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I am still learning

-Michelangelo

contents



THESIS PROJECT

IN SEARCH OF SOUND'S SOUL:
UNVEILING THE SONIC SPIRIT OF ARCHITECTURE



TOURISM PROJECT | MINI THESIS

BIRDS SANCTUARY FOR MIGRATORY
BIRDS OF KPK, MANG HARIPUR



EDUCATIONAL INSTITUTE

ELEMENTARY SCHOOL FOR THE
POPULATION OF KHANPUR



MIXED USE MID-RISE

COMMERCIAL & RESIDENTIAL MIXED
USE DEVELOPMENT, PESHAWAR.



ABBOTTABAD BUS TERMINAL

INTRACITY BUS TERMINAL FOR
ABBOTTABAD



REVIT DOCUMENTATION

FRERE HALL KARACHI DOCUMENTATION
USING AUTODESK REVIT

IN SEARCH OF SOUND'S SOUL

This thesis explores the profound connection between architecture and music, culminating in the design of a vibrant cultural complex in Shakarparian, Islamabad.

The project integrates a parametric façade with the Aeolian harp concept, creating an innovative fusion of structure and sound. As the wind passes through the façade, it produces harmonious musical tones, making the building itself a dynamic instrument. The spatial organization follows the principles of the golden ratio, ensuring

ing a balanced and aesthetically pleasing flow throughout the complex. This architectural composition, deeply rooted in the harmony of visual and auditory experiences, transforms traditional spaces into immersive environments where music and architecture converge.

Advanced acoustic materials are strategically employed to optimize sound quality in each space, enhancing the storytelling aspect of the project.

This work not only showcases the potential of architecture to engage multiple senses but also highlights the unique role of music in creating an emotional and resonant user experience.

PROBLEM STATEMENT

Traditional architectural designs often prioritize utility and aesthetics but can sometimes fall short in evoking profound emotional responses or engaging multiple senses. Overcoming these challenges to design spaces that combine visual-auditory experiences and optimal acoustics for an enhanced user journey.

OBJECTIVES

1. Multi-sensory Harmony in Architecture

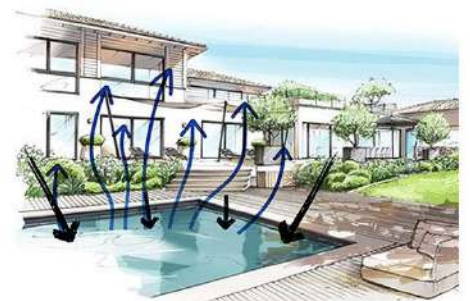
Creating spaces that engage and resonate with multiple senses providing a holistic and experience. Intentional planning and manipulation of sound within built environment to optimize acoustic qualities and enhance the overall sensory experience.

2. Architectural Rhythmic Expression

Intentional use of design elements, patterns and spatial arrangements to create a sense of rhythm, flow and movement within building.

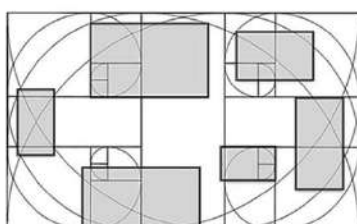
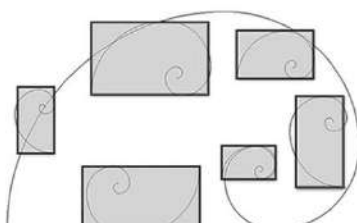
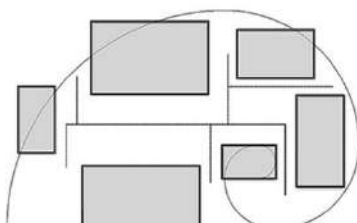
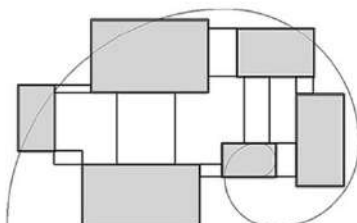
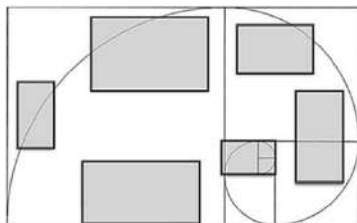


Soaring glass lobby

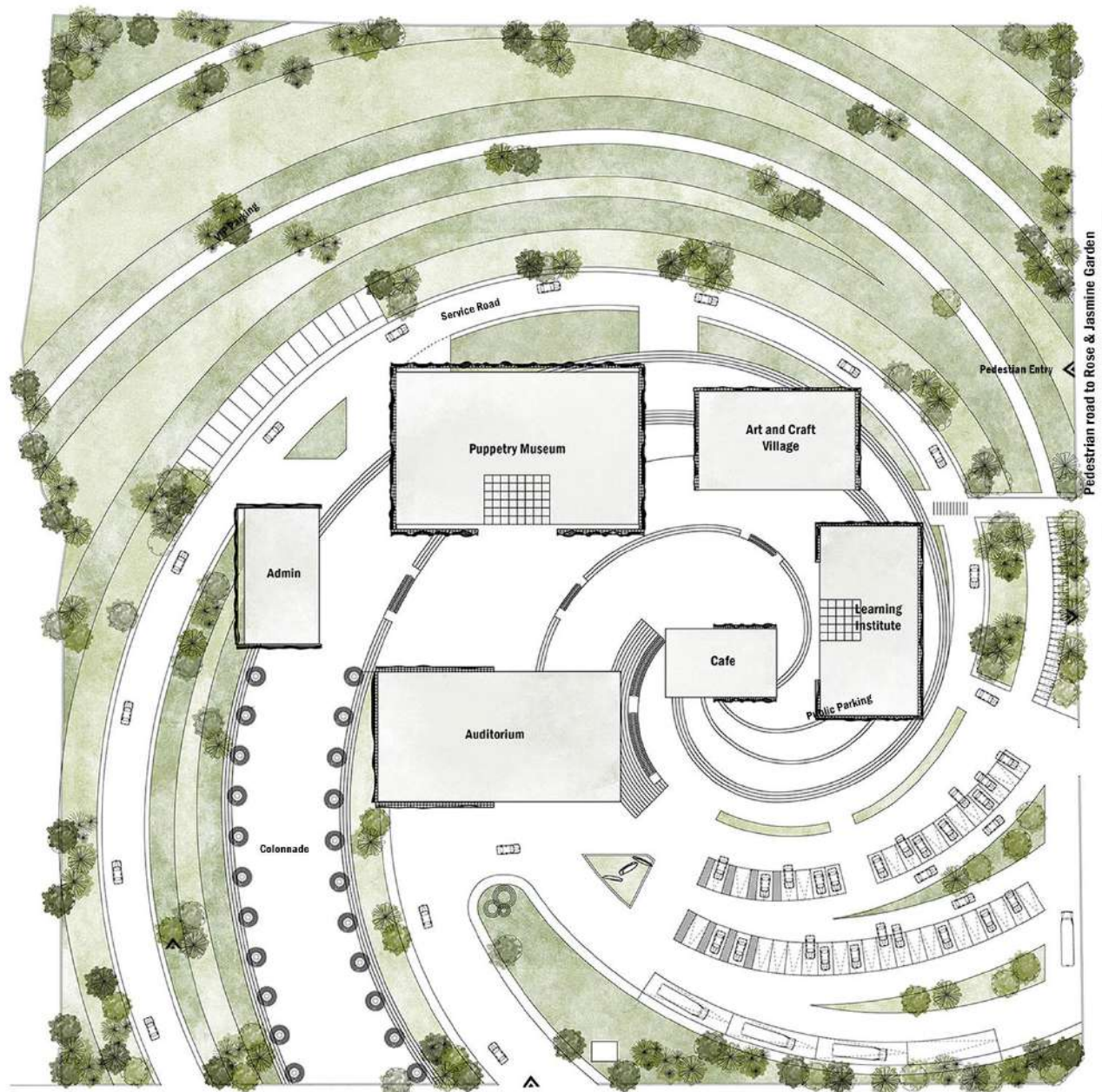


Reflection pool

Schematics



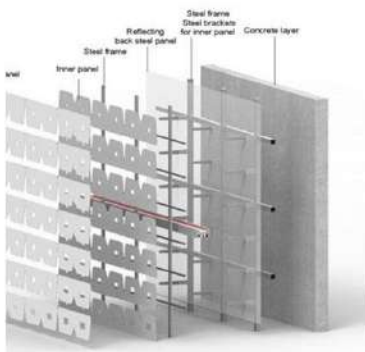
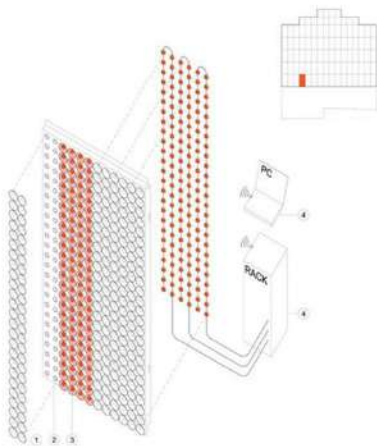
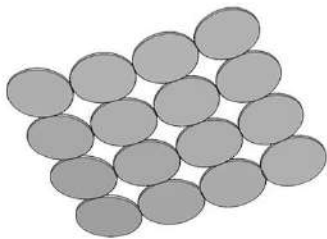
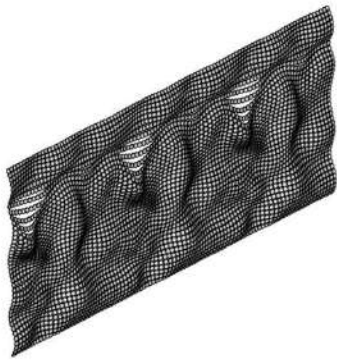
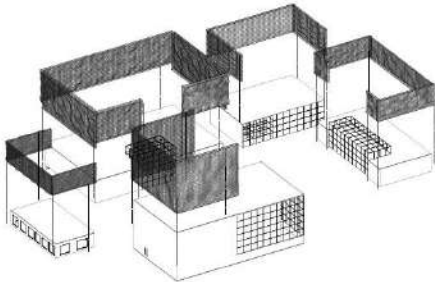
Golden Devine 1.618





CONCEPT

A wavy metallic double skin facade inspired by Aeolian Harp effect, where wind-generated motion of metallic coins produces harmonious sounds, blending architecture with dynamic auditory experience.



WINGSPAN HAVEN

Nestled in Mang Village within Haripur City, KPK, my project focuses on a refined avian sanctuary and educational haven. Seamlessly integrated into its natural surroundings, the project serves as a sophisticated refuge for migratory birds while providing an enriching educational experience and tourist attraction.

Designed with precision, the sanctuary incorporates architectural nuances such as a well-appointed library, specialized research centers, and laboratories, elevating the site into a scholarly hub for the study of avian life. Architectural elements like bird hides, an observation tower, and a meditation pergola are strategically positioned to offer visitors unobtrusive vantage points for observing migratory birds. The Lotus Pond, a serene water feature, enhances the overall experience, providing a tranquil setting for avian observation without causing any disturbance.

This architectural endeavor epitomizes the harmonious convergence of ecological preservation, educational advancement, and tourism engagement, showcasing a commitment to sustainable and purposeful architectural solutions within the KPK game reserve.

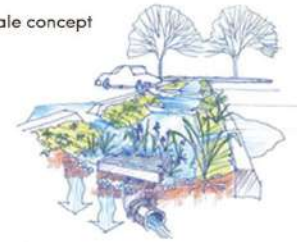
PROBLEM STATEMENT

Due to increase in need of housings, Pakistan is losing it's bio-diversity by cutting down the forests to fulfill basic human needs which causes habitat loss for migratory birds. Many species are becoming extinct due to human interference in their eco-system. Cutting down our natural habitat leads to unbalanced eco-system which results in drastic changes in nature.

OBJECTIVES

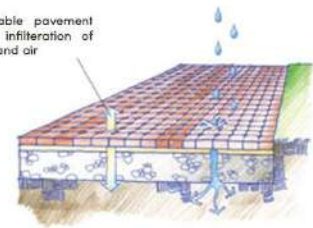
- 1. Protection of Bio-diversity**
Bird sanctuaries serve the conservation of various species and also their natural habitat. Further, it promotes the survival and rehabilitation of these birds.
- 2. Sustainable/Green livelihood**
Green infrastructure is an approach to water management that protects, restores, or mimics the natural water cycle.

Bioswale concept



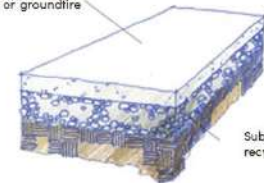
Permeable pavements

Permeable pavement allows infiltration of water and air



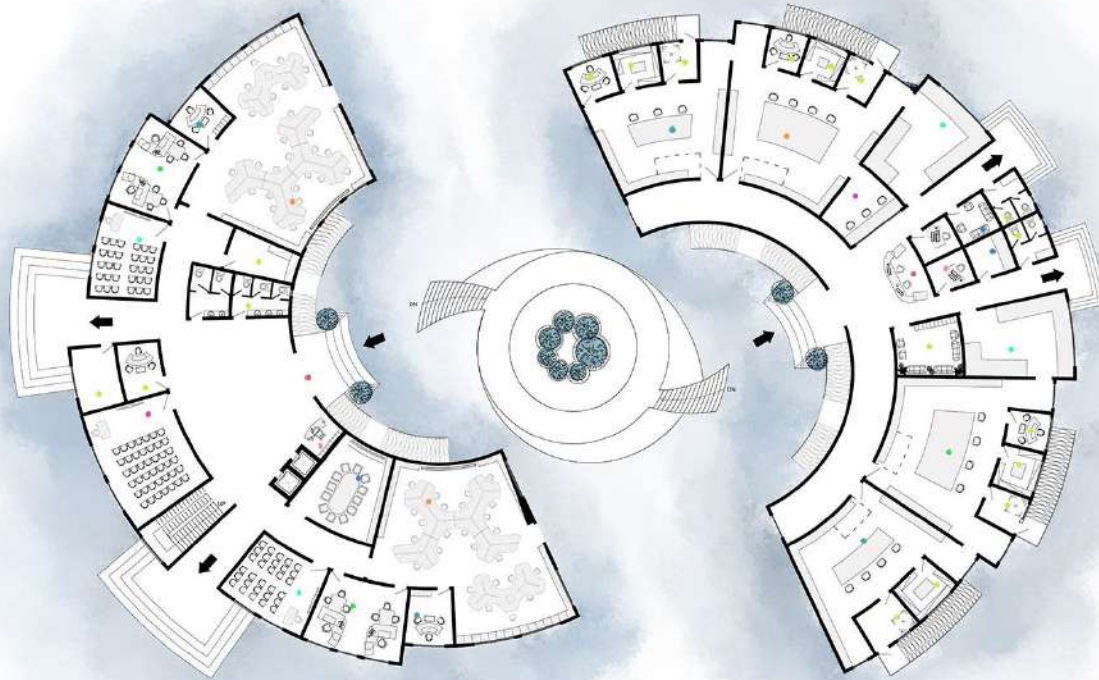
Use of recycled material

Pavement produced using slag, recycled concrete or groundfire rubber



Subbase containing recycled concrete





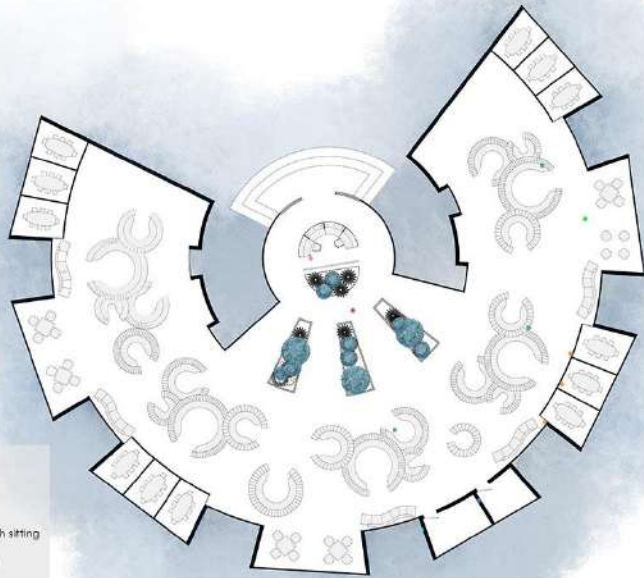
LEGEND

- Lobby
- Reception
- Research Lab
- Lab Assistant Office
- Research Office
- Lecture Room
- Meeting Room
- Seminar Room
- Supporting area

LABORATORIES FLOOR PLAN

LEGEND

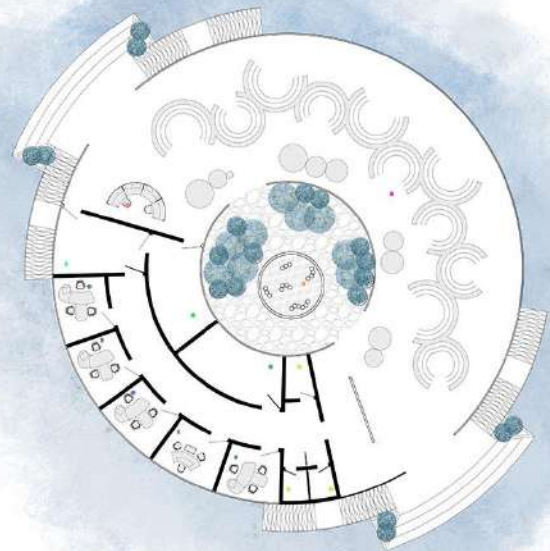
- Lobby
- Reception
- Wet lab
- Dry lab
- Microbiology lab
- Birds holding area
- Lab incharge
- Report collection area
- Supporting area



LEGEND

- Lobby
- Reception
- Cabins
- Book shelves with sitting
- Study area
- Librarian Office
- Storage
- Green space
- Supporting area

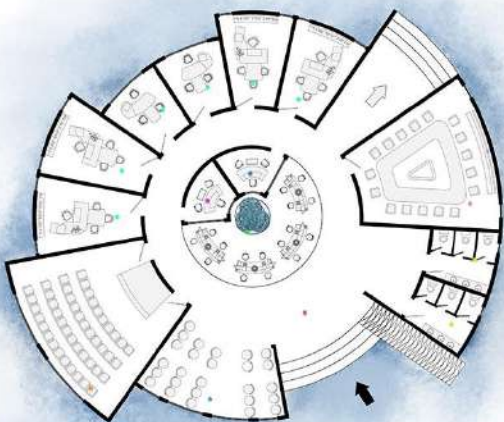
LIBRARY FLOOR PLAN



LEGEND

- Lobby
- Reception
- Sculpture Garden
- Seminar Room
- Conservation Lab
- Storage
- Management Offices
- Exhibition Area
- Supporting area

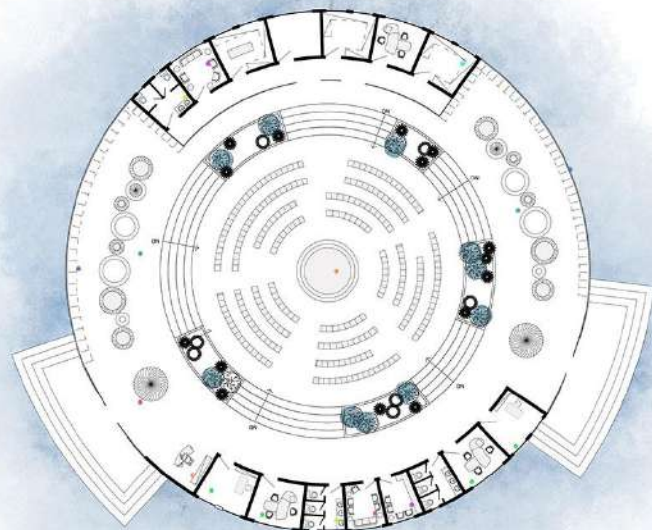
MUSEUM FLOOR PLAN



LEGEND

- Lobby
- Meeting Room
- Multi-purpose Room
- Waiting Area
- Workstations
- Management Offices
- Admin Office
- Research Office
- Supporting area

ADMINISTRATION FLOOR PLAN



LEGEND

- Lobby
- Reception
- Covered Amphitheatre
- Exhibition Area
- Management Offices
- Backstage Support Offices
- Box Display
- Staff Lounges
- Supporting area

SCIENTIFIC THEATRE FLOOR PLAN



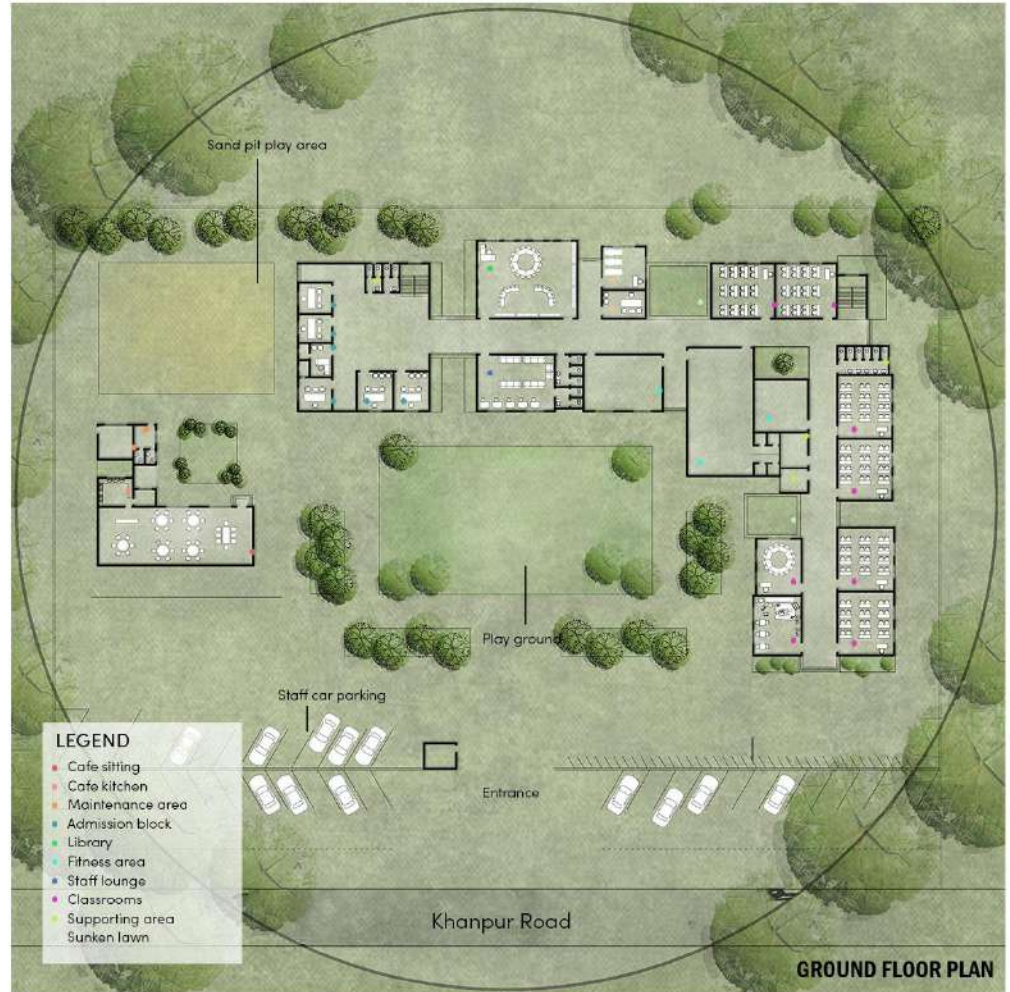
EDUCATIONAL INSTITUTE

In recognizing the pressing need for quality educational spaces, this project took the lead in crafting a vibrant Pre-nursery and Elementary School in the heart of Khanpur, KPK, Haripur.

Through insights gathered from an inclusive online survey, Khanpur emerged as the ideal location, setting the stage for a purposeful design. Project approach meticulously emphasizes functionality, ensuring seamless movement for staff, students, and parents, cultivating an optimal learning environment.

The school is enriched with well-thought-out amenities, featuring playful playgrounds, a sand pit, and a fitness area with a gym. A standout feature is the versatile multi-purpose hall, designed to host engaging seminars and creative workshops for student enrichment.

Beyond the structural aspects, color psychology plays a pivotal role in both the interior and exterior design, tailored to foster a refreshing and active atmosphere for students. The inclusion of green spaces, such as sunken lawns for outdoor study, and dedicated vegetation areas encourages a connection with nature. To further engage students, a hands-on approach is adopted, allowing them to plant and nurture their own greenery, turning the school into a dynamic hub of learning and growth.



KEY ELEMENTS:

Vegetative activity:

This project introduces an innovative vegetative activity, allowing students to connect with nature firsthand. This hands-on engagement fosters a sense of responsibility, environmental awareness, and a refreshing connection with the natural world.



Gymnasium:

This project includes a gymnasium designed for both fitness and inspiration, it's a space where students cultivate not just strength but also a healthy mindset for lifelong well-being.



Color psychology:

Color psychology guides the selection of hues that stimulate creativity and concentration among children, fostering an environment conducive to learning and cognitive development.





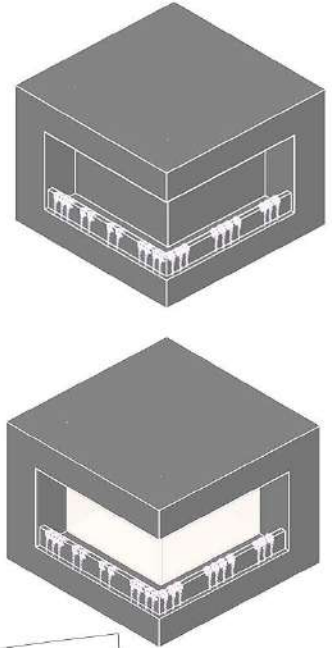
MIXED-USE DEVELOPMENT

An architecturally captivating mixed-use haven in Peshawar, where bustling commerce meets sustainable living. Picture vibrant scenes on the ground and first floors, bustling with retail therapy, childcare delights, and culinary adventures, all enhanced by inviting green spaces for relaxation and connection.

Above, envision cozy nests and spacious abodes, each adorned with private green balconies, inviting residents to unwind amidst nature's embrace. With a sleek mesh wire facade exuding modern allure, this development embodies the spirit of innovation, offering a dynamic urban retreat that harmonizes architectural brilliance with human-centric design.



PERSPECTIVE VIEW



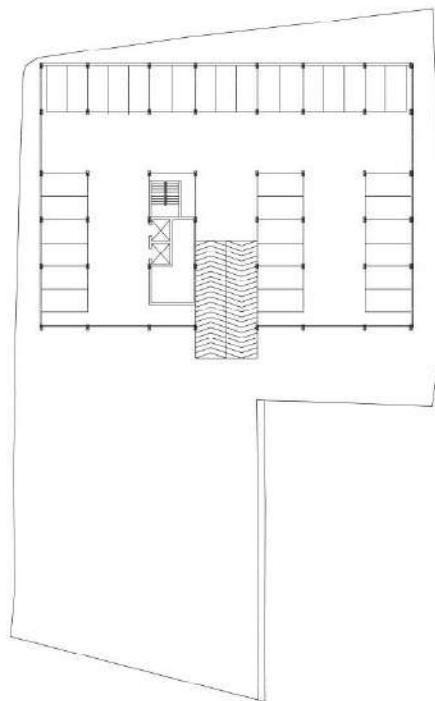
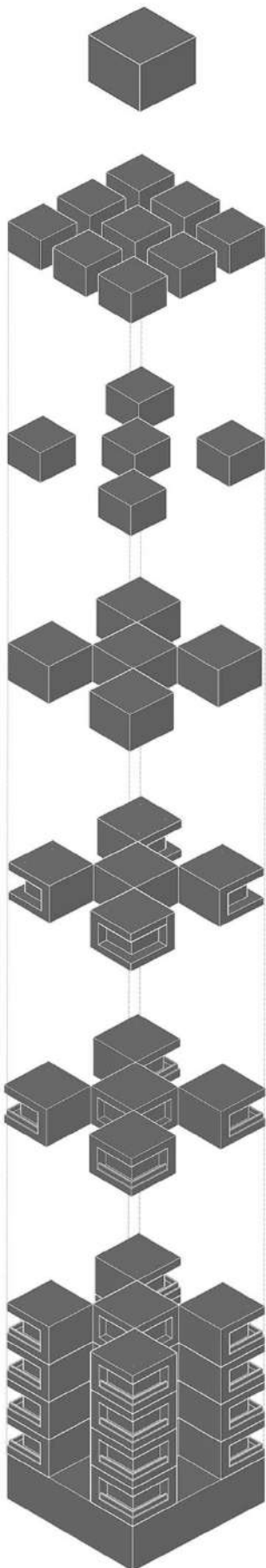
CONCEPT:

• Recessed spaces:

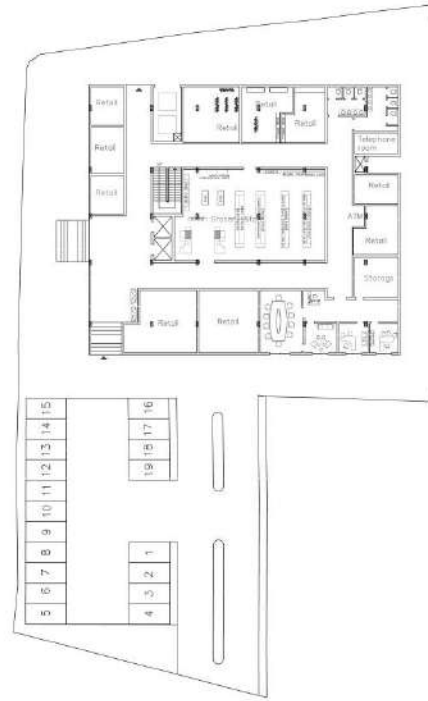
Use of recessed spaces to create green balconies, emphasizing the interplay between solid and void elements. This design approach not only provided private outdoor areas but also enhanced the building's facade through visual depth and variation.

• Inside Out:

The use of transparent materials further accentuated the connection between indoor and outdoor spaces, creating a harmonious blend of nature and architecture.



BASEMENT FLOOR PLAN



FIRST FLOOR PLAN

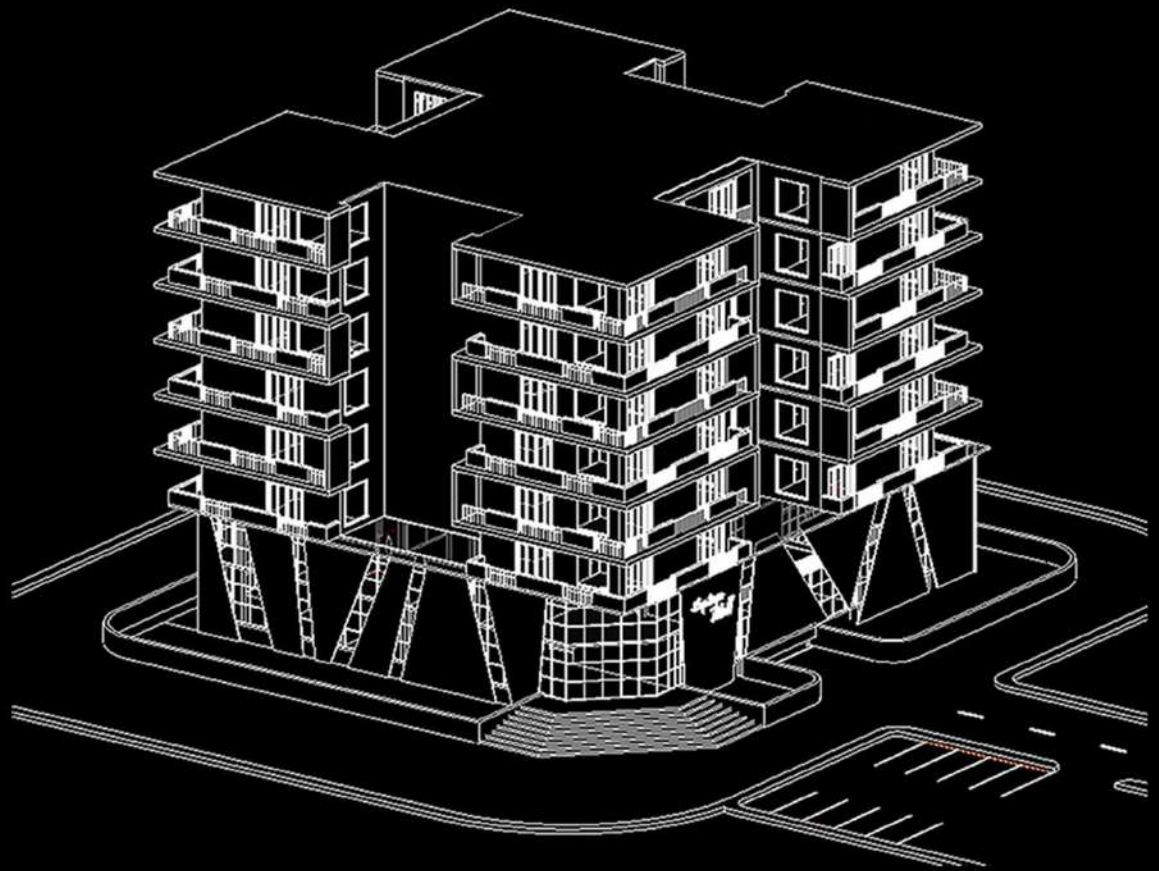


SECOND TO FOURTH TYPICAL FLOOR PLAN

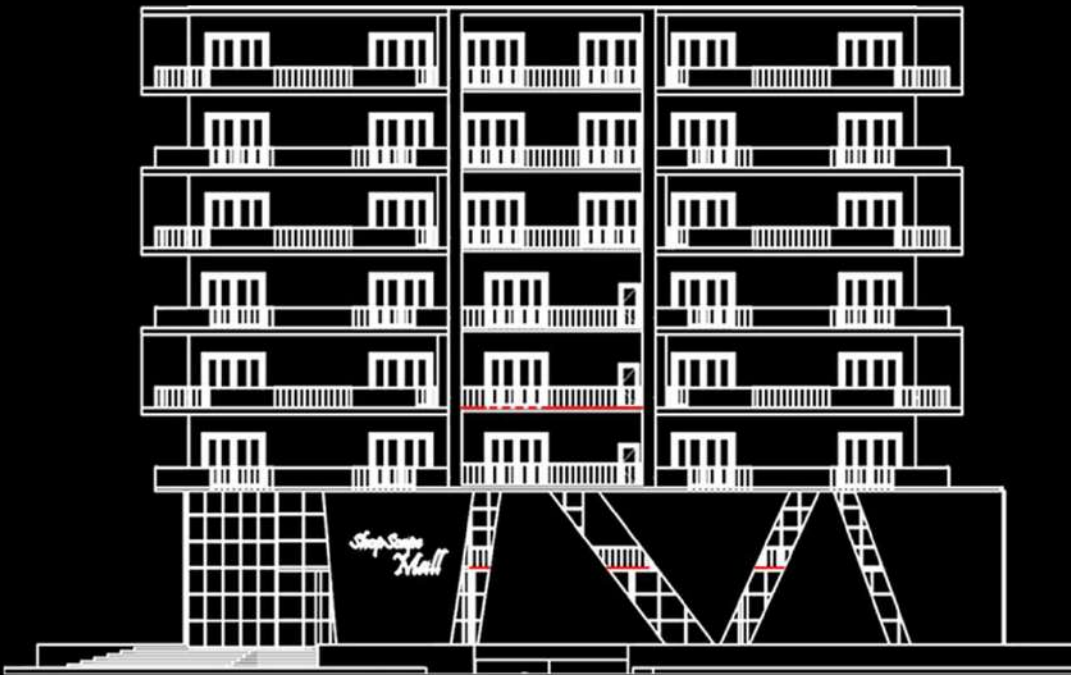


FIFTH TO SEVENTH TYPICAL FLOOR PLAN

PERSPECTIVE VIEW

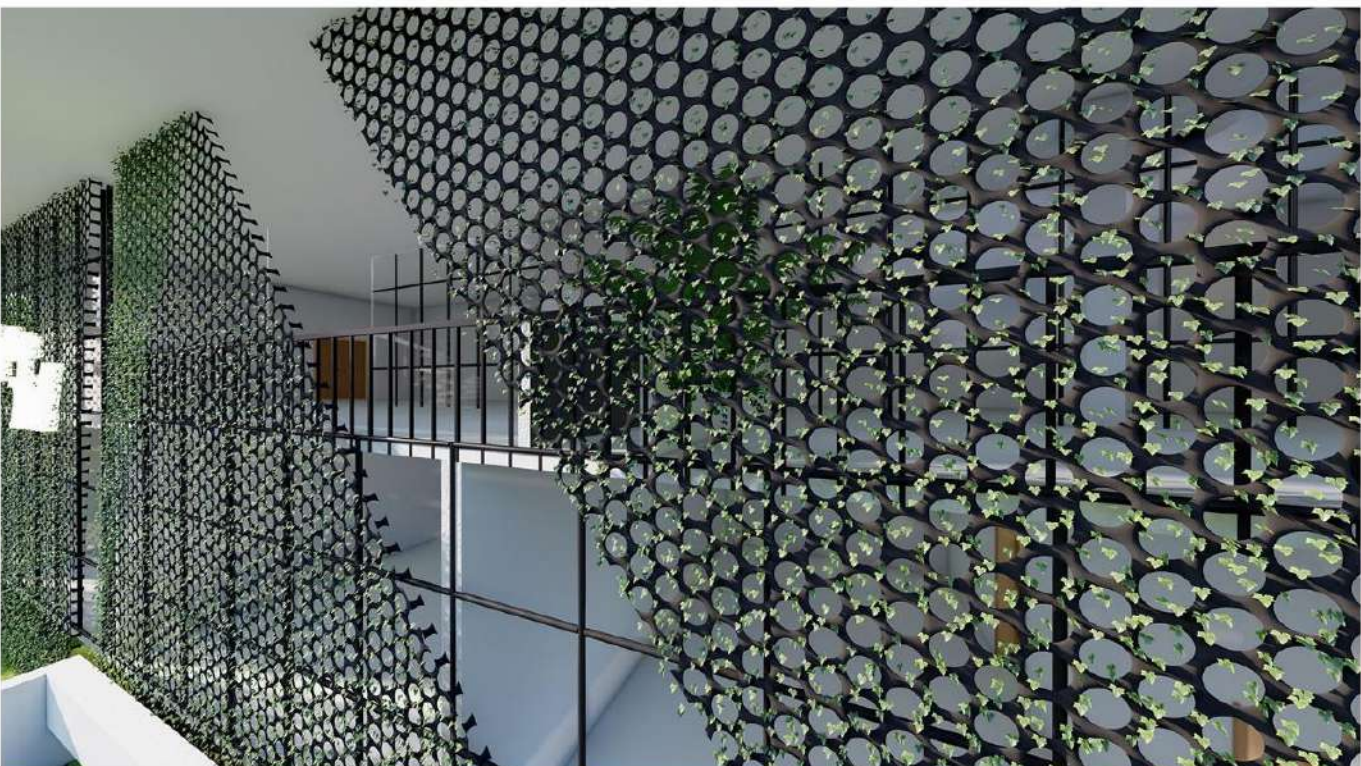


ELEVATION



SECTION





ABBOTTABAD BUS-TERMINAL

The Abbottabad Intra-City Bus Terminal is designed with a focus on creating a walkable city and integrating an urban forest landscape. The terminal aims to enhance pedestrian accessibility and connectivity, promoting a car-free environment within the city center. The layout prioritizes wide walkways, pedestrian-friendly amenities, and convenient transit connections, encouraging walking as a primary mode of transportation. The landscape design incorporates an urban forest concept, featuring native trees and greenery to create a serene and sustainable environment. This green space not only provides natural shade and improves air quality but also serves as a welcoming area for passengers and visitors, blending functionality with environmental stewardship.

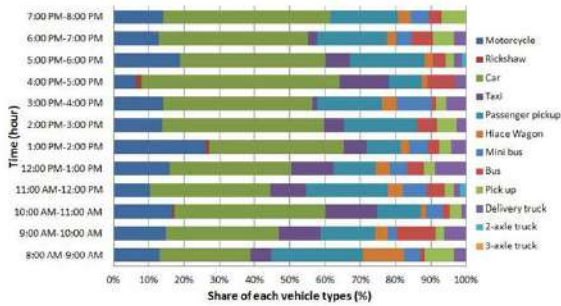
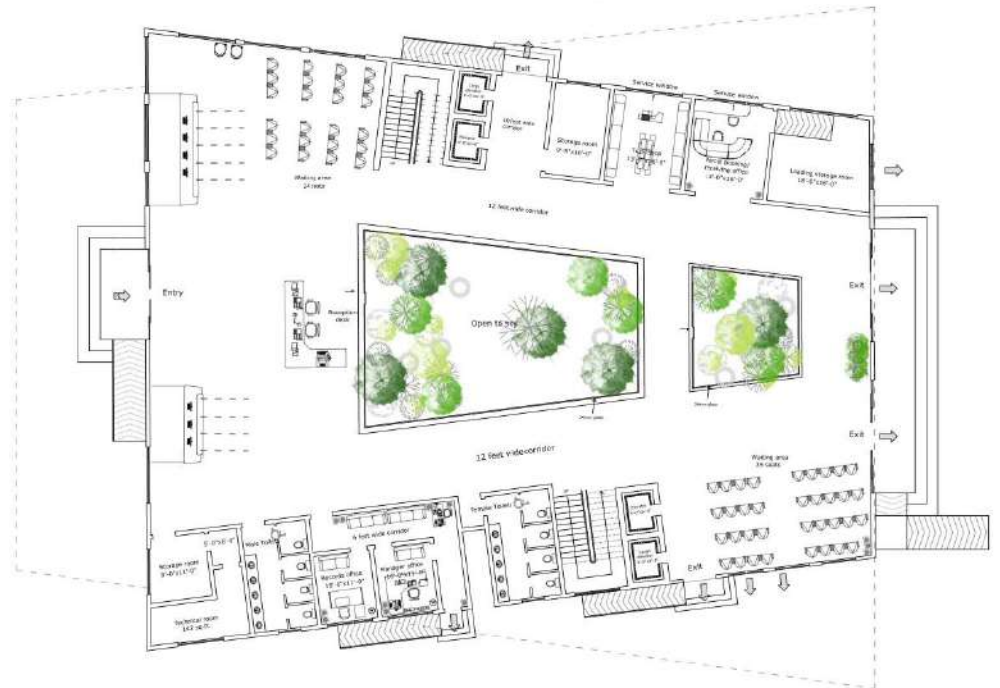


Figure 4.6: Share of vehicle type with time

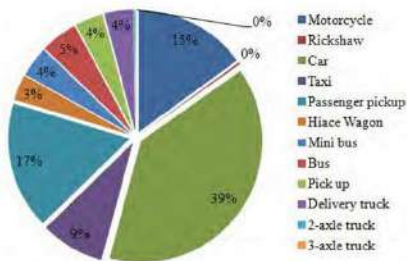


Figure 4.1: Share of each vehicle type in OD survey

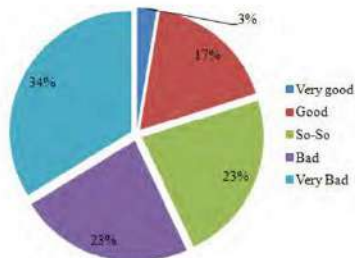


Figure 4.8: Trip maker's assessment about traffic congestion



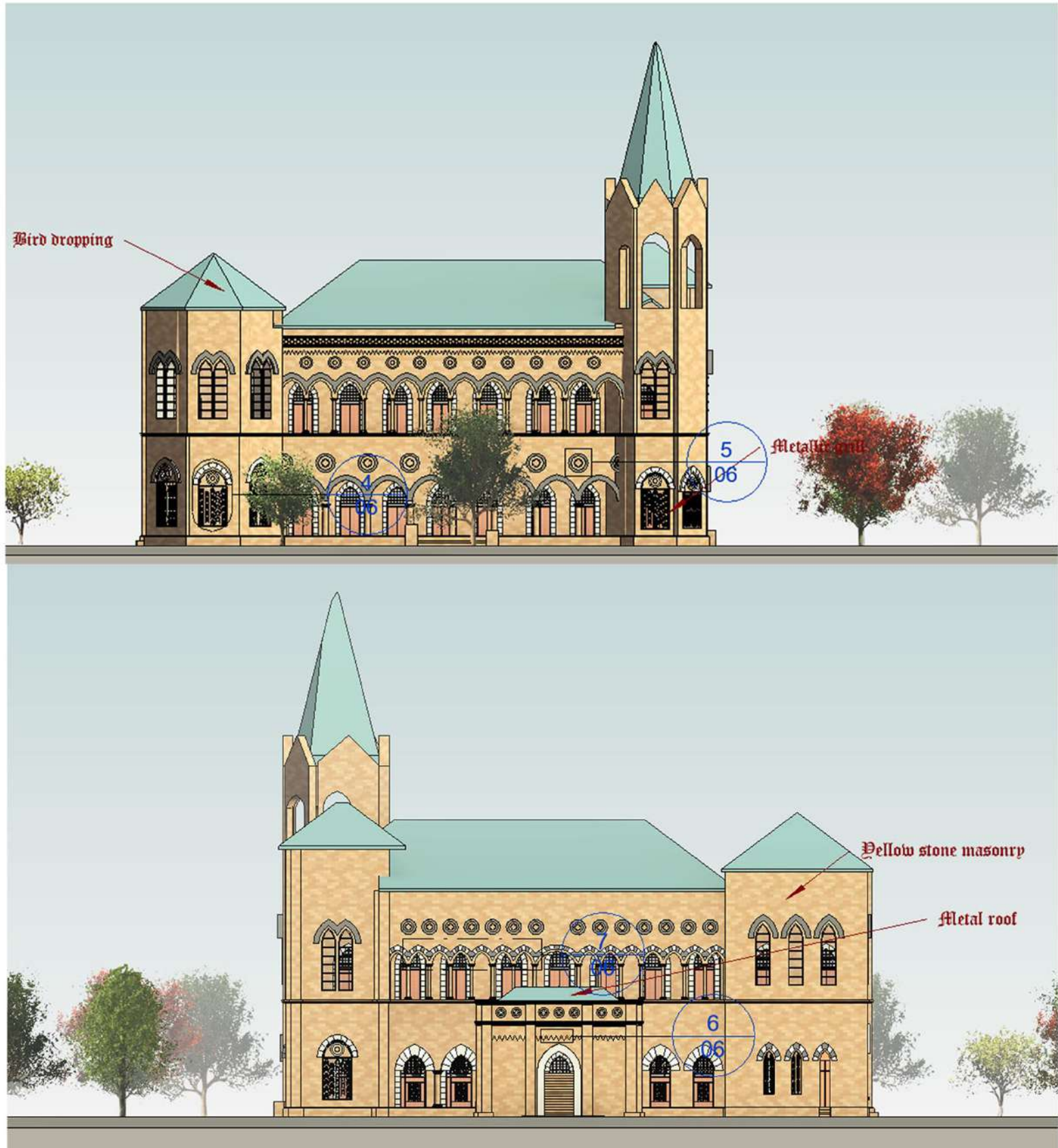
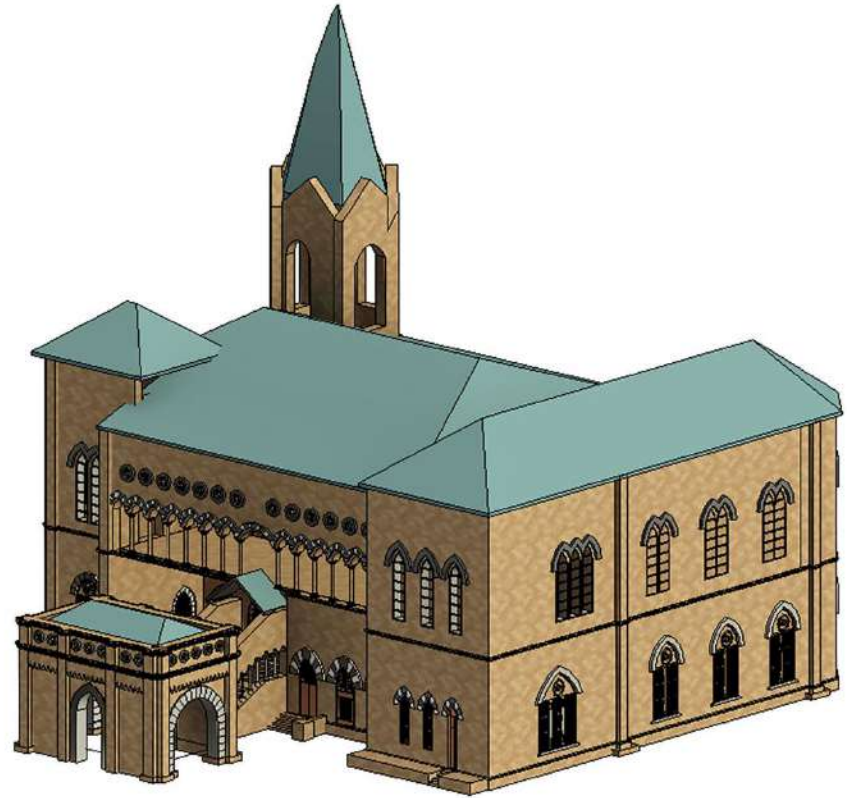


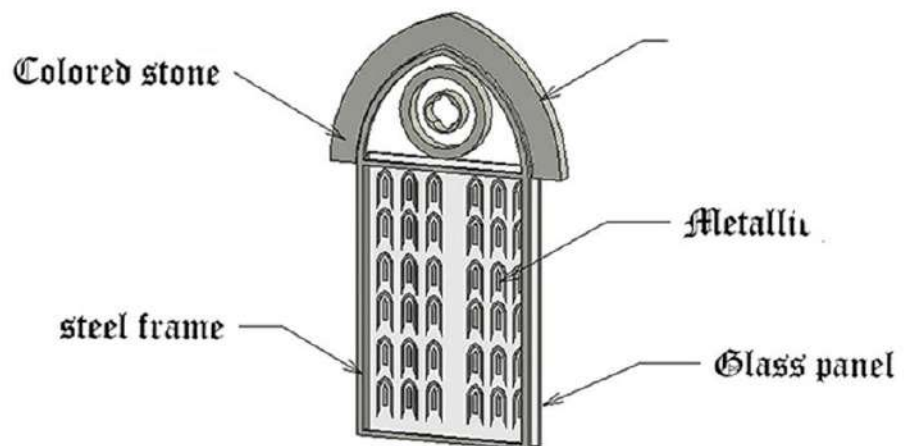
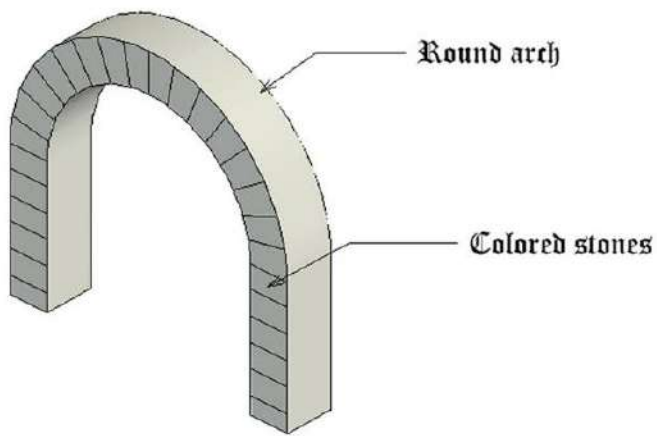
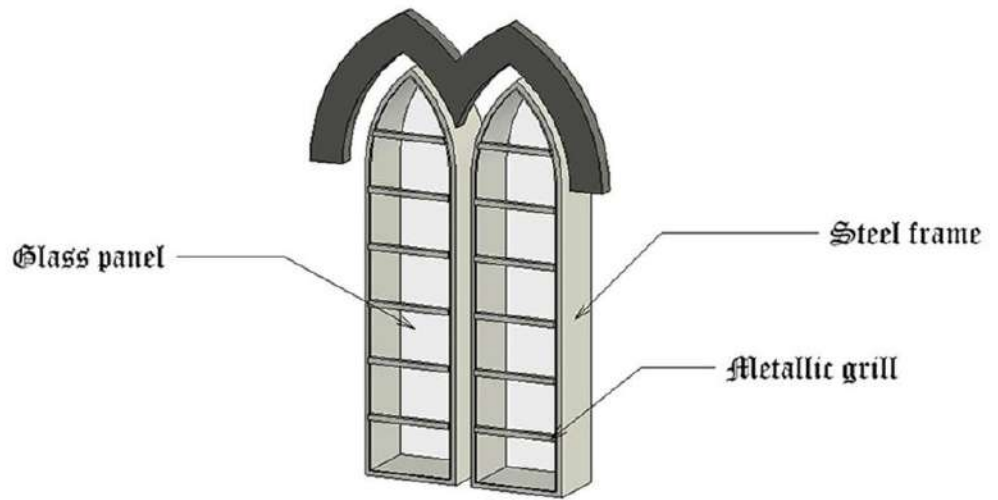
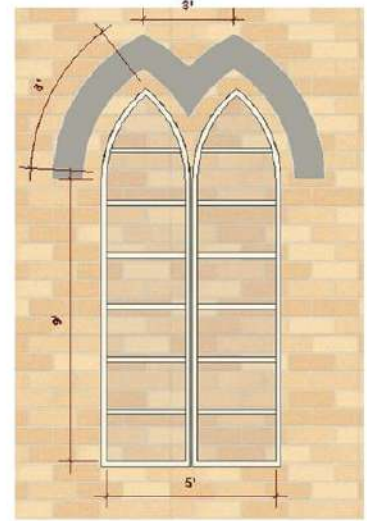
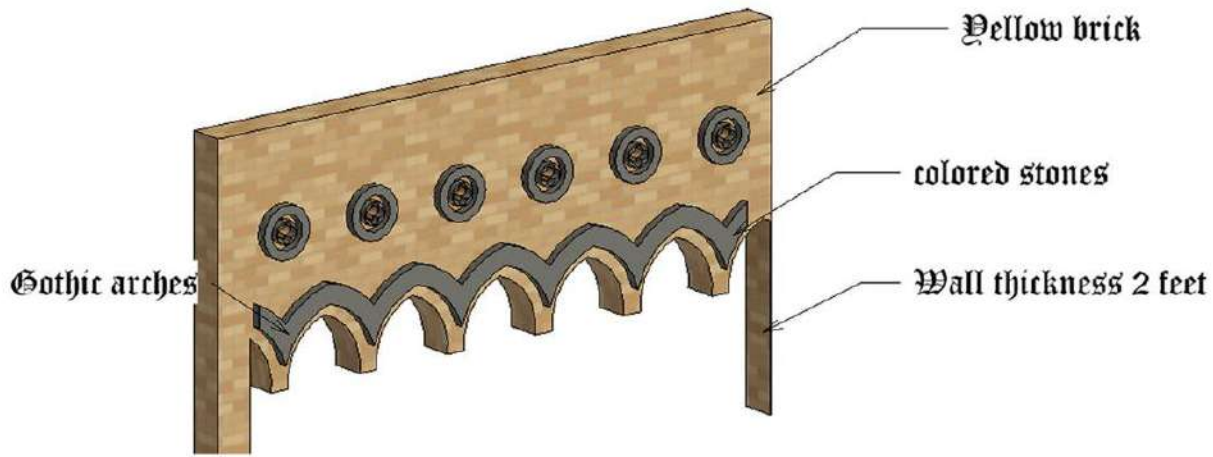
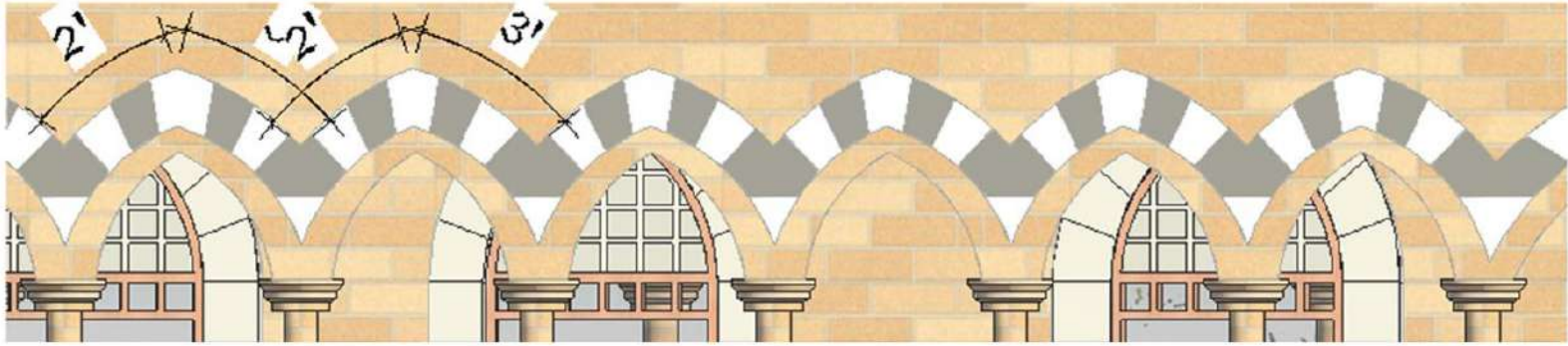
REVIT DOCUMENTATION OF FRERE HALL, KARACHI

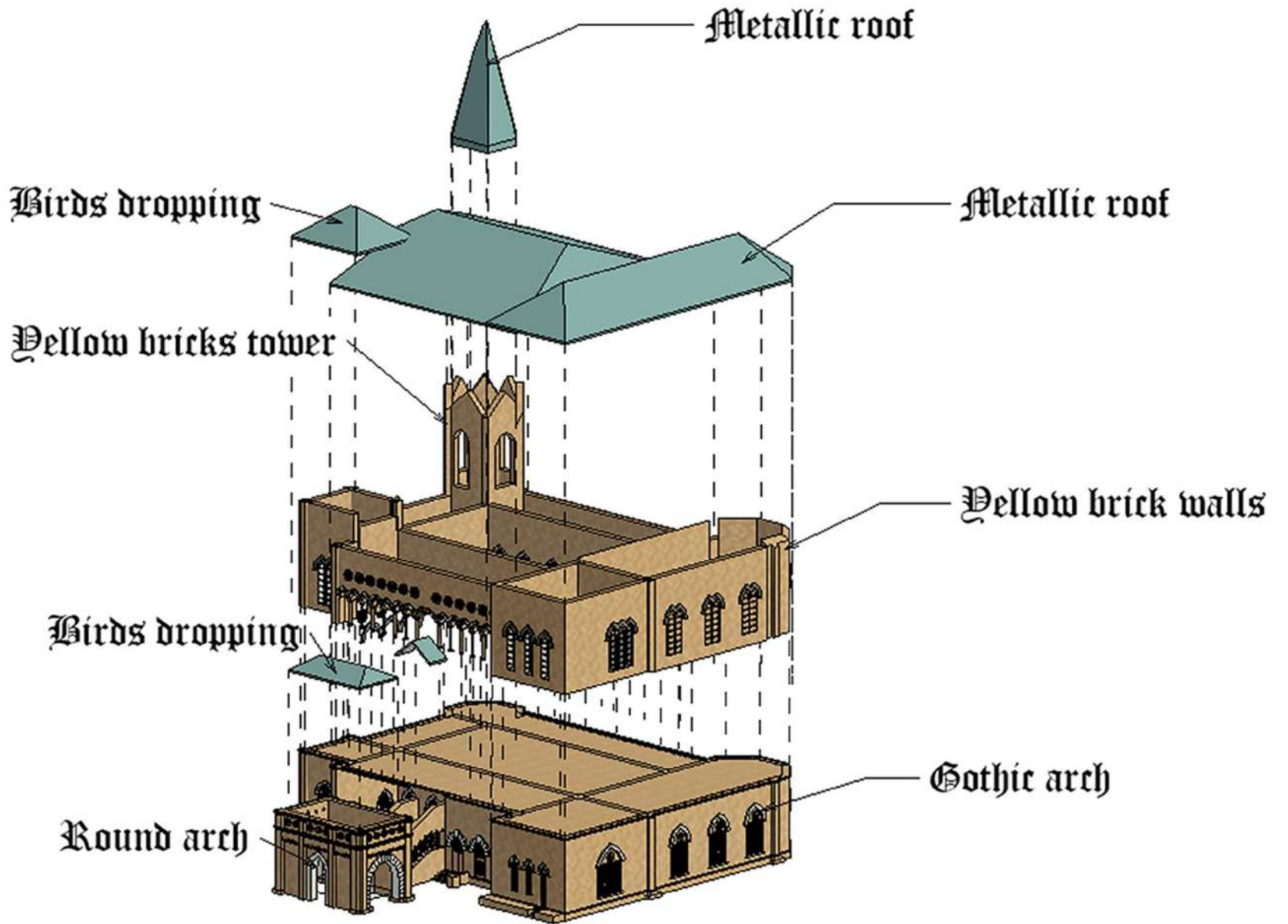
Frere Hall is an historical building in Karachi, Pakistan that dates from the early British colonial in Sindh. Completed in 1865, Frere Hall was originally intended to serve as Karachi's town hall, and now serves as an exhibition space and library.

ARCHITECTURAL FEATURES:

- Frere Hall was built in the Venetian-Gothic style that also blends elements of British and local architecture.
- The building features multiple pointed arches, ribbed vaults, quatrefoils, and flying buttresses.
- Carving on the walls and beautifully articulated mosaic designs are visible on multiple walls and pillars.
- A tall octagonal tower is located in one of the building's corner that is crowned by an iron cage.
- The roof of the hall is coated with Muntz metal.








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