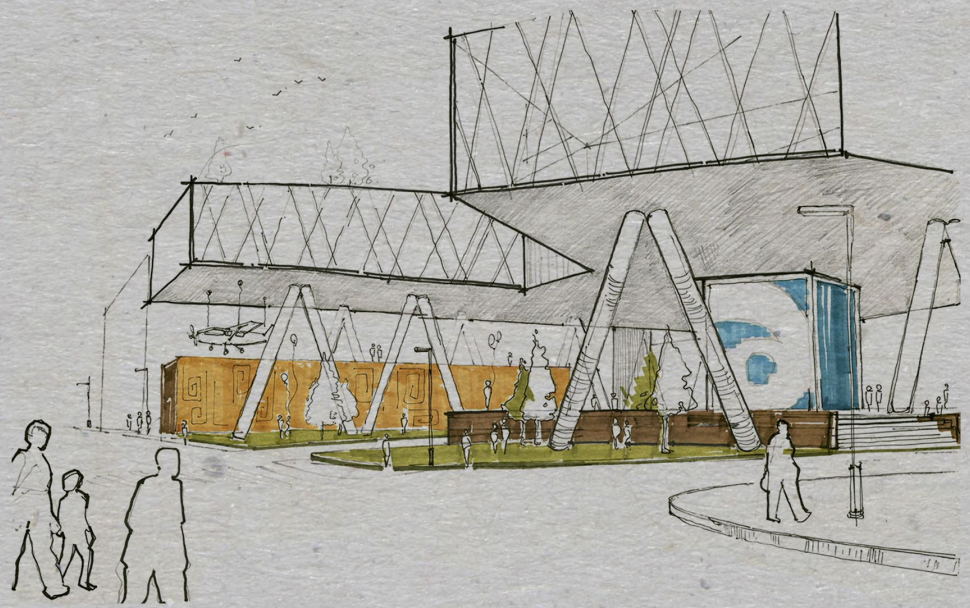


Portfolio

Mohammad
Abdul Kader



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Retail Shops at Kroger Marketplace

Narramore Associates 2023

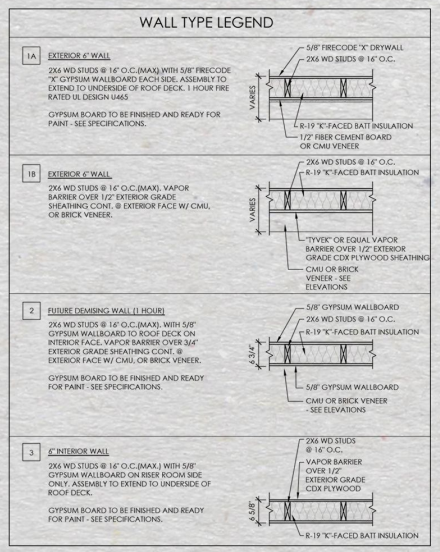
Two identical freestanding retail shops at a Kroger Marketplace Georgia both of which are cold dark shell construction with no rooftop HVAC. In between the two buildings, a covered patio has been provide with pre-engineered metal canopy that will allow customers of both Retail shops to come outside and enjoy the buslting marketplace in an shahded semi outdoor environment. This project construction falls under type VB and mostly utilizes 2x6 wood stud in the wall adn wood trussed roof.

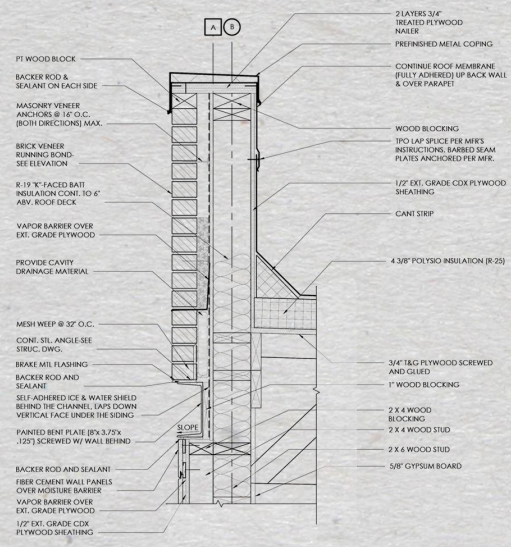
Project Status : Permit has been issued by the Augusta City dept. and the Construction is yet to start

Responsibility: Code Research, prelim design, design development, CD set preparation, Coordination with Consultants, Permit application, drawing submittal to the city, drawing revision based on city plan review.

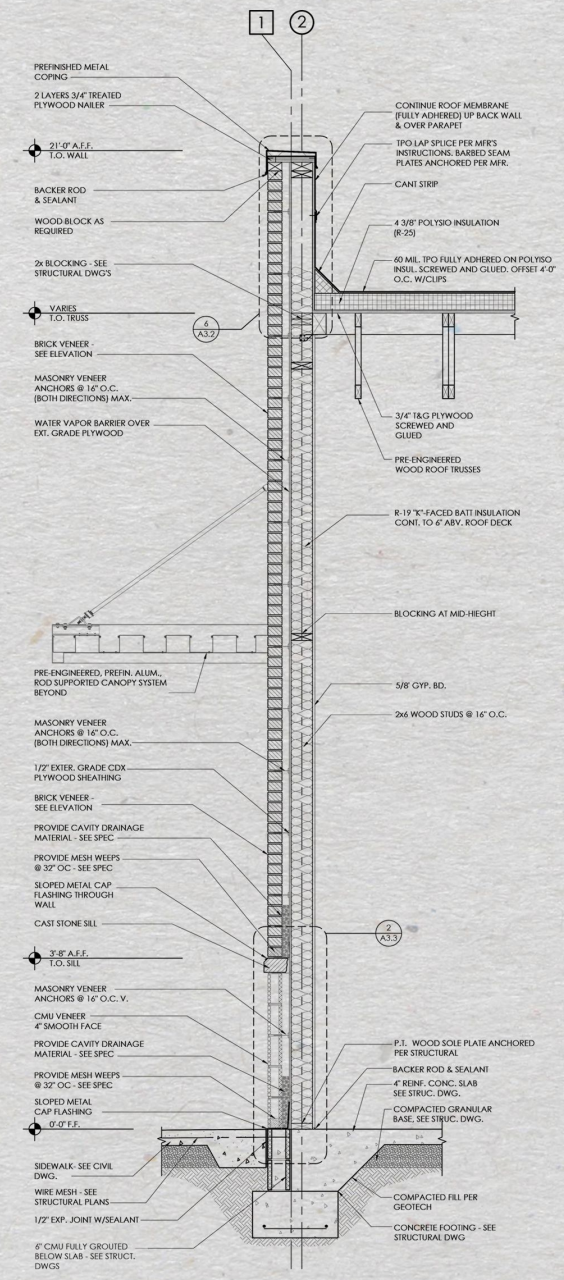


Front Elevation





Section detail



Wall section

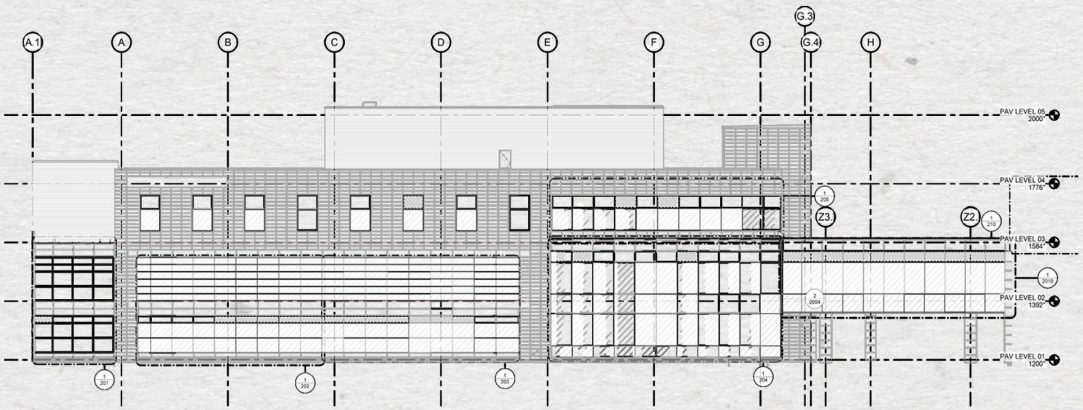
Unitized Curtain Wall

United Architectural Metals | 2020-22

I got the oppoertunity to work on several projects of varying scale and capacity at UAM. These projects are as follows:
1. AHUJA Medical Center, OH
2. Cleveland Museum of Natural History, OH
3. FlexJet, OH
4. 101 College Street, CT

Each of these projects had its own uniqueness in terms of design features and details. Each offered different level of challanges to be addressed as far as fabrications is concerned. For instance, AHUJA had curved curtain walls, 101 college had terracotta panels to be added with the curtain wall and so on. I worked on detail shop drawing preparation to final fab and assembly drawings of these projects.

Responsibility: Shop drawing, Fab drawing, Rhino 3d Modelling,Visual mock up drawing, Performance mock up drawing.



AHUJA Elevation



Image courtesy : HKS Architects



Perspective view from Georgia Avn

Image courtesy : Elkus Manfredi Architects

Single Family Residence

Professional Project
StudioMB | 2020



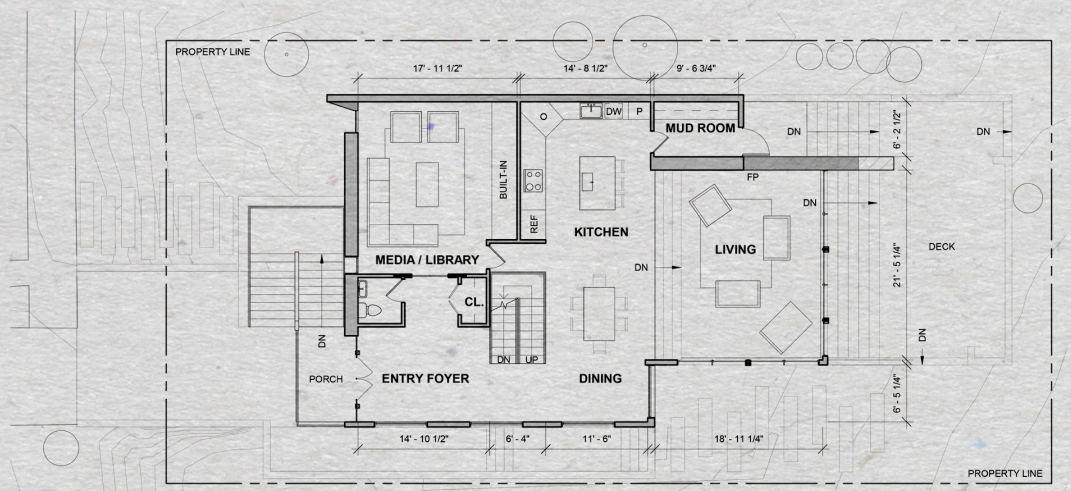
This single-family residence is a design proposal located in Nebraska Ave, Northwest of DC. The couple already had an existing residence there and wanted to renovate it by demolishing everything but the foundation walls. The challenge was to articulate the required spaces in this contour site. The existing building already sits on the small mound and the contour slopes down gradually at the back towards a wooded area which is a source of great views of nature.

Project Status: SD Proposal (Unbuilt)

Role: Site Measurement, Schematic Design, Revit Modeling & Rendering



View from road

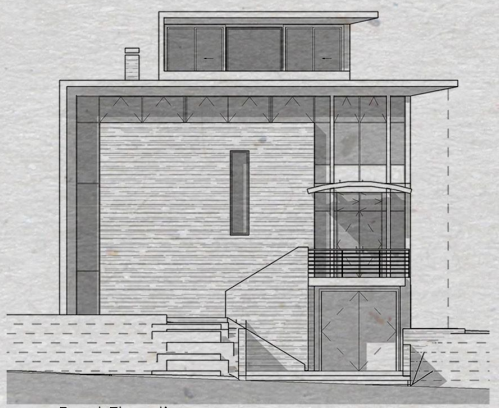


1st Floor Plan

Spaces have been arranged in such a way that there has been a spatial sequence from the entry to the end of the building where the outdoor deck meets the wood. The idea was to open gradually towards the beautiful nature. Right above the living space is the open terrace of the master bedroom which serves the same purpose.



Back Elevation



Front Elevation

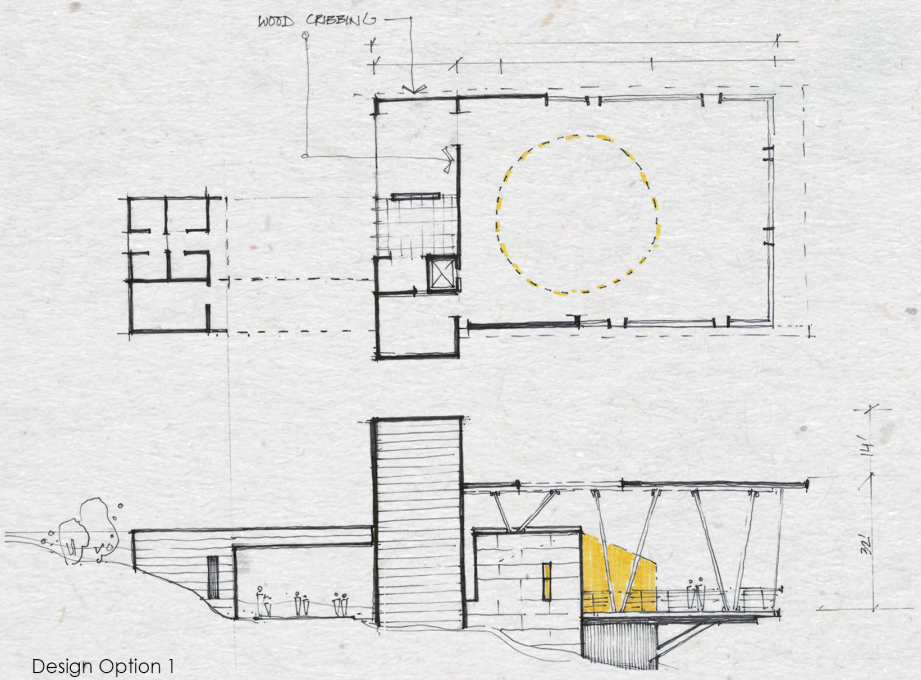
Ovid Hazen Wells

Professional Project
StudioMB | 2020

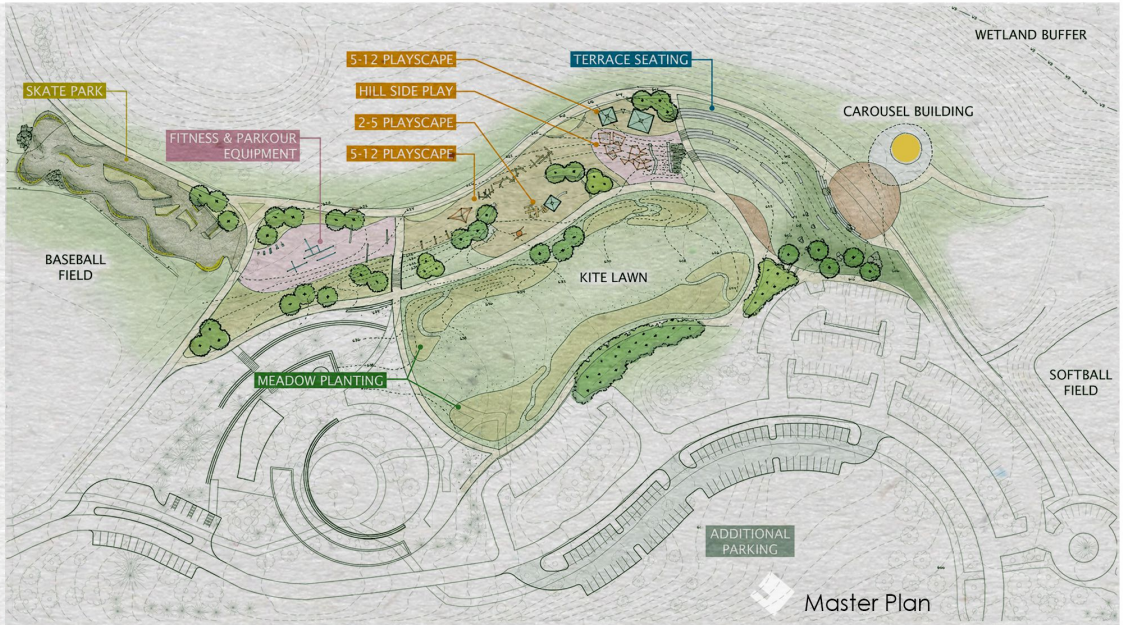
This 288-acre park in Montgomery County, MD's Ag Reserve includes a new roundhouse for a carousel once located on the National Mall, a water play area and adjacent playground, as well as a skate-board park, picnic pavilions and looped trail system of boardwalks, bridges and paths. The design will create a "Great Lawn" with vistas of historic farmland and stream valleys while integrating site program into the rolling topography of the site.

Project Status : SD submitted

Role: Schematic Design, Model making, Rendering & Presentation



Design Option 1

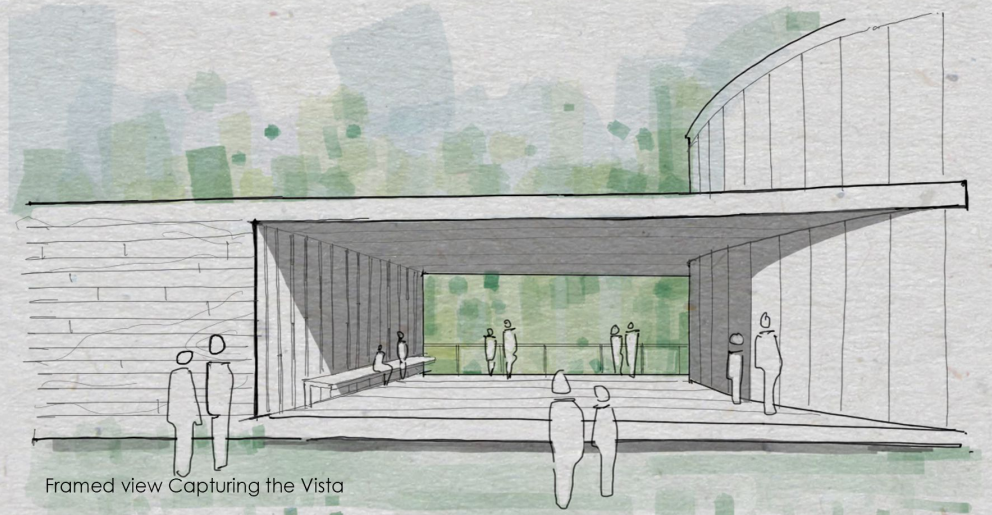


Master Plan



Design Option 2

The carousel was the center of attraction and the design intent was to create a rustic structure around it which will not only blend with the magnificent bucolic surrounding, but also sometimes create a frame through the building overlooking the marvelous views down the valley.



Framed view Capturing the Vista

GU Village C

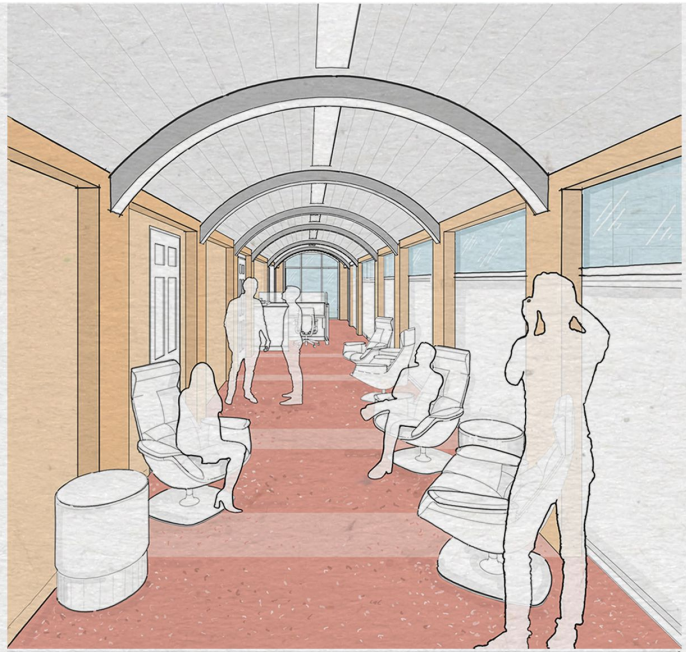
Professional Project
StudioMB | 2020

It's an interior reconfiguration and renovation work of an existing student dormitory building (Village C) and Dean's office in Georgetown University campus, Washington DC. Dean's office required to rearrange and renovate their existing space to accommodate more employees in a contemporary office look. Village C residence hall on the other hand underwent comprehensive upgrades to original finishes, MEP systems as well as student's life improvements. This includes redesigining lounge areas, lobbies, corridors, study areas with bold color and new furnitures.

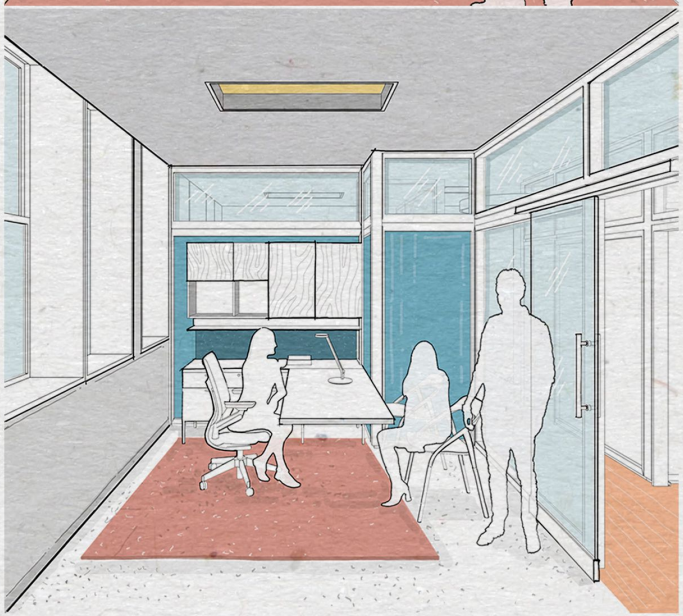
These are the schematic/initial idea renderings of some of the designed spaces before proceeding for final photorealistic renders.

Project Status : Built

Role: Schematic sketchy rendering with different color options, Realistic rendering using Revit and Presentation







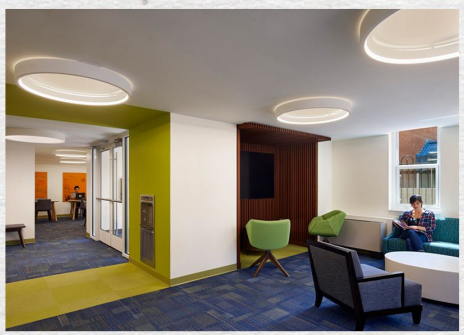




Top two images are photo realistic rendeings using Revit. Rest of the images are built photos.
Role: Schematic sketchy rendering with different color options, Realistic rendering using Revit and Presentation







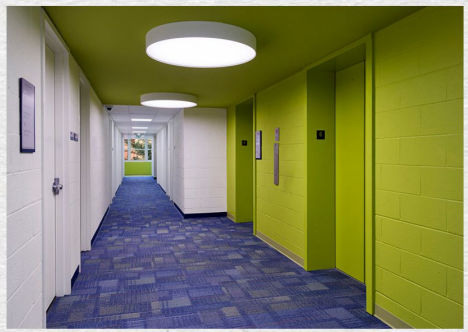






Image courtesy : StudioMB

Image courtesy : StudioMB

Net Zero + Mass Timber

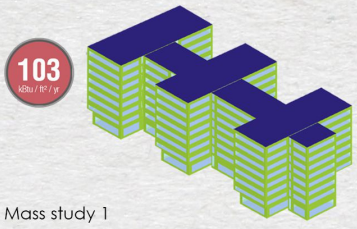
Professional Project
StudioMB | 2020

This is an internal research project to get familiarized with Net Zero and Mass Timber combinedly. The main goal was to gain more knowledge and insight on Energy and Carbon Efficiency as well as Mass timber construction techniques and essentials through this project.

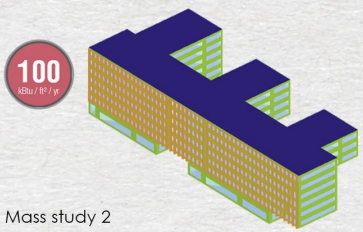
This research project deals with designing a 6 storied Student Dormitory building for Howard University in Washington DC, which would utilize Mass Timber as a primary structural material to reduce the carbon footprint and embodied energy in Building Construction. In addition to that, strategies have been taken to get close to Net Zero Energy by applying passive house techniques, utilizing renewable energy and so on.

Proj. Status: Research & Proposal

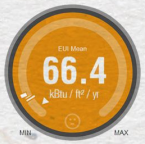
Role: Research, 3d Mass Study, Energy Analysis



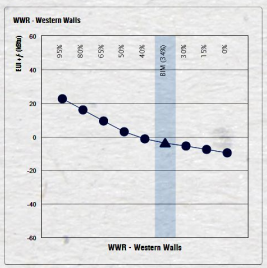
Mass study 1

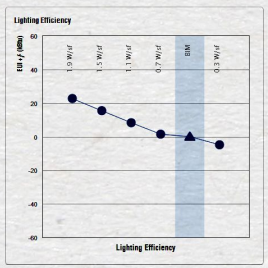


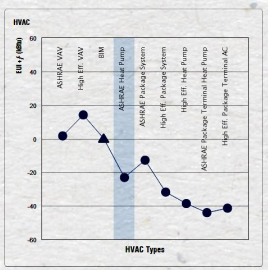
Mass study 2

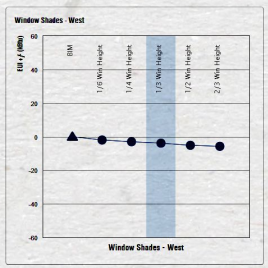


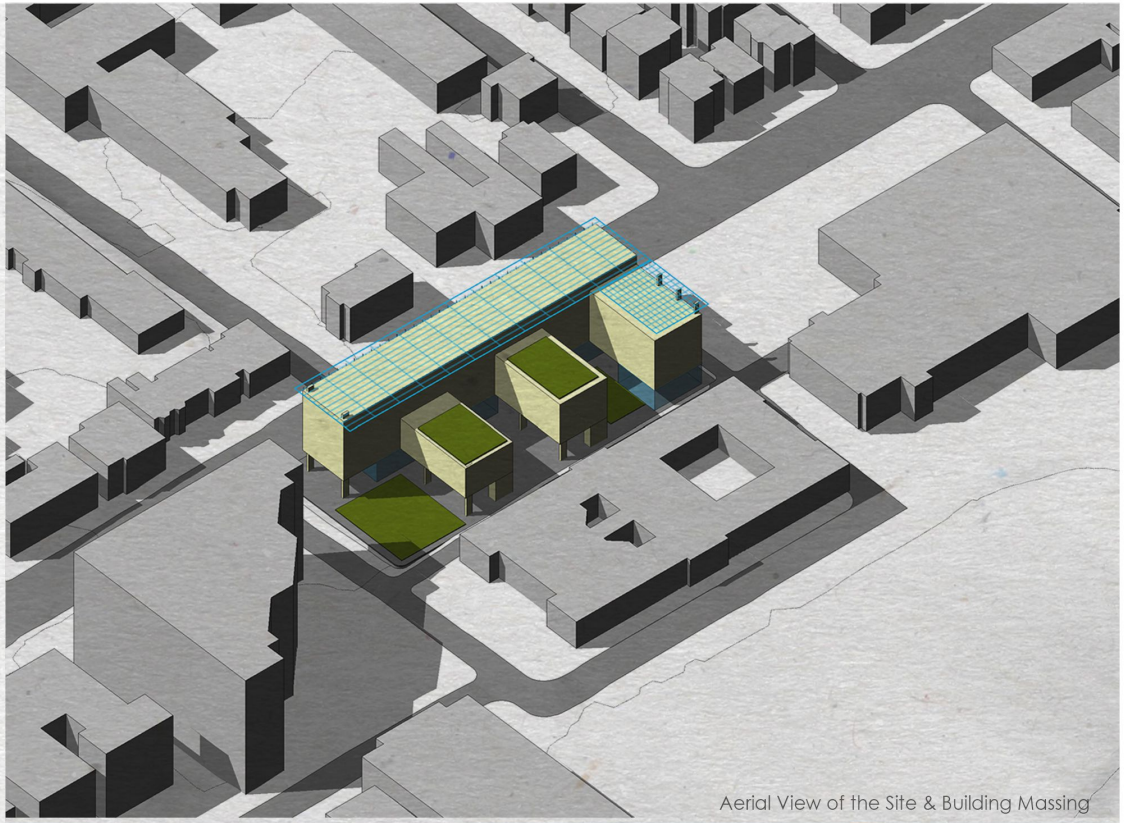
Mass study 3
EUI (kBtu/sft/yr)











Aerial View of the Site & Building Massing



Image courtesy: StudioMB

Montessori School at D.C.

Professional Project
StudioMB | 2019

It's a massive expansion work of the only Montessori school located in DC.Approximately 52,000 SF of area has been added to the existing 47,000 S structure. The expansion includes extensive site improvements, implemenation of Montessori method, balcony garden and rooftop play space.

Project Status : Built

Role: Assisting Project Architect in construction drawing and details, stair 3d modeling and design in Revit.

Image Courtesy: StudioMB





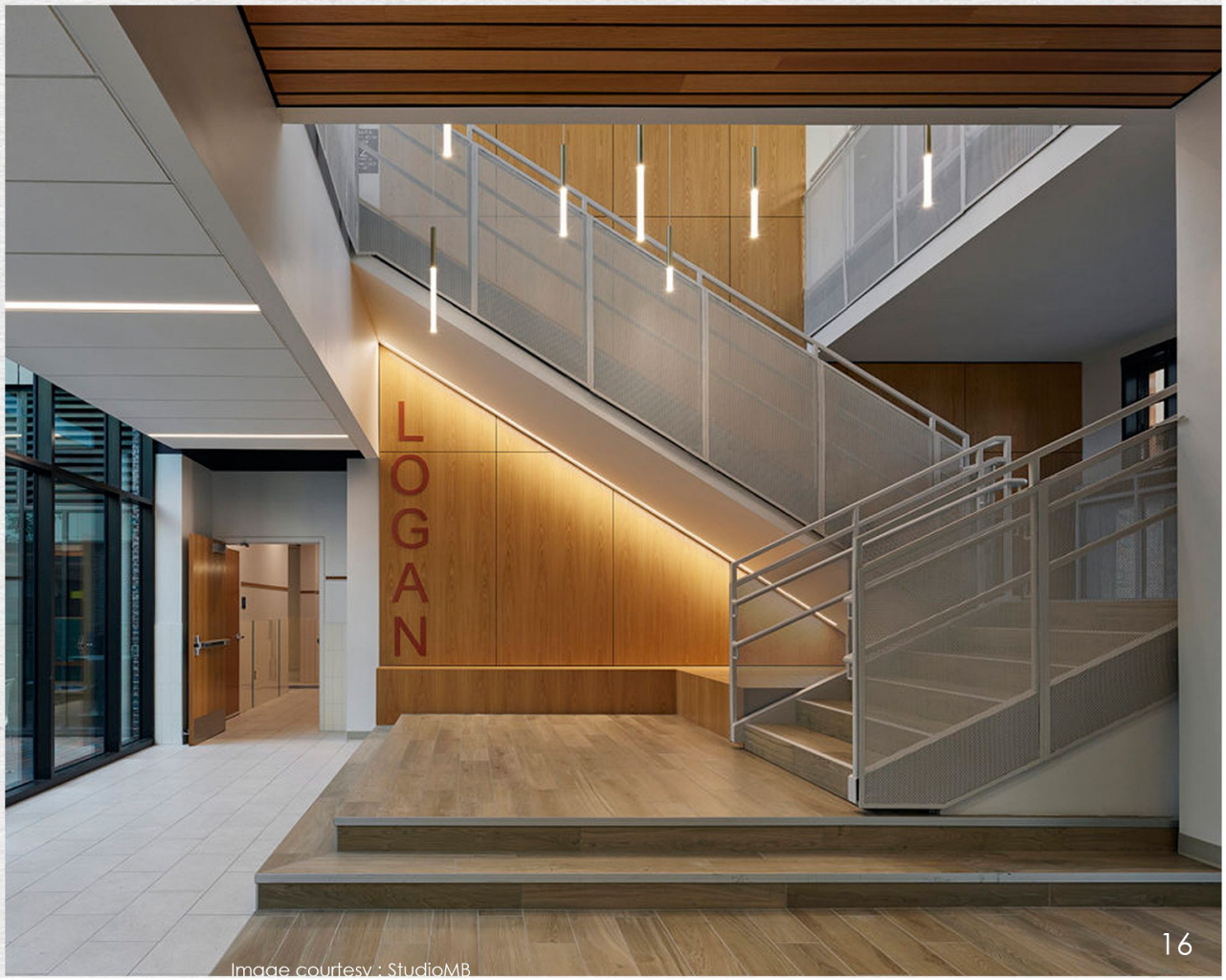


Image courtesy : StudioMB

Weekend House

Professional Project | 2017

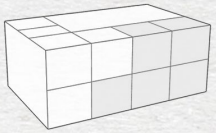
Location: Norshingdi, Bangladesh
Site Area : 21950 sft, **Built Area** : 3700 sft
Role : Project Architect (SD, CD, DD, Cost estimation, construction administration, and project management).
The client wanted to have a secluded place where he and his family can retreat from the restless city life and rejuvenate themselves through a close connection with nature which is missing now a days in city life. An environment which will not only enhance the natural feeling but also instigate the sensory experience through built form.
Project Status : Built

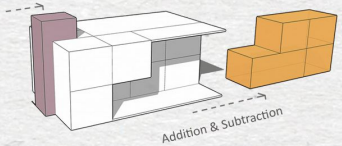


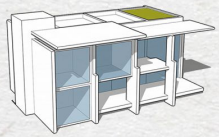
I wanted to design something that strongly responds to the nature, becomes part of the landscape through its expression, and evokes a sense of belonging to its occupants. An architecture, that enhance the sense of beauty through responsiveness to local context , sensitivity towards materials and careful incorporation of vernacular strategies.

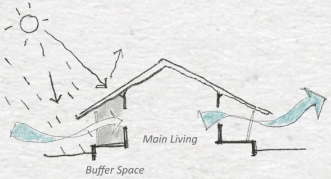
The main building is east west oriented to catch the prevailing breeze from the south as well as to reduce the solar heat gain. However, this orientation exposes the building to the south sun and driving monsoon rain. The central living and dining space are the kernel of the building that has been accompanied by verandas in the southern periphery. Veranda works as a buffer space and protect the living space from direct sun and rain. This central double height space always stays cool due to its huge volume and constant cross ventilation.

Building Morphology

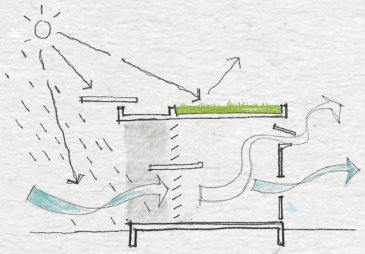








Vernacular Strategy

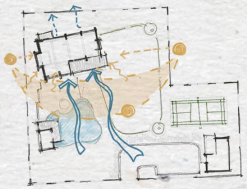


Our Interpretation

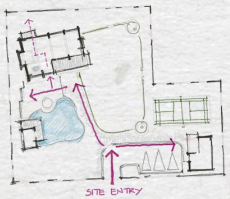
Master Plan Diagrams



Views and indoor-outdoor relations



Sunpath and wind



Connection and Circulation

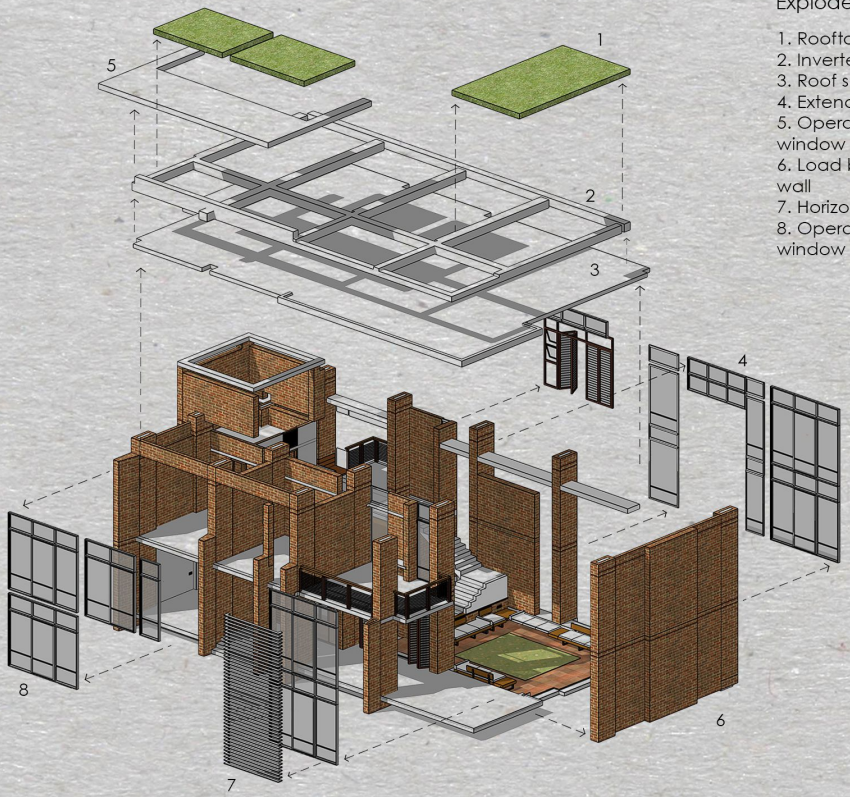
Master Plan

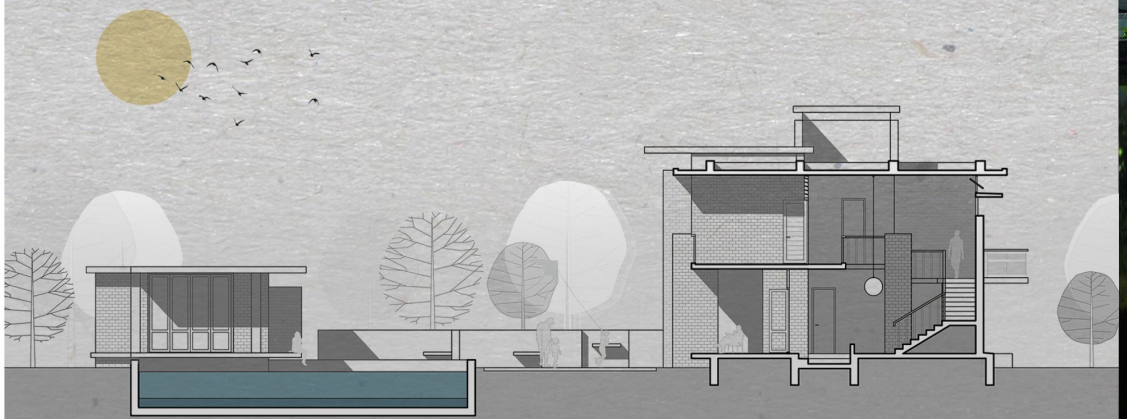




Exploded Axonometric

1. Rooftop green
2. Inverted beam
3. Roof slab
4. Extended roof
5. Operable north window
6. Load bearing east wall
7. Horizontal Louvre
8. Operable south window





Section AA

2' 1' 4'

Traditionally, "Kachari Ghar" concept was a widespread practice in rural architecture of Bangladesh. This project carries that idea in the form of a library. This single room seemingly floats over the water body, creates a sense of tranquility in and around the place. This library has book storage facility and the open deck extending over the water-body provides the opportunity to enjoy the subtle ripples on the water surface while reading or relaxing on the deck.



KEPZ Factory

Professional Project
2015

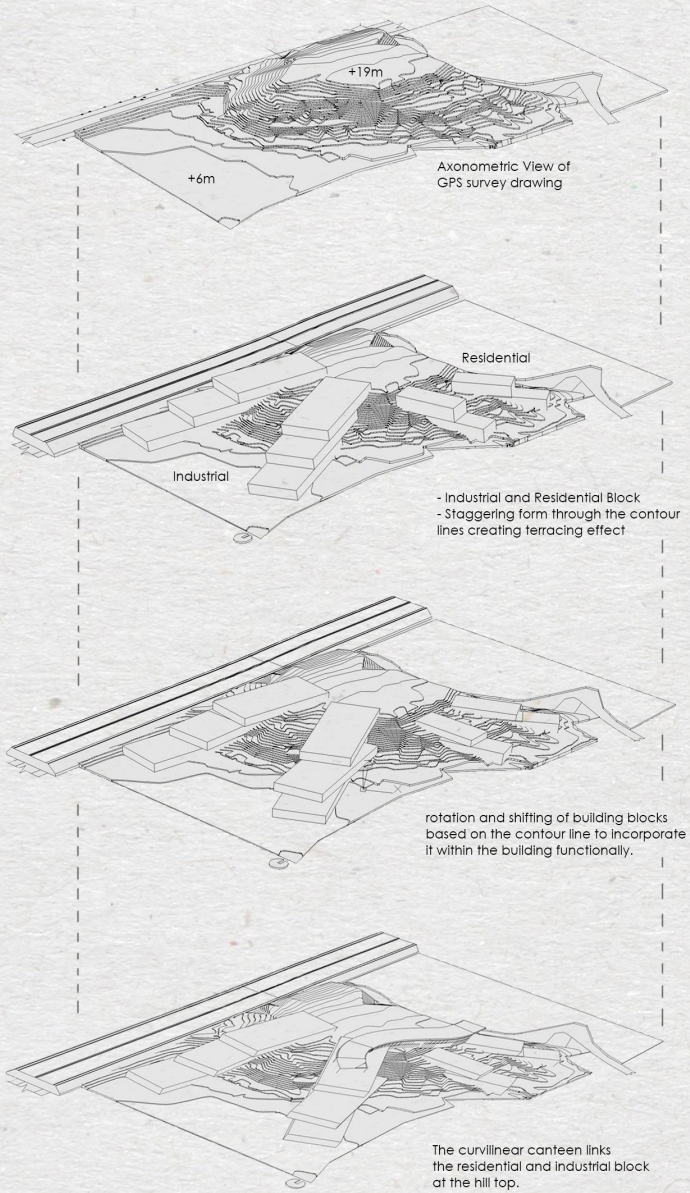


Product development center is a specialized building project which is designed for research and development of garments products. In addition to production facilities, there is dormitory for female workers and amenities like large canteen, day care and game sections.

This contour site is located in the hilly district of Chittagong, roughly 3.85 acre in area with a canal on the west of it. The height difference between top and bottom most level of the site is around 14m that significantly increases the challenge of designing a factory in such condition.

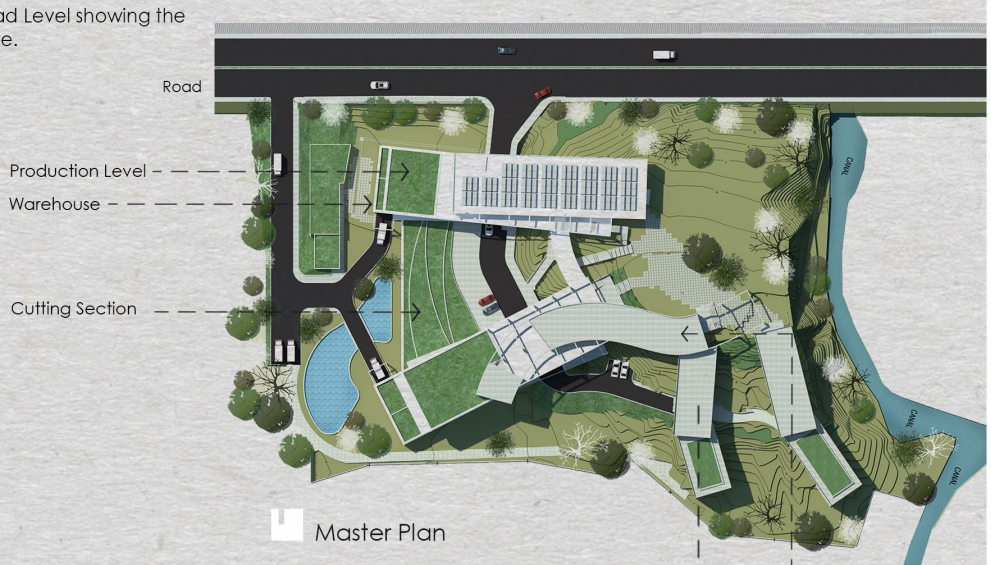
Project Status : Built

Role: 3d modelling and rendering, working drawing.





View from Road Level showing the peak of the site.



Master Plan



Elevation of a Residential Block

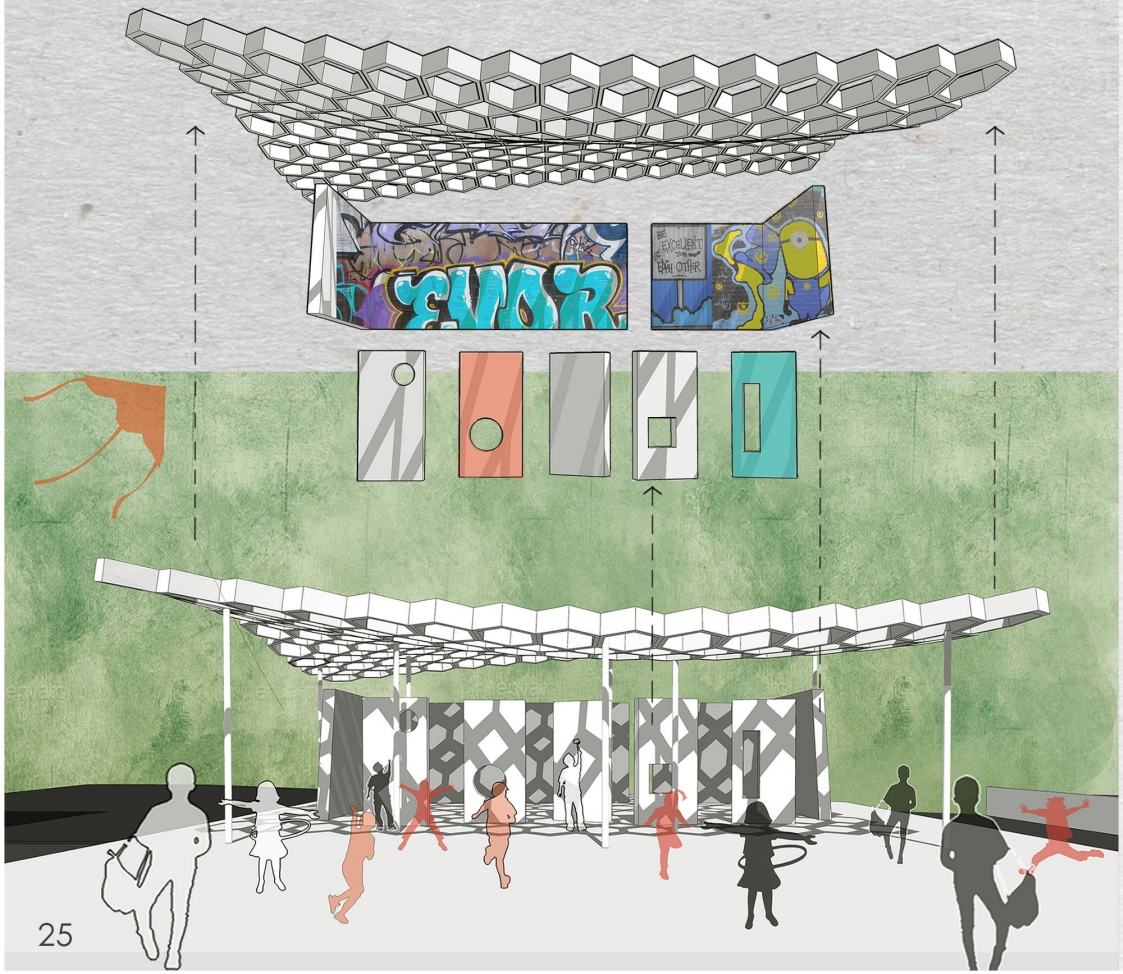
In pursuit of Well-Being

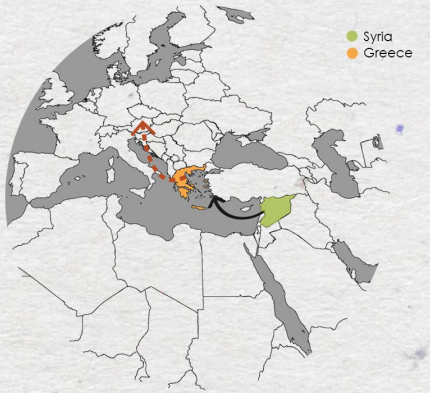
"Architecture for the Displaced Children"

M.Arch Thesis | 2019

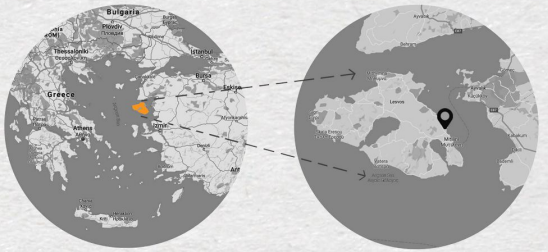
Sometimes the scope of architecture goes far beyond the building walls and becomes a catalyst to achieve positive change in the community and improve people's live. Its influence during the crisis moment is far reaching.

Almost half of the Syrian refugee migrants entered Europe in last few years arrived via Greek island Lesvos which is only 20km away from Turkey. Its proximity to Turkish mainland, it's size and status as the third largest of the Greek islands make it a desirable destination. Its capital Mytilene, on the east coast, has become a focal point in the crisis.

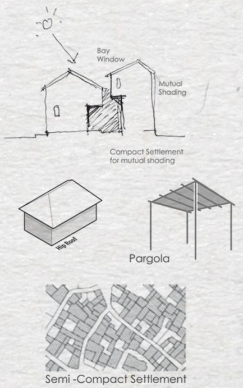




Migration Route



Project Site (Lesvos Island)



Contextual Study

Nearly half of the displaced population is children who are not only deprived of education but also chased by horrendous experience of war and destruction. How can architecture promote welfare and provide inspiring learning environments for the displaced children living in the island?

The most challenging part here is to design for a displaced community which possesses a strong culture. At the same time it is needed to design for them in a location which is not their home and quite different and distinct in terms of culture, lifestyle and built form. It's important to make synthesis of the two cultures through design, so that the displaced community feel at home and at the same time the local community feel safe and respected.

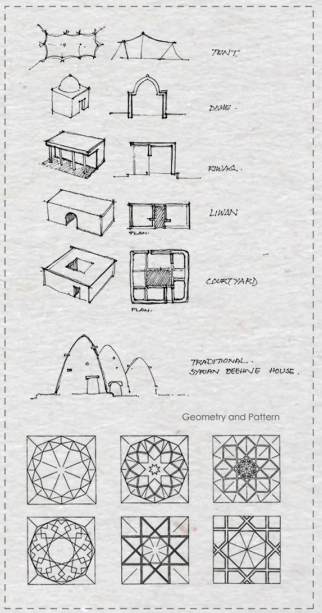
Commerical & leisure Activities





Conceptual diagram of whole community plan

** The school is considered as the pivotal point where interaction between two communities will start talking place.



Syrian Building Typology



Phase i



Phase ii



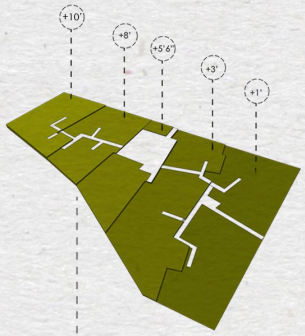
Phase iii

(Development phases of the whole commnuity)

Adventure Yard

Adventurous and Imaginative Play with natural, recyclable and Raw material. Where Children can create and recreate their playground of their own.





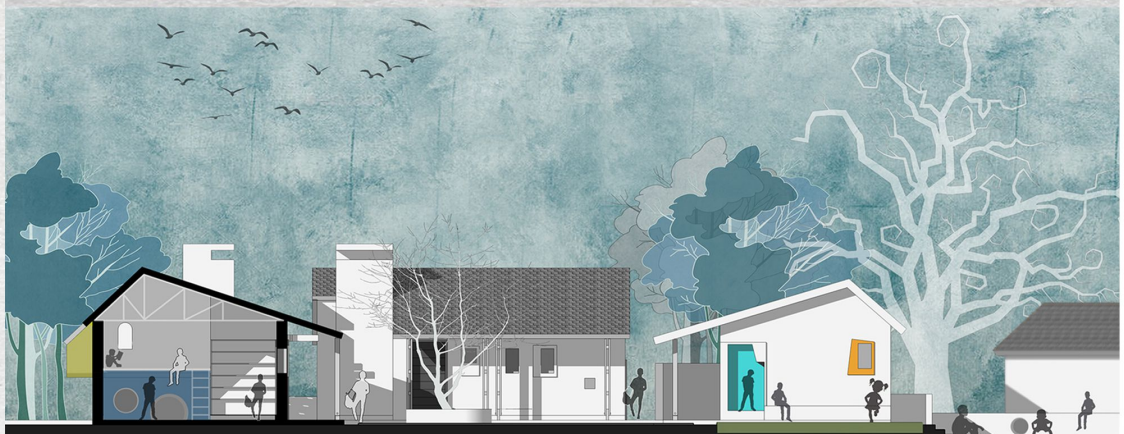


Terracing of the site following the natural slope



Master Plan (School)

The school is designed in such a way that it becomes an extension of their village life, house life. Functions are not stacked up in a single building, rather the classrooms and facilities are clustered in separate aggregates which break down the built scale and create the sense of belonging and individuation to the specific user. Classrooms are gathered in clusters with central courtyard which is not only popular in Syria, but also a familiar Greek urban form. Courtyard also works as a good thermal regulator.



Section AA (Classroom Cluster)

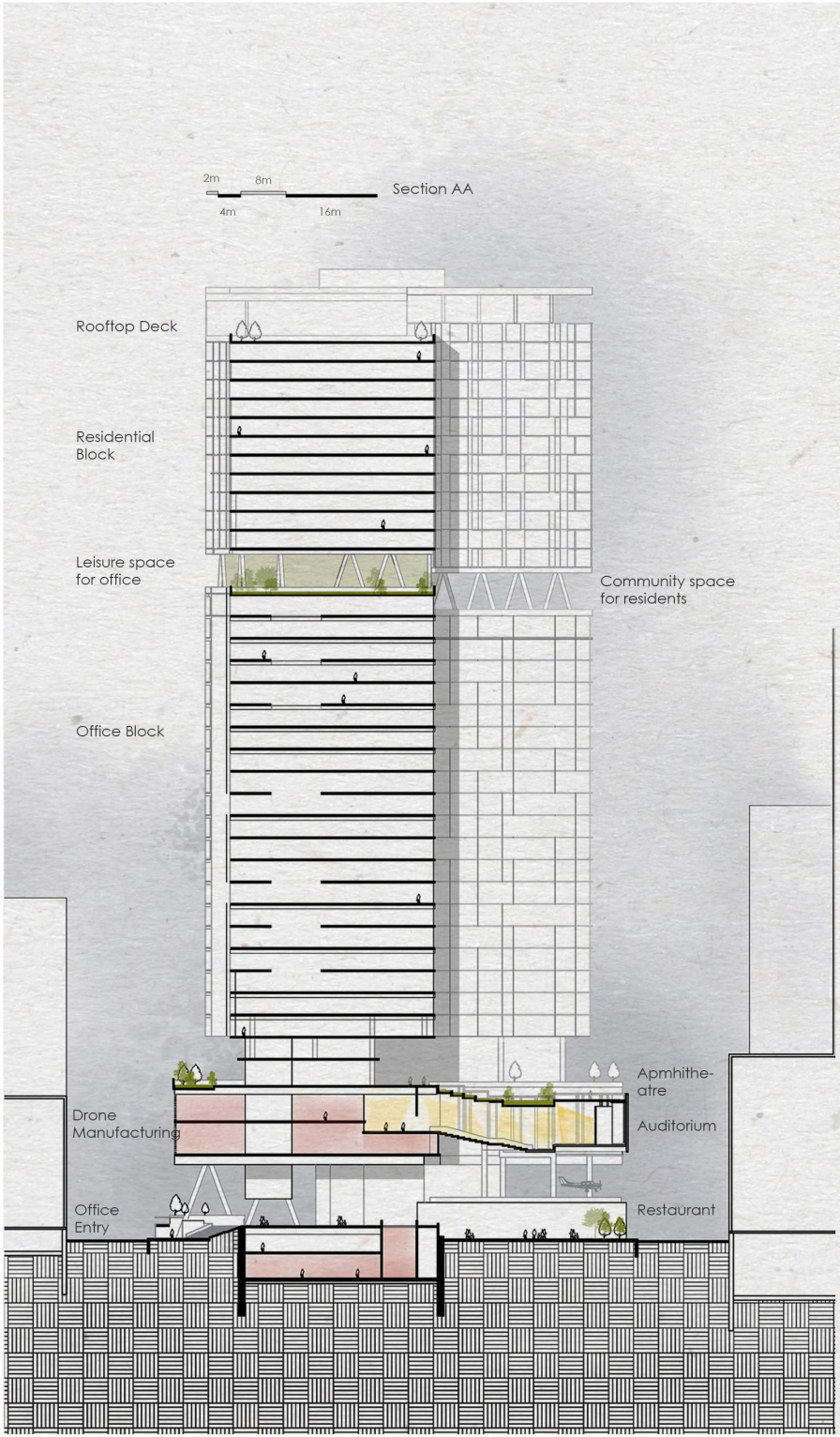


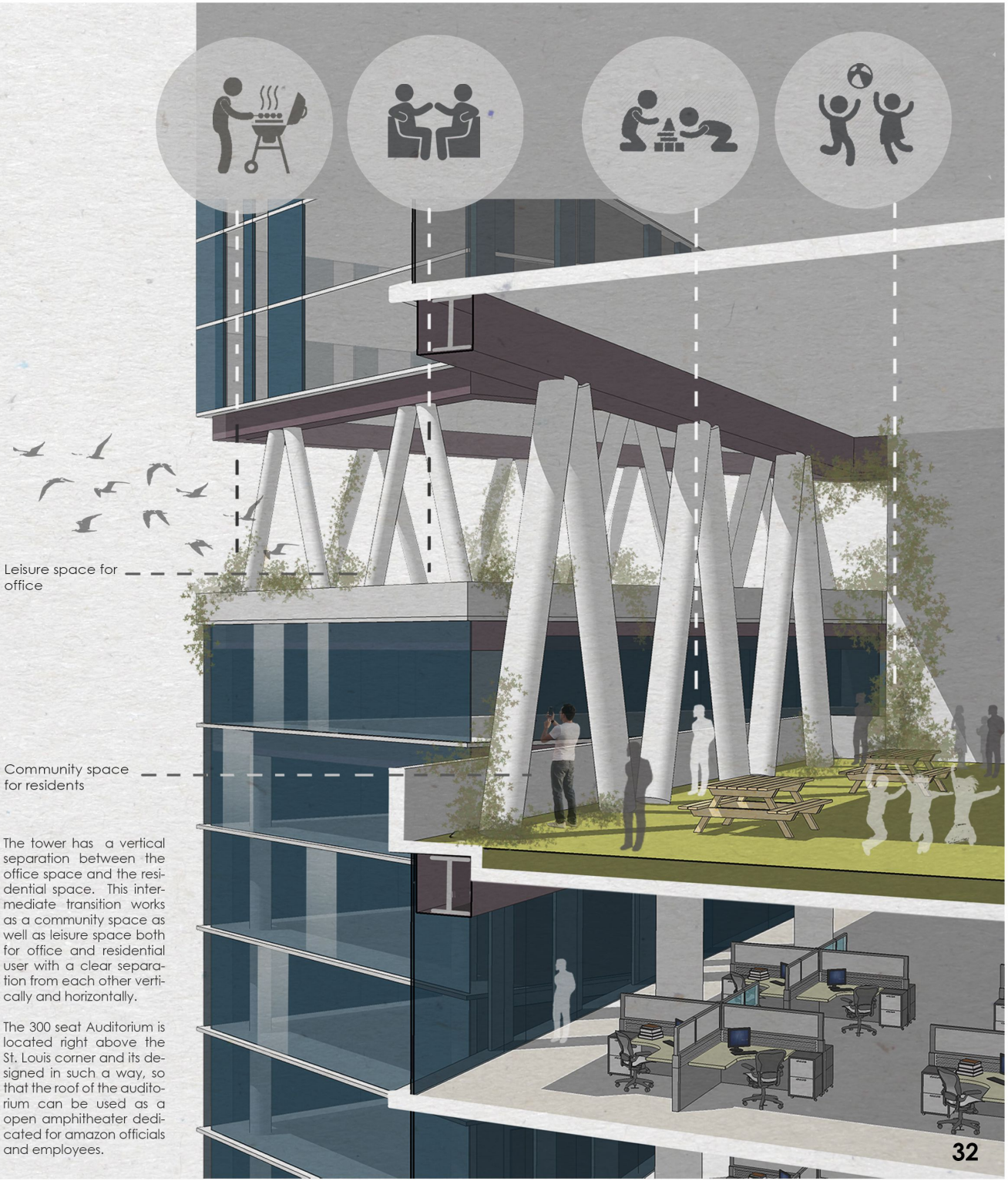
AMAZON HQ2

M.Arch | Studio-601
2017

I strongly believe that a high-rise building's significance is not just only creating a landmark in the sky line, but also promoting an interactive dialogue with its users, public and the vicinity around it.

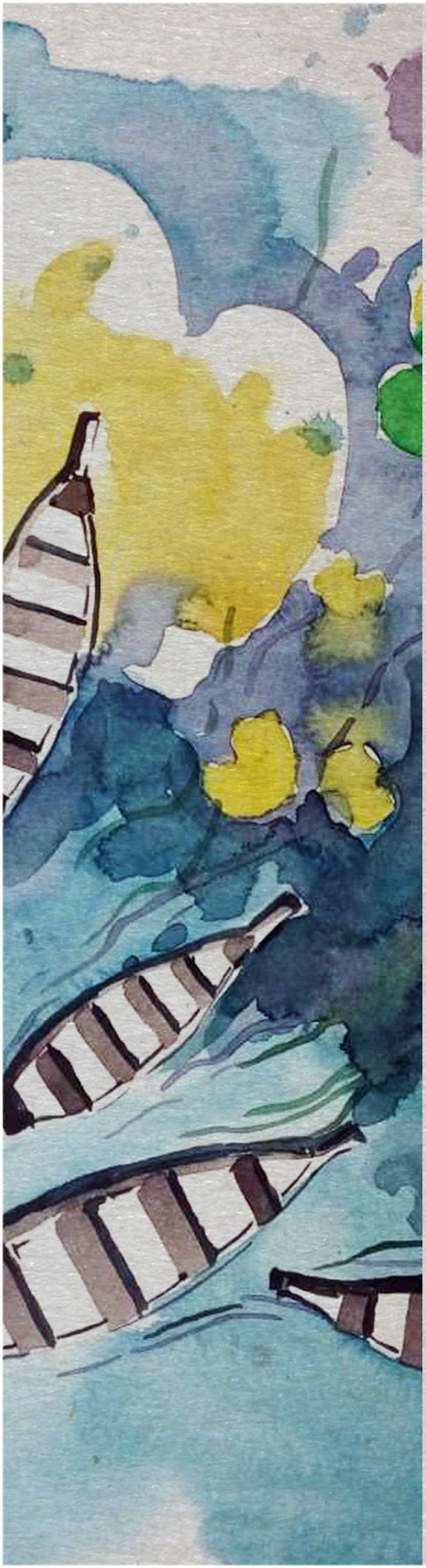
AIA Ohio
Student Design Award
(1st Place)





The tower has a vertical separation between the office space and the residential space. This intermediate transition works as a community space as well as leisure space both for office and residential user with a clear separation from each other vertically and horizontally.

The 300 seat Auditorium is located right above the St. Louis corner and its designed in such a way, so that the roof of the auditorium can be used as a open amphitheater dedicated for amazon officials and employees.



THANK YOU

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