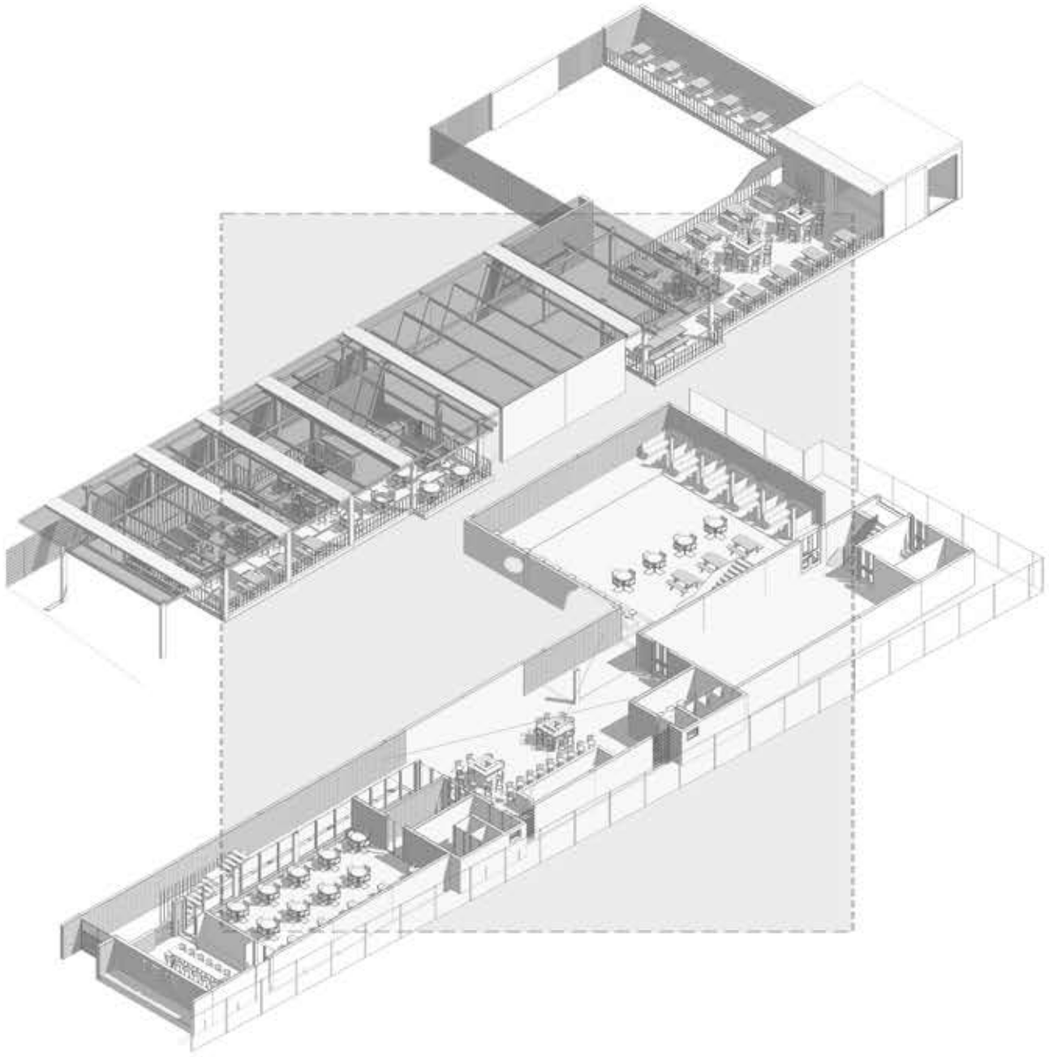


PORTFOLIO

YOVAN ROBERT KASPAR

YOVAN ROBERT KASPAR

BIM and REVIT Technician

Liverpool, United Kingdom |
+44 (0) 7407002318
yvnarchitect@gmail.com
linkedin: https://www.linkedin.com/in/yovan-robert-kaspar

EDUCATION

2024 Master's in Building Information Modelling and Digital Transformation
University of Liverpool, Liverpool

2019 Bachelor of Architecture
Anna University, Chennai, India

PROFESSIONAL EXPERIENCE

2021 – 2023 **BIM Architect**
Alankaram Design Studio, Madurai, India

-Led a team in executing 10 architectural projects, focusing on efficiency and budget.
-Conducted detailed clash detections within BIM models, ensuring optimal project coordination.

2019 – 2021 **Interior Architect**
1405 Design Studio Chennai, India

-Collaborated closely with customers, adjusting plans as needed to satisfy requirements.
-Maintained accurate specifications for each project.

2017 – 2018 **Intern Architect**
Balan and Nambisan Architects, Bangalore, India

-Managed the SNN Clubhouse project,
-Demonstrating strong project management and design skills.

KEY SKILLS & COMPETENCIES

B - Basic, I - Intermediate, M - Master

BIM Authoring Tools:
Autodesk Revit (M), AutoCAD (M), , ArchiCAD (B)

3D Modelling Tool
SketchUp (M), 3ds Max (I), Rhino-Grasshopper (I)

Coordination & Clash Detection:
Navisworks (M), Solibri (I)

Common Data Environment (CDE):
BIM 360 (I), BIMcloud (I)

Rendering Software:
V-Ray (M), Lumion (M), Enscape (M)

Energy Simulation Software:
Climate Studio (M), Insight (M)

Other Software:
Unity (B), Gravity Sketch (B), Dynamo (B) , Synchro (I), Photoshop (M), Excel (M)

Standards:
ISO 19650, COBie, Level of Development (LOD)

CERTIFICATIONS

2020 **Architect** – Council of Architecture (CA/2020/119695)

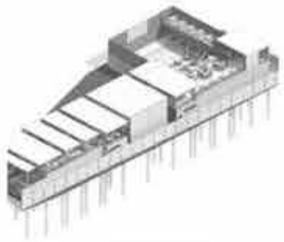
2023 **Revit 2020** – LinkedIn Learning |
Rhino & Grasshopper – LOSMOS Archilabs

2023 **Navisworks:** Clash Detection – LinkedIn Learning

CONTENTS

Olympus Club House

DESIGNING A CLUB HOUSE FOR A RESIDENTIAL AP-PARTMENT

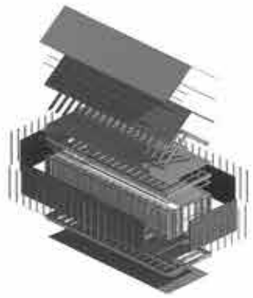


Deck Bar - Banglore

RUNWAY TAPROOM DESIGNED WITH LIVELY AMBIANCE FOR THE VI BRANT NIGHTLIFE OF-BANGLORE.

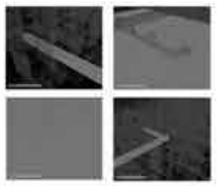
BIM Enabled Window

WINDOW OPTIMIZATION FOR SLUM HOUSING DEVELOPMENT - RESEARCH BY DESIGN



WOODEN PORTABLE HOUSE

PARAMETRIC BIM MODELLING FOR MODULAR TIMBER PROTOTYPES



NAVISWORK

NAVISWORKS MANAGE – COORDI-NATION SETUP (SETS, VIEWPOINTS & BEP COLOUR CODING)

WAVERLY CRESCENT STIRLING

INTERNAL ALTERATIONS AND EXTENSION TO HOUSE

Vajram's Main Resi-dence

A RESIDENCIAL AND CLUBHOUSE DESIGN FOR THE VAJRAM GROUP

Nirvana Farmhouse

DESIGNING A CONTEM-PORARY FARM HOUSE ON THE OUTSKIRTS OF BANGLORE

01.OLYMPUS-CLUBHOUSE

The clubhouse is part of the residential apartment tower complex proposed and built by the developers of Sumadhura group under the name Olympus. This standalone ground plus six structure act as clubhouse for the all 240 apartments residents comprising of various amenities such as multi purpose halls,anchor stores,creche,gym,badminton and squash court and an infinity pool at the terrace level.

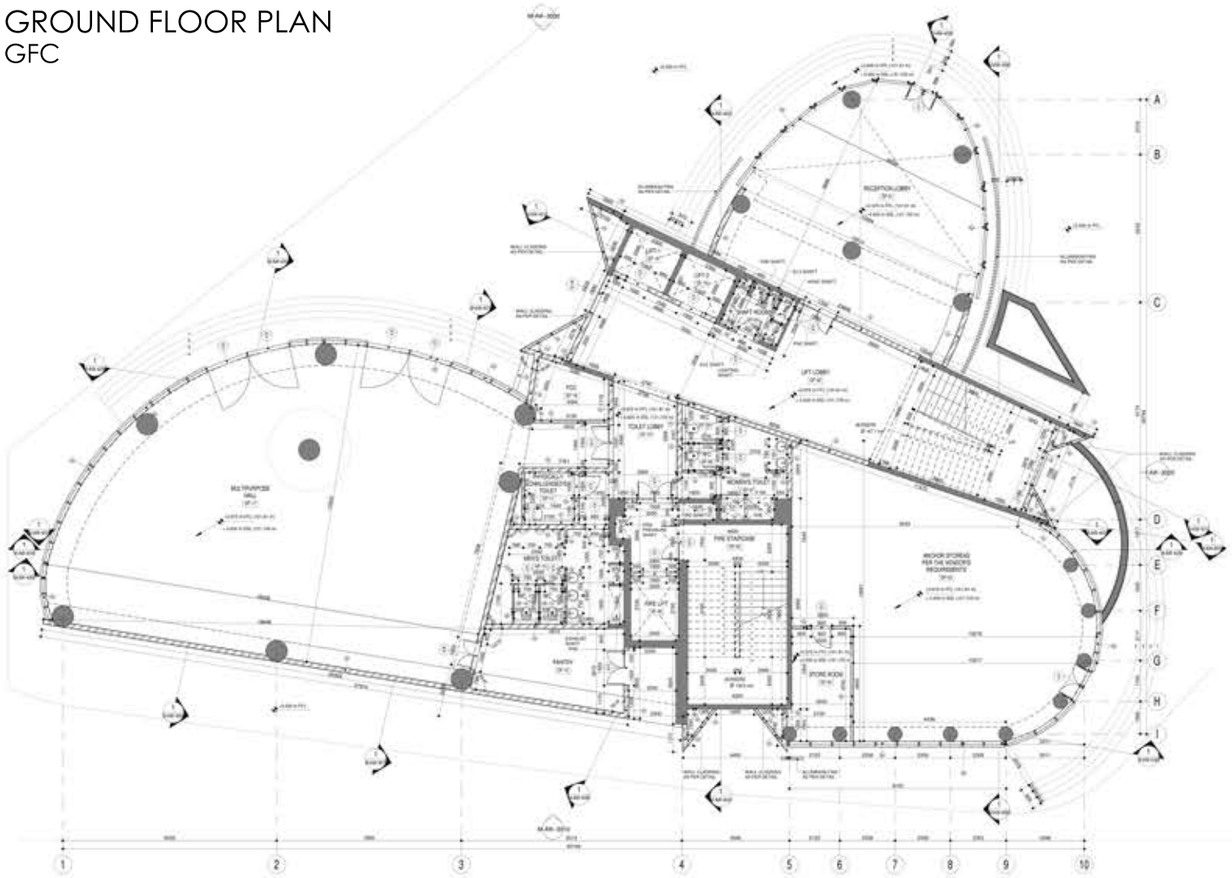
Location
Sadashivanagar,Banglore
Builiding type : Residence
Site Area : 52500 sqft
Role :BIM Architect

SUMADHURA'S OLYMPUS
CLUBHOUSE-MASTERPLAN

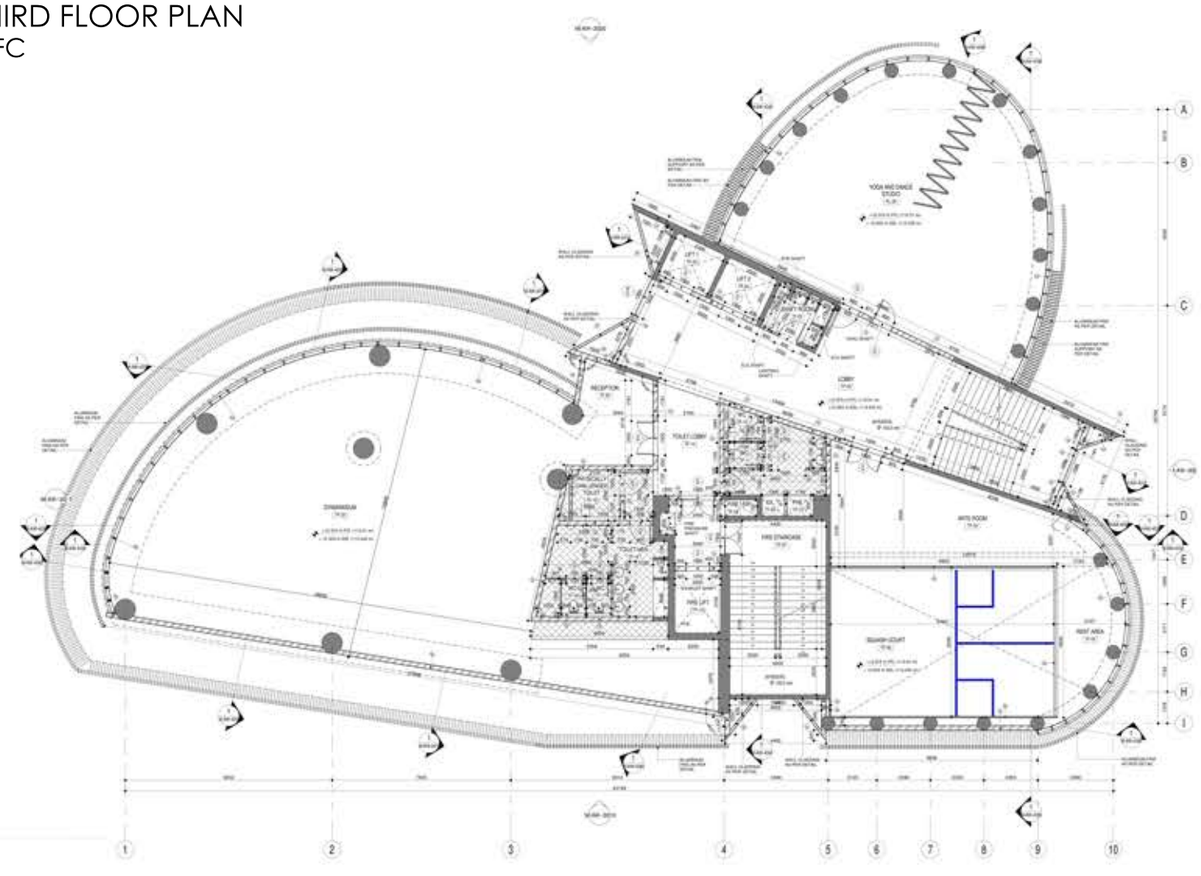
N

SUMADHURA'S OLYMPUS CLUBHOUSE
MASTER ELEVATION VIEW

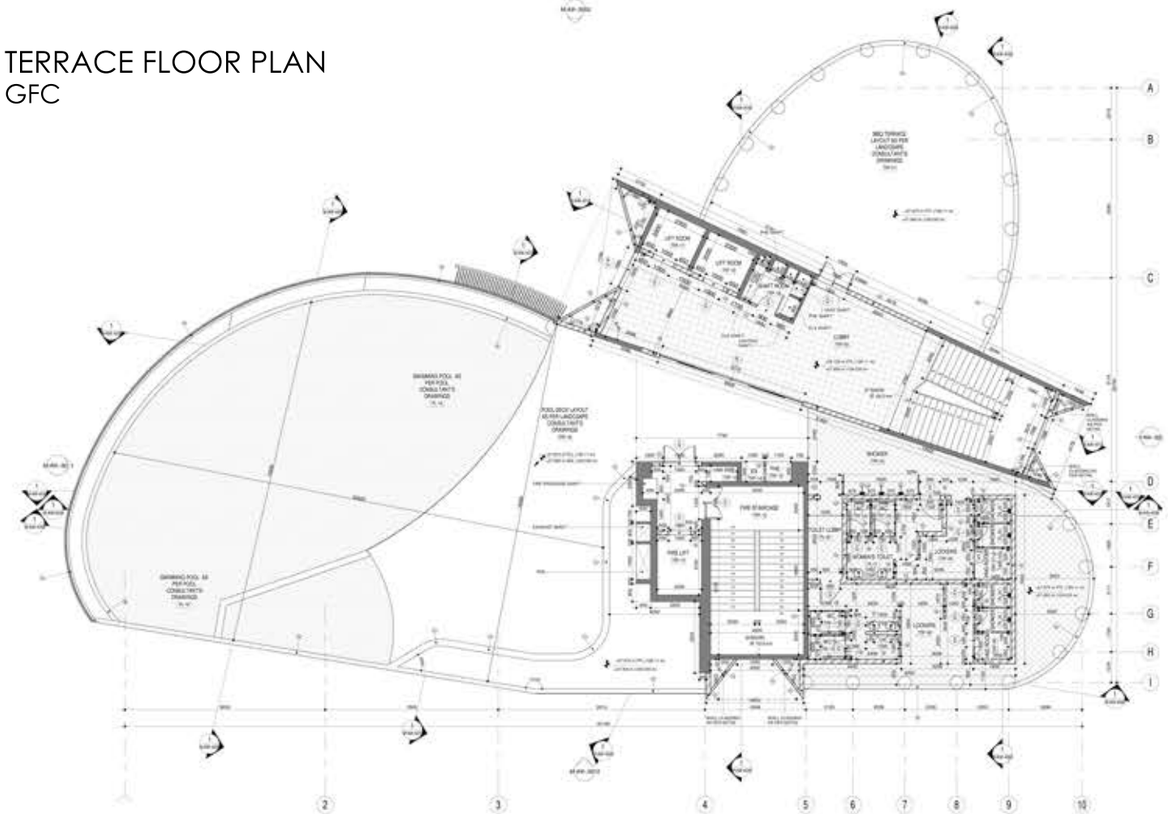
GROUND FLOOR PLAN
GFC



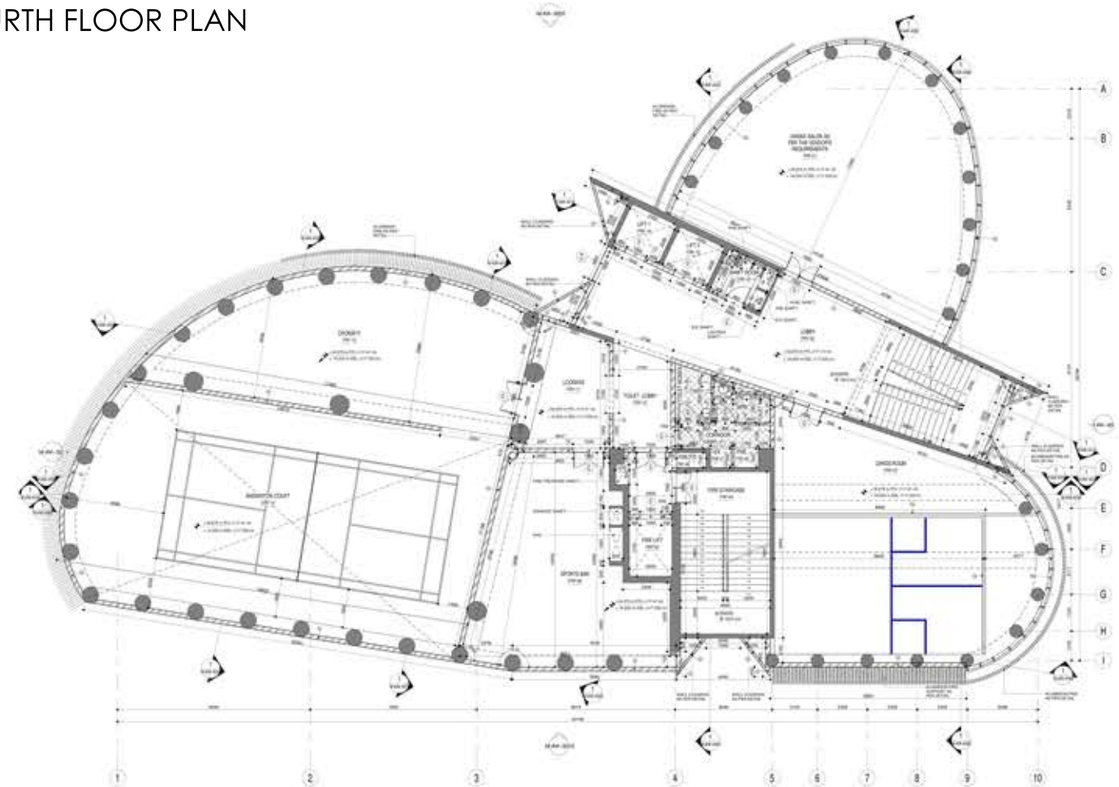
THIRD FLOOR PLAN
GFC



TERRACE FLOOR PLAN
GFC

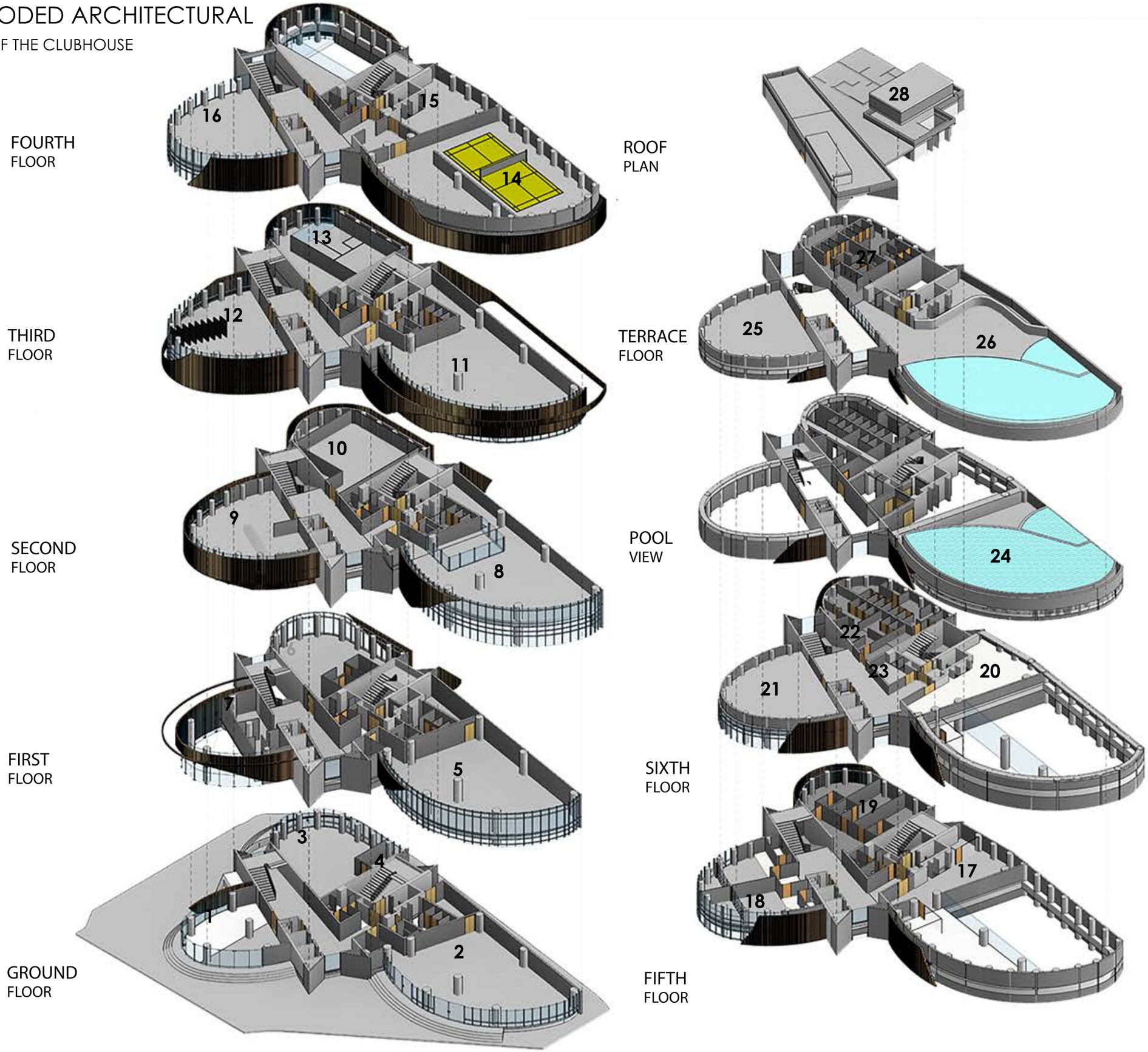


FOURTH FLOOR PLAN
GFC



EXPLODED ARCHITECTURAL

VIEW OF THE CLUBHOUSE



ARCHITECTURAL SPACES

IN THE CLUBHOUSE AS FOLLOW:

1.RECEPTION LOBBY
2.MULTI PURPOSE HALL
3.ANCHOR STORE

4.TOILETS AND FIRE CORE
5.MULTIPURPOSE HALL-2
6.CRECHE
7.LAUNDRY AND MEDICAL

8.GAMES ROOM
9.CAFE
10.MINI THEATRE

11.GYMNASIUM
12.YOGA AND AEROBICS
13.SQUASH COURT

14.BADMINTON AND CROSS FIT
15.ESTATE MANAGER OFFICE
16.SALON

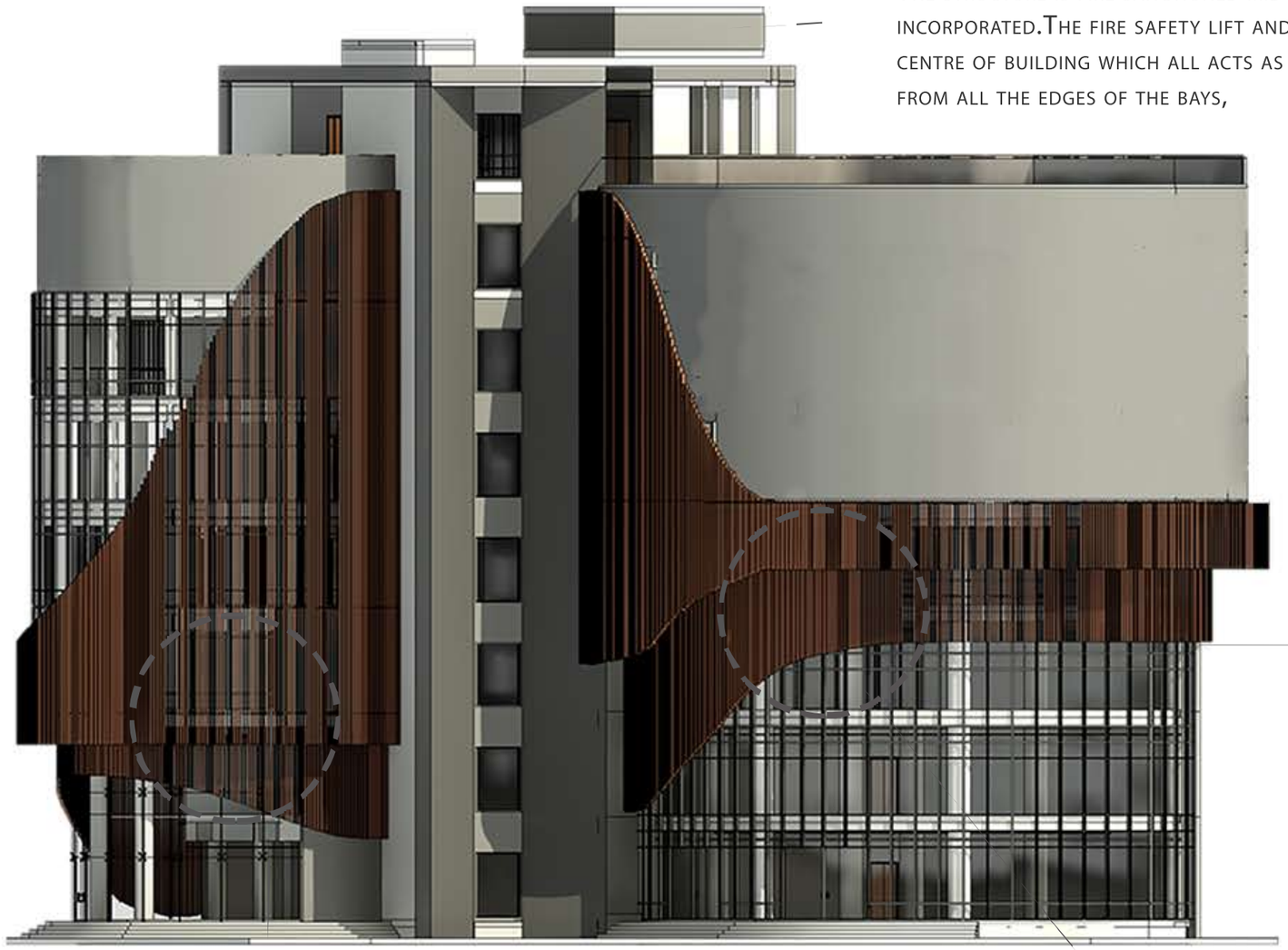
17.SPORTS BAR
18.GUEST ROOMS WITH DECK
19 GUEST BEDROOMS

20.POOL FILTERATION ROOM
21.SPA
22.COMMON TOILETS
23.STORE ROOM

24.SWIMMING POOL
25.BARBEQUE TERRACE
26.SWIMMING POOL DECK
27.POOL TOILETS

28.OHT

BUILDING INFORMATION
MODEL_REVIT



FIRE SAFETY NORM

The structure is fire sanctioned mid-rise with all safety measures incorporated.The fire safety lift and staircase are placed at the centre of building which all acts as fire OHT and at minimum reach from all the edges of the bays,

BUILDING FACADE

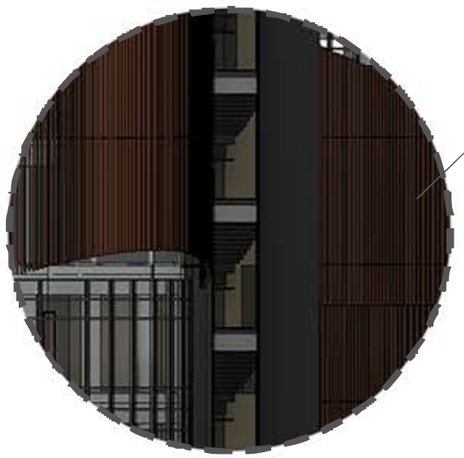
The architectural features of the facade made of suspended fins made of aluminium rectangle section.These are anchor bolted to the face of the beam on the building surface.

MEP SERVICE CONSIDERATIONS

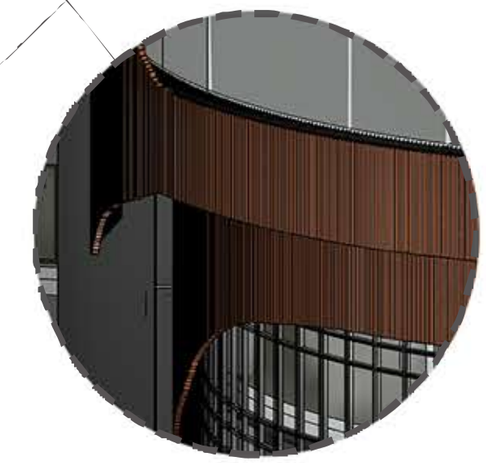
The other service considered is mechanical vented and air conditioner with VRV system and PHE with sleeves throughout since most of the service shaft and lines cut through the PT structure.

FRONT FACADE WITH GLASS AND FINS VIEW

LOBBY AND THE EXTERNAL CLADDING VIEW



NORTH ELEVATION WITH GLASS AND FINS VIEW



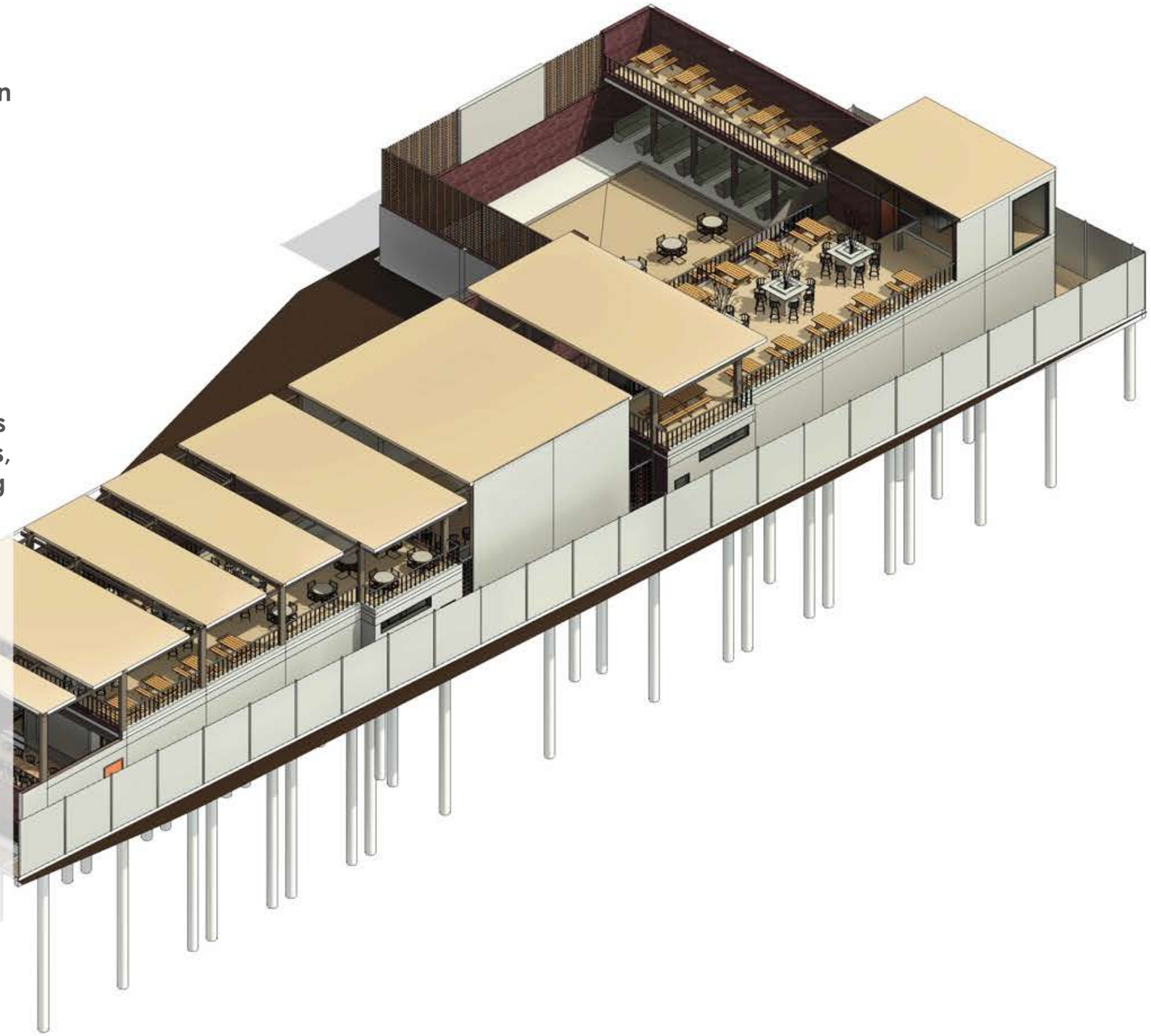
SECTIONAL ELEVATION
THROUGH POOL

02. DECK BAR - BANGALORE

Runway Taproom located at Yemalur main road,Bangalore exudes a contemporary and sophisticated architectural aesthetic that mirrors the lively ambiance of its vibrant nightlife. The venue showcases a spacious design meticulously arranged with seating areas strategically placed around a generous dance floor, ensuring ample space for guests to socialize and move with ease.

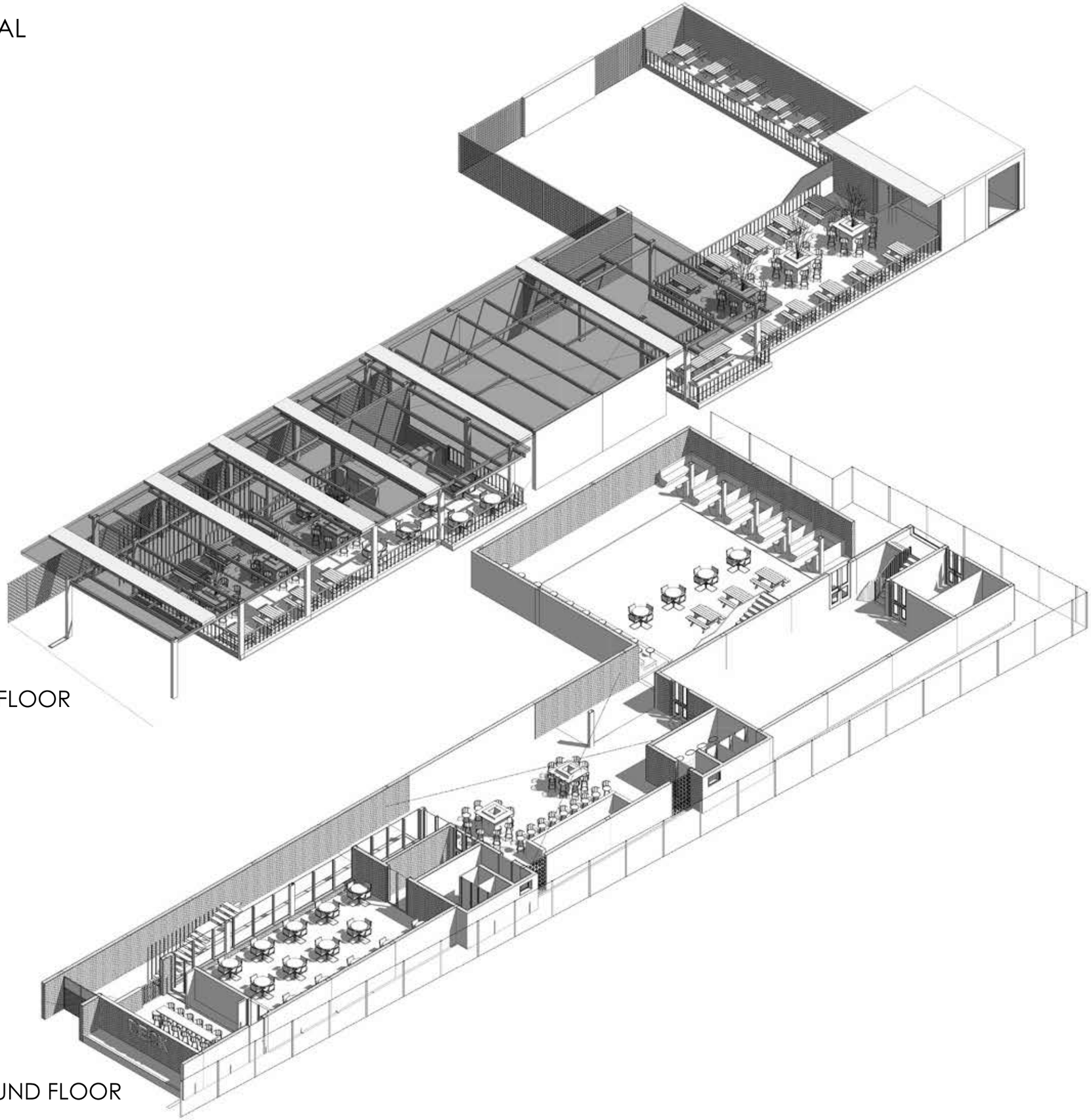
Its a G+1 structure of 15000 sft and interiors are distinguished by sleek modern finishes, stylish furnishings, and imaginative lighting installations that collectively cultivate an inviting and dynamic atmosphere. Functionality is paramount, evidenced by well-defined spaces for the DJ booth and bar seamlessly integrated into the overall layout.

Inspired by aviation, the design follows an industrial motif, enhancing the venue's unique character. Moreover, the upper floors offer panoramic views of the scenic HAL Airport Runway, distinguishing it as a standout project in the cityscape.



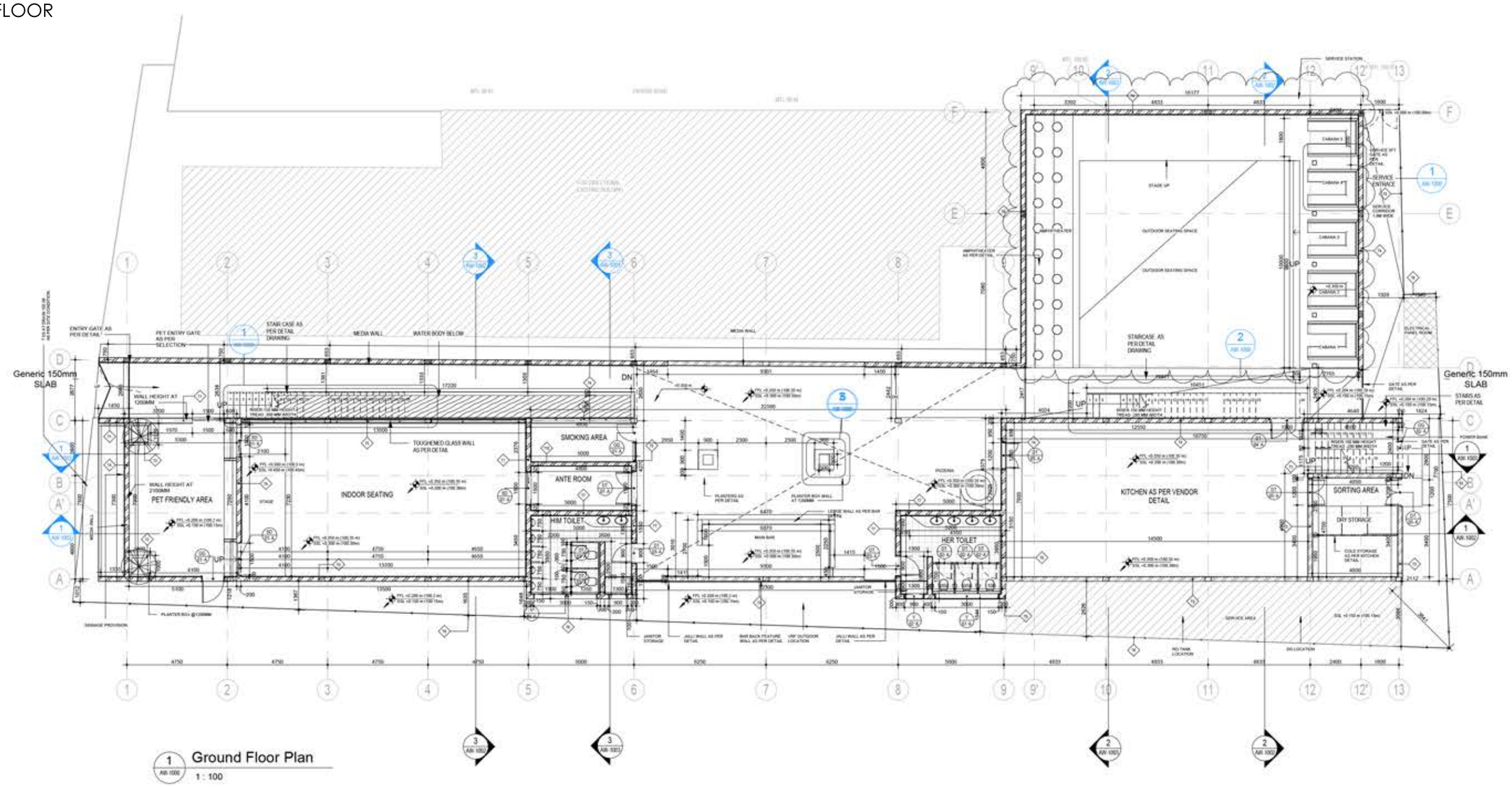
EXPLODED ARCHITECTURAL

VIEW OF THE DECK BAR



ARCHITECTURAL PLAN

GROUND FLOOR



1 AR-1000 Ground Floor Plan
1 : 100

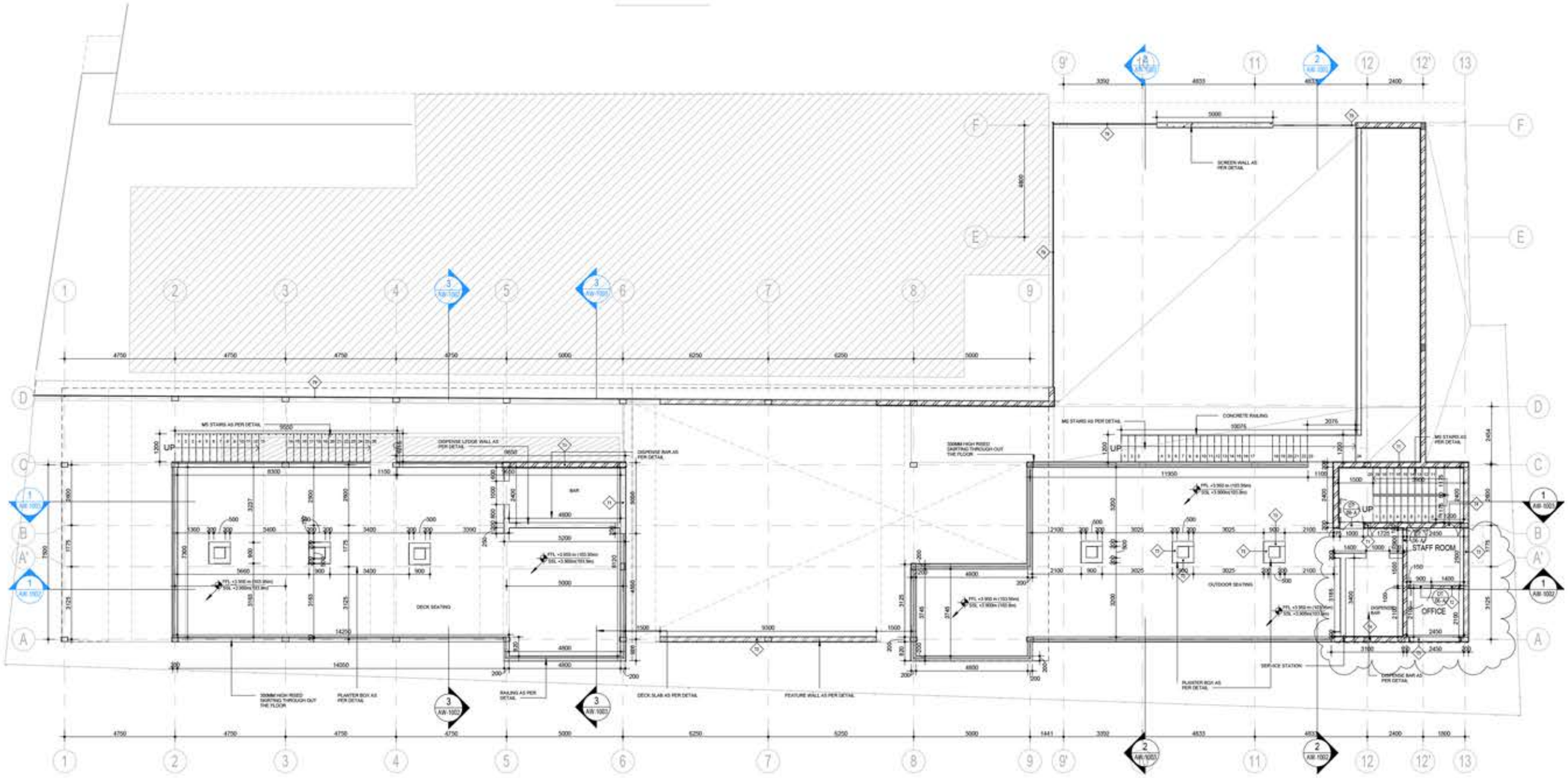
Door Schedule					
Type	Width	Height	Sill Height	Count	Level
GROUND FLOOR(100.3m)					
DT-02	700	2400	50	5	GROUND FLOOR(100.3m)
DT-03	900	2400	50	2	GROUND FLOOR(100.3m)
DT-04	1500	2400	50	1	GROUND FLOOR(100.3m)
DT-05	1200	2400	50	3	GROUND FLOOR(100.3m)
DT-07	1500	2400	0	1	GROUND FLOOR(100.3m)
GD-01	796	2375		1	GROUND FLOOR(100.3m)
GG-01	1000	2400	0	1	GROUND FLOOR(100.3m)
GG-02	0	0	0	1	GROUND FLOOR(100.3m)
SD-01	1500	2400	<varies>	3	GROUND FLOOR(100.3m)
GROUND FLOOR(100.3m): 18					
FIRST FLOOR(103.9m)					
DT-06	900	2400	50	2	FIRST FLOOR(103.9m)
DT-08	1000	2400	50	1	FIRST FLOOR(103.9m)
FIRST FLOOR(103.9m): 3					
Grand total: 21					

Window Schedule					
Type	Height	Width	Sill Height	Count	Description
V-01	600	3000	2400	2	FULL GLASS WINDOW
V-02	600	900	1500	2	FULL GLASS WINDOW
W-01	3000	2200	50	1	
W-02	1150	2400	1850	1	
Grand total: 6					

Wall Schedule		
Family and Type	Type Mark	Description
<varies>		<varies>
Basic Wall: DB 200MM WALL CLADDED	T1	BRICK CLAD 25MM WITH 10MM FINISH ON BOTH SIDE
Basic Wall: DB 100MM WALL	T2	15MM PLASTER FINISH ON BOTH SIDE
Basic Wall: DB 200MM WALL	T3	15MM PLASTER FINISH ON BOTH SIDE
Basic Wall: DB 200MM WALL CLADDED AND PLASTER	T4	INTERIOR 25MM CLADDED WITH PLASTER FINISH ON EXTERIOR
Curtain Wall: Storefront	T5	TOUGHENED GLASS WALL
Basic Wall: DB 200MM WALL TILE AND PLASTER	T6	EXTERIOR WITH PLASTER FINISH &INTERIOR WITH TILE AS PER DETAIL
Basic Wall: DB 200MM WALL CLADDED TOILET	T7	EXTERIOR 25MM BRICK CLAD & INTERIOR TILE AS PER DETAIL
Basic Wall: Fence	T8	FENCE WALL ON BOUNDARY AS PER DETAIL
Curtain Wall: Lattice	T9	HDPE LATTICE FENCE ABOVE COMPUND WALL
Basic Wall: DB 150MM WALL CLADDED 2	T10	BRICK CLAD 25MM WITH 10MM FINISH ON BOTH SIDE

ARCHITECTURAL PLAN

FIRST FLOOR



1 AW-1001 First Floor Plan

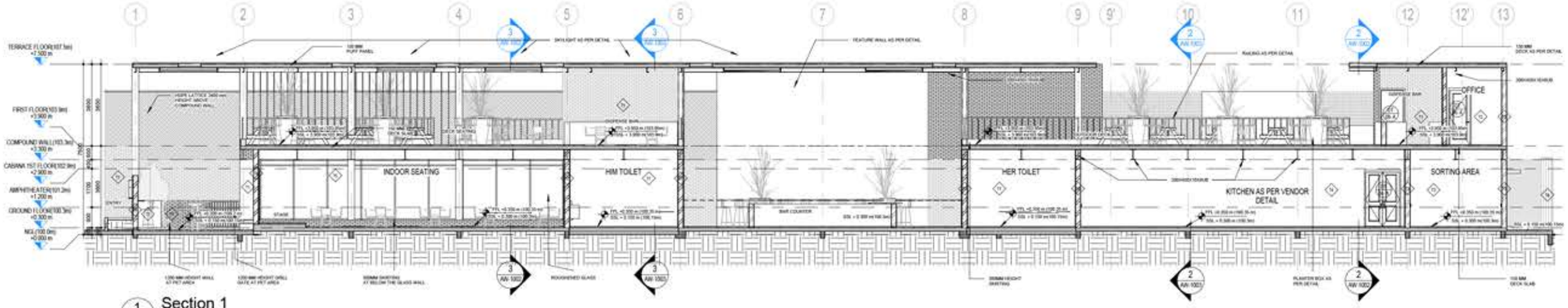
1 : 100

Door Schedule					
Type	Width	Height	Sill Height	Count	Level
GROUND FLOOR(100.3m)					
DT-02	700	2400	50	5	GROUND FLOOR(100.3m)
DT-03	900	2400	50	2	GROUND FLOOR(100.3m)
DT-04	1500	2400	50	1	GROUND FLOOR(100.3m)
DT-05	1200	2400	50	3	GROUND FLOOR(100.3m)
DT-07	1500	2400	0	1	GROUND FLOOR(100.3m)
GD-01	796	2375		1	GROUND FLOOR(100.3m)
GG-01	1000	2400	0	1	GROUND FLOOR(100.3m)
GG-02	0	0	0	1	GROUND FLOOR(100.3m)
SD-01	1500	2400	<varies>	3	GROUND FLOOR(100.3m)
GROUND FLOOR(100.3m): 18					
FIRST FLOOR(103.9m)					
DT-06	900	2400	50	2	FIRST FLOOR(103.9m)
DT-08	1000	2400	50	1	FIRST FLOOR(103.9m)
FIRST FLOOR(103.9m): 3					
Grand total: 21					

Wall Schedule		
Family and Type	Type Mark	Description
<varies>		<varies>
Basic Wall: DB 200MM WALL CLADDED	T1	BRICK CLAD 25MM WITH 10MM FINISH ON BOTH SIDE
Basic Wall: DB 100MM WALL	T2	15MM PLASTER FINISH ON BOTH SIDE
Basic Wall: DB 200MM WALL	T3	15MM PLASTER FINISH ON BOTH SIDE
Basic Wall: DB 200MM WALL CLADDED AND PLASTER	T4	INTERIOR 25MM CLADDED WITH PLASTER FINISH ON EXTERIOR
Curtain Wall: Storefront	T5	TOUGHENED GLASS WALL
Basic Wall: DB 200MM WALL TILE AND PLASTER	T6	EXTERIOR WITH PLASTER FINISH &INTERIOR WITH TILE AS PER DETAIL
Basic Wall: DB 200MM WALL CLADDED TOILET	T7	EXTERIOR 25MM BRICK CLAD & INTERIOR TILE AS PER DETAIL
Basic Wall: Fence	T8	FENCE WALL ON BOUNDARY AS PER DETAIL
Curtain Wall: Lattice	T9	HDPE LATTICE FENCE ABOVE COMPUND WALL
Basic Wall: DB 150MM WALL CLADDED 2	T10	BRICK CLAD 25MM WITH 10MM FINISH ON BOTH SIDE

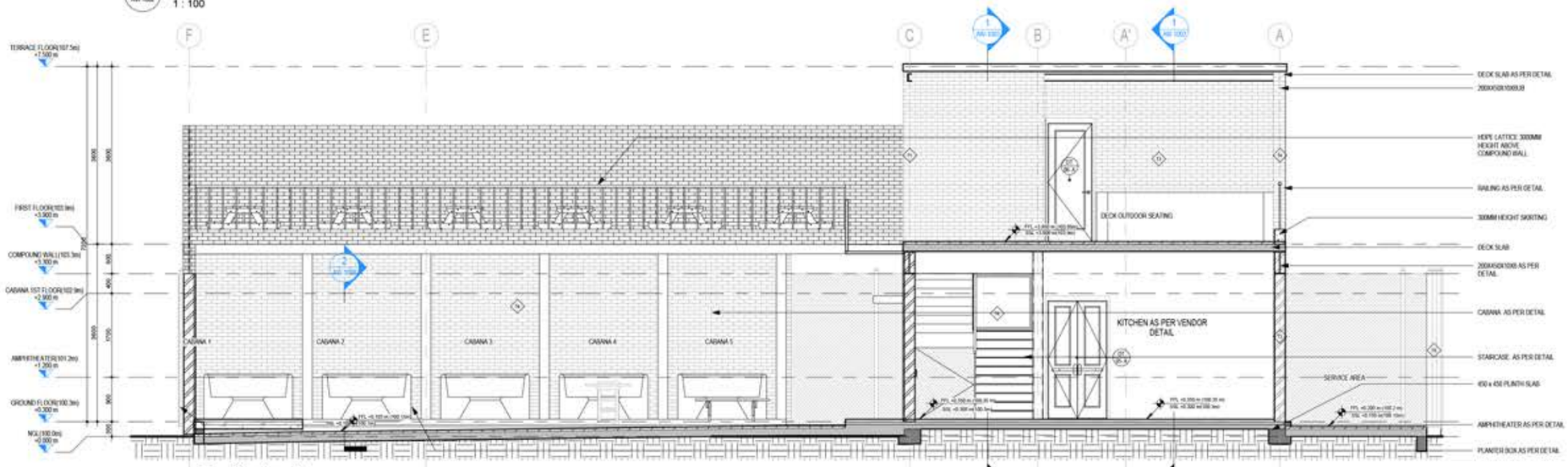
ARCHITECTURAL SECTION

LOD 350 (CONSTRUCTION DOCUMENTATION)



1 / AW-1002 Section 1

1 : 100



2 / AW-1002 Section 2

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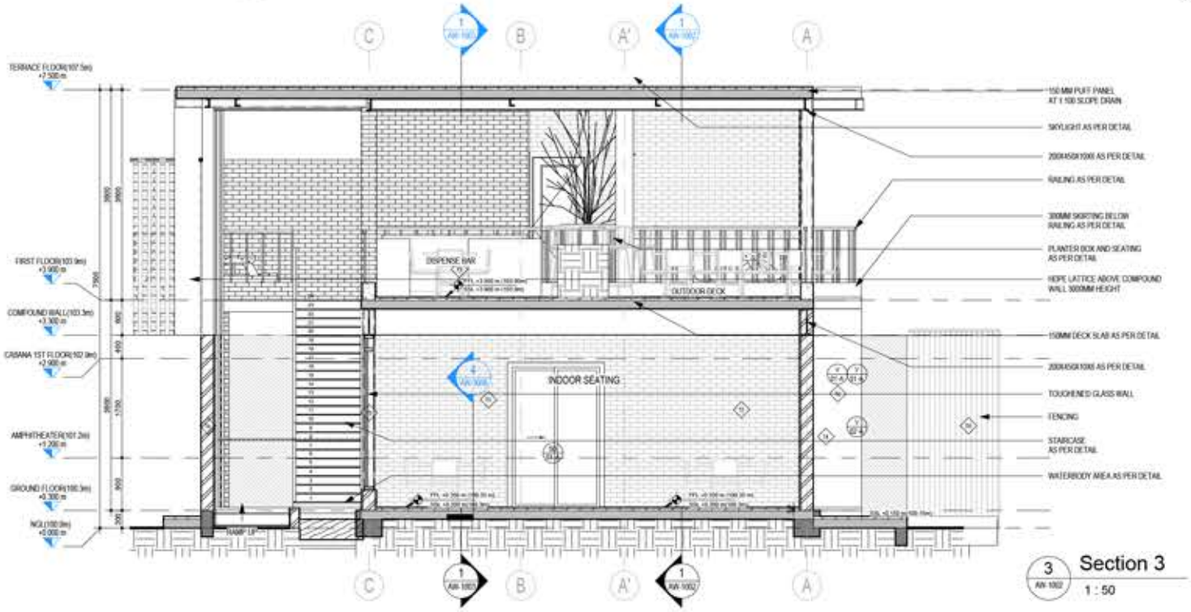


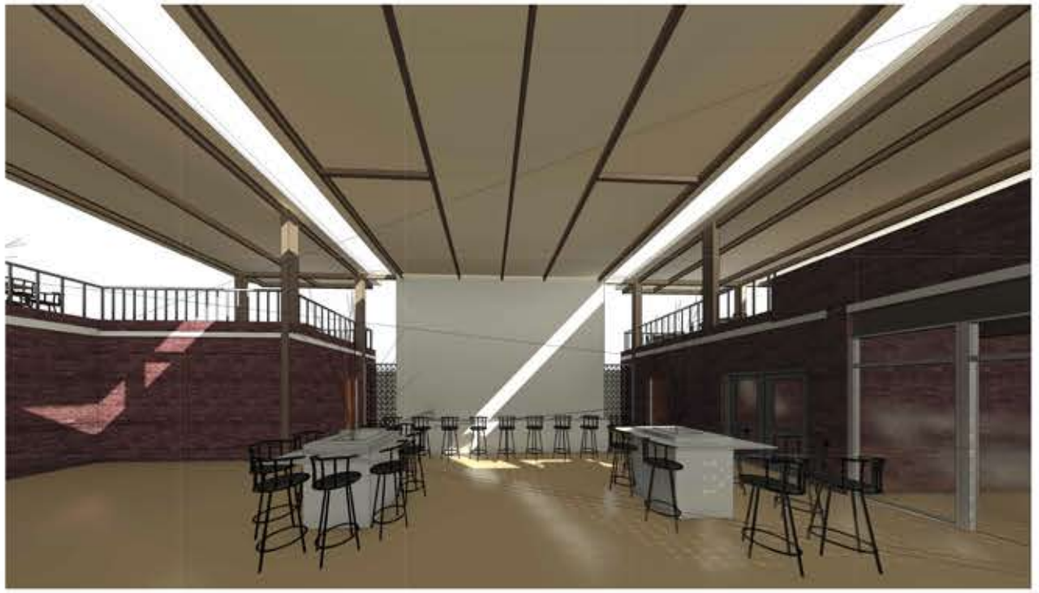
3 / AW-1002 Section 3

1 : 50

Door Schedule					
Type	Width	Height	Sill Height	Count	Level
GROUND FLOOR(100.3m)					
DT-02	700	2400	50	5	GROUND FLOOR(100.3m)
DT-03	900	2400	50	2	GROUND FLOOR(100.3m)
DT-04	1500	2400	50	1	GROUND FLOOR(100.3m)
DT-05	1200	2400	50	3	GROUND FLOOR(100.3m)
DT-07	1500	2400	0	1	GROUND FLOOR(100.3m)
GD-01	796	2375		1	GROUND FLOOR(100.3m)
GG-01	1000	2400	0	1	GROUND FLOOR(100.3m)
GG-02	0	0	0	1	GROUND FLOOR(100.3m)
SD-01	1500	2400	<varies>	3	GROUND FLOOR(100.3m)
GROUND FLOOR(100.3m): 18					
FIRST FLOOR(103.9m)					
DT-06	900	2400	50	2	FIRST FLOOR(103.9m)
DT-08	1000	2400	50	1	FIRST FLOOR(103.9m)
FIRST FLOOR(103.9m): 3					
Grand total: 21					

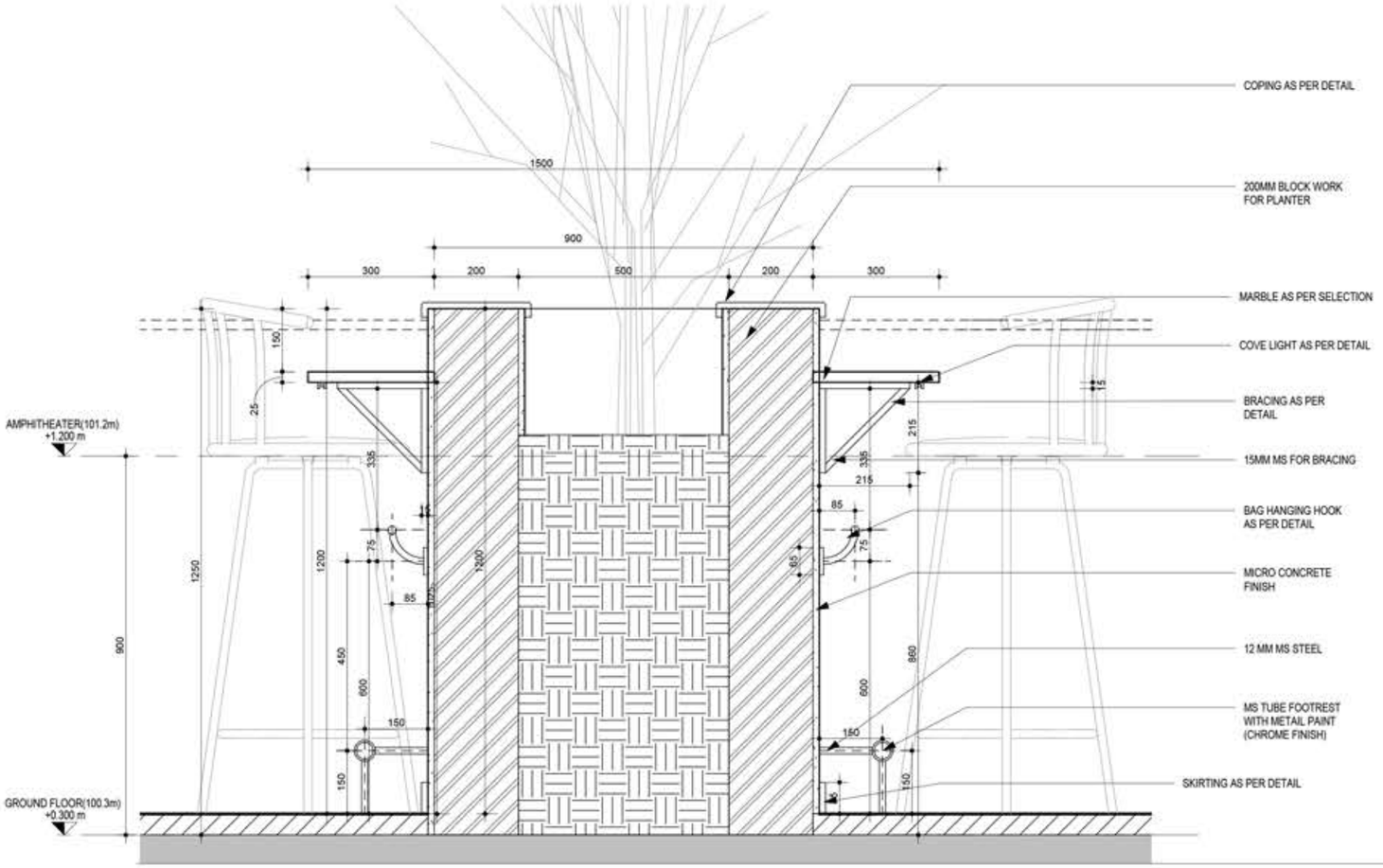
ARCHITECTURAL VIEW

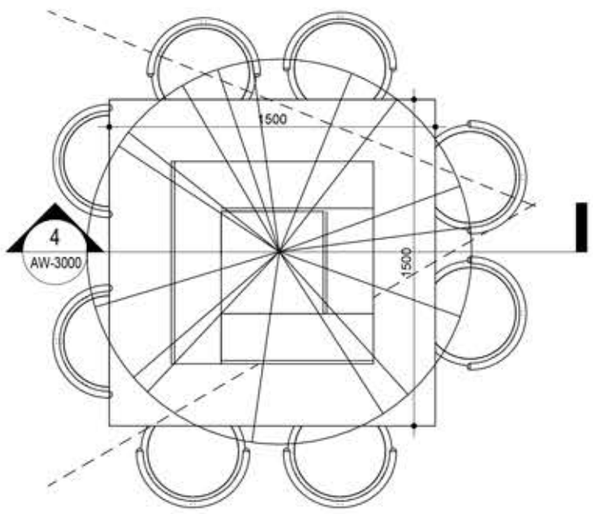
VIEW OF THE DECK BAR



PLANTER DETAILS;

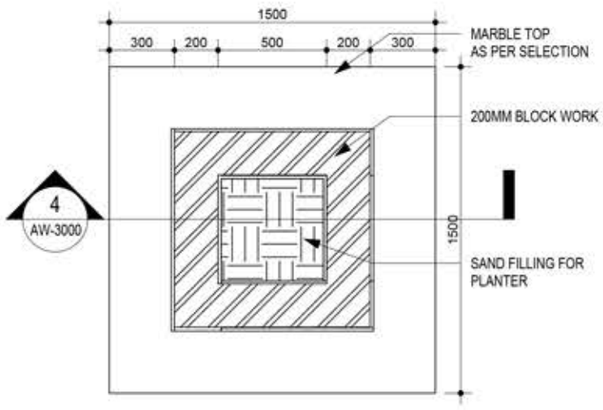
LOD 400





3 AW-3000 PLANTER FIRNTIURE

1 : 25



6 AW-3000 PLANTER WALL

1 : 25

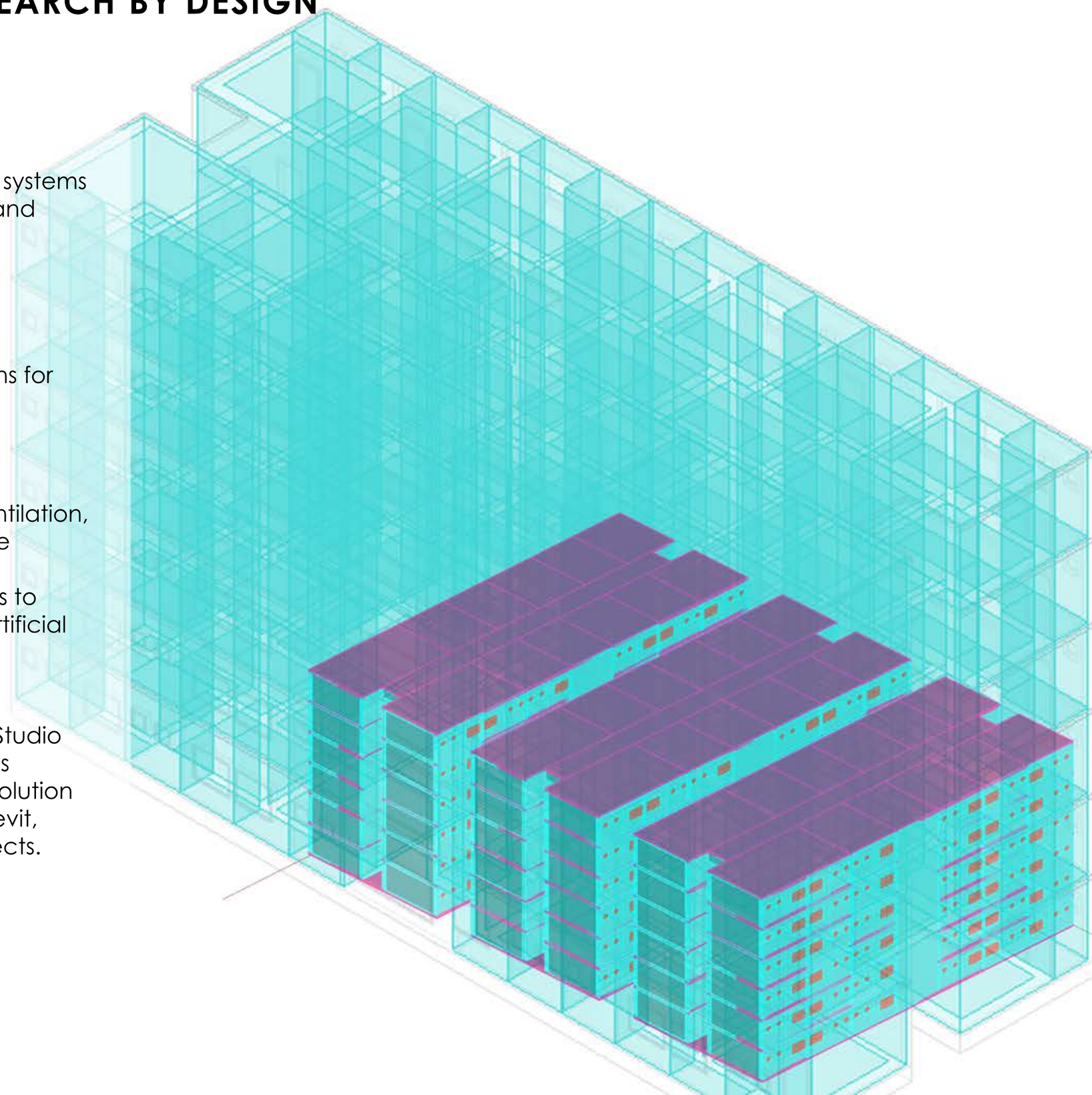
03. BIM-ENABLED WINDOW OPTIMIZATION FOR SLUM HOUSING DEVELOPMENT - RESEARCH BY DESIGN

Objective:
Design cost-effective, sustainable window systems to enhance thermal comfort, ventilation, and daylighting in slum housing.

Key focus areas:
Utilizing BIM for optimized window design. Enhancing natural ventilation and thermal performance. Leveraging digital simulations for energy efficiency.

Project Overview:
Lallubhai Compound, a Mumbai slum rehabilitation project, suffers from poor ventilation, high indoor temperatures, and inadequate daylight. This research explores BIM-driven solutions, optimizing window configurations to improve airflow and reduce reliance on artificial cooling and lighting.

Methodology:
Using Rhino for 3D modeling and Climate Studio for daylight and energy simulations, various window designs were analyzed. The final solution was integrated into a BIM workflow with Revit, ensuring scalability for urban housing projects.



01. Problem Identification and Climate Analysis

Thermal discomfort, poor air circulation, and insufficient natural light are common in slum housing.
Conventional windows fail to address energy efficiency, increasing heat buildup and the need for artificial ventilation.

Climate Data for Mumbai

Climate Type: Hot and humid with temperatures averaging 30°C.

Challenges: High heat gain, inadequate ventilation, and solar exposure, especially in densely packed urban housing.

02. Design Methodology and Approach

Research-by-Design Process

Modeling: Created housing unit models in Rhino with multiple window scenarios.

Simulation: Used Climate Studio for daylight, airflow, and energy analysis.

Optimization: Improved window configurations iteratively to enhance performance.

BIM Integration: Integrated final solutions into Revit for seamless design coordination.

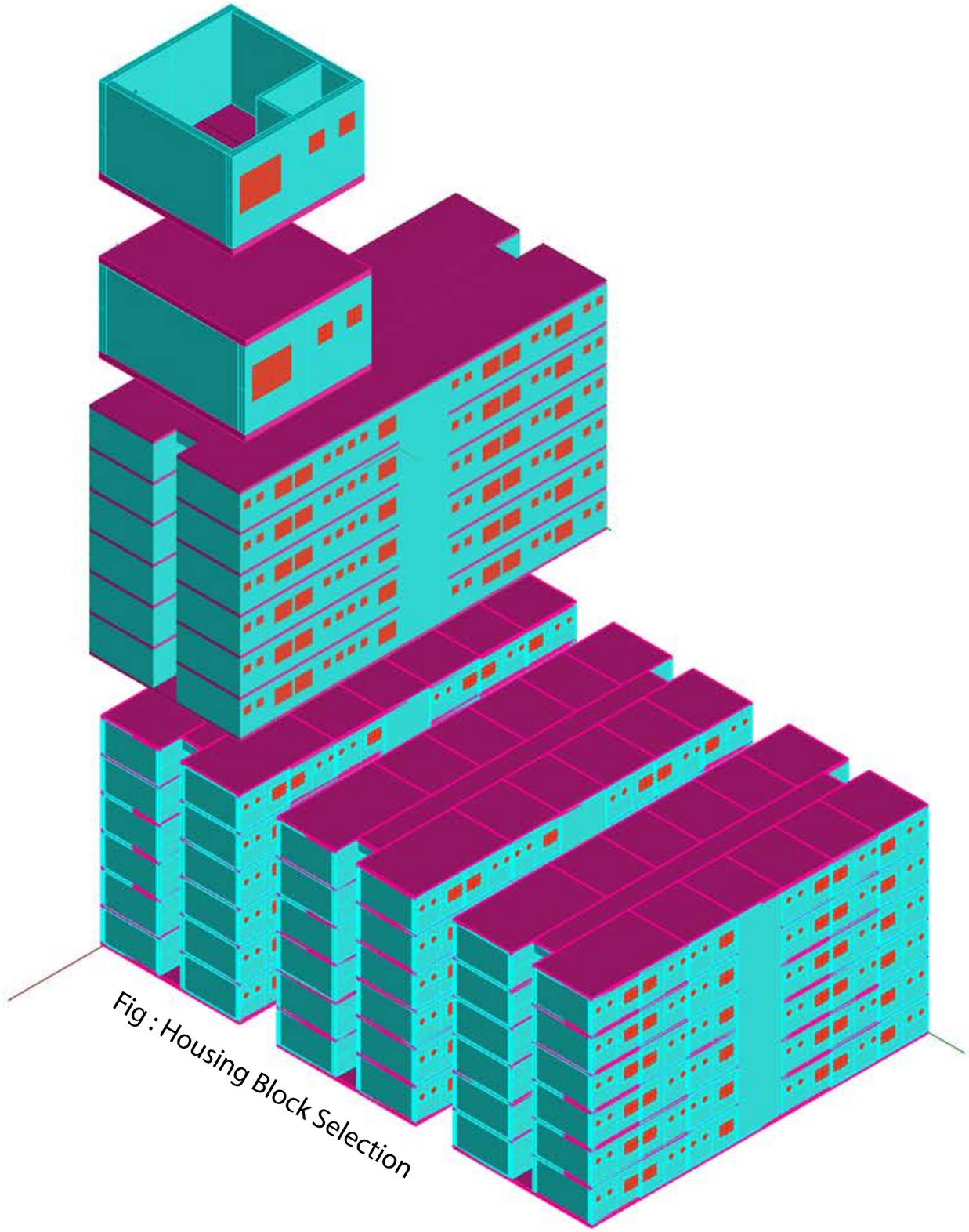


Fig : Housing Block Selection

03. Design Iterations and Alternatives

Base Case Analysis

Unit Selected: Southwest corner unit of a G+5 block in Lallubhai Compound.
Objective: Assess daylight performance, energy efficiency, and overexposure to identify areas for improvement.
High heat gain, causing indoor discomfort.

Key Findings:

Daylight Autonomy:
Achieved only 13.7% of the time, significantly below the recommended benchmark.
This highlights a heavy dependence on artificial lighting, reducing energy efficiency.

Overexposure to Sunlight:
7.1% overexposure was recorded, which is within the acceptable limit of 10%.

Energy Use Intensity (EUI):
47 kWh/m², reasonable given the absence of heating and cooling systems typical of low-cost housing.
Most low-income residents rely solely on natural ventilation, making window optimization critical.

Facade Orientation:
Although the facade faces south, minimal natural daylight was achieved due to poor window design, further increasing reliance on artificial lighting.

Conclusion:
The existing window design leaves significant room for improvement. Optimizing window size, placement, and shading can enhance daylighting and ventilation while minimizing energy use and reliance

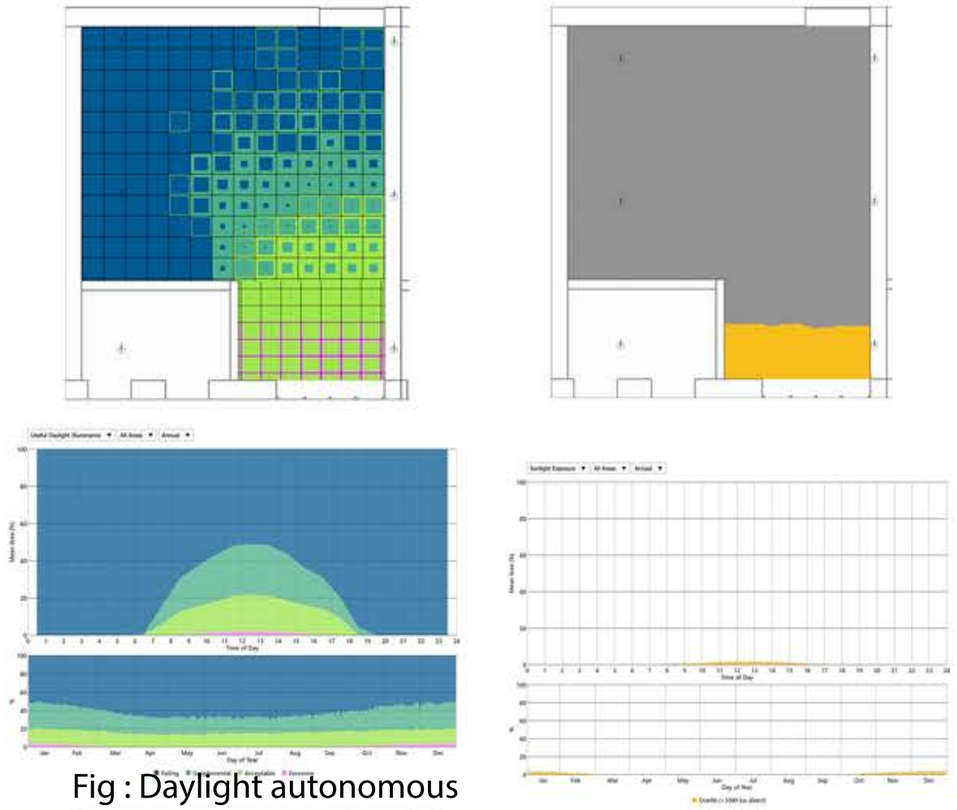
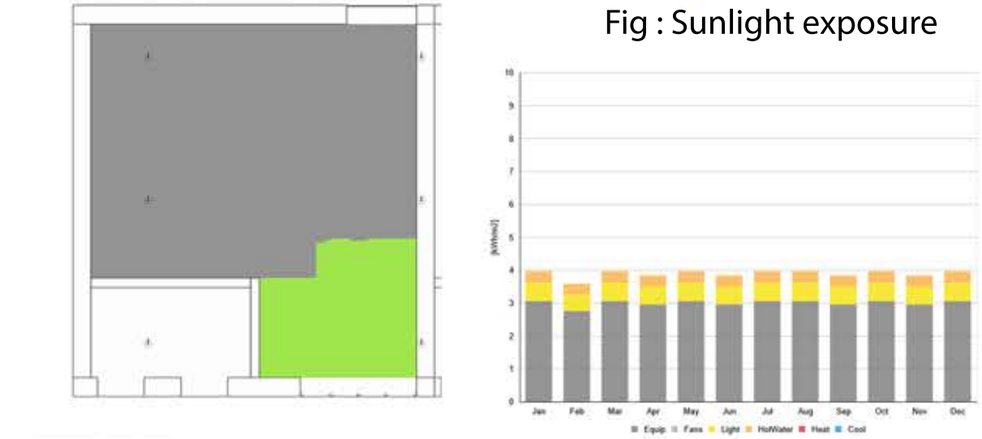


Fig : Daylight autonomous

Fig : Sunlight exposure



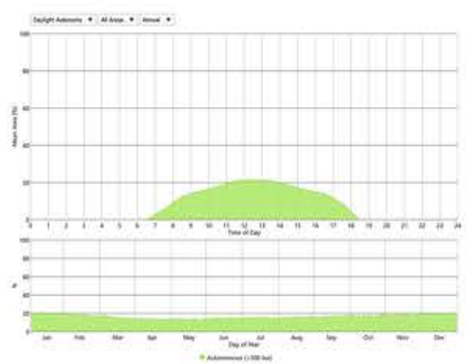


Fig : Useful daylight illuminance

Fig : EUI Value

04. Results and Analysis

Design:
Integrated louvers and shading devices in larger window openings.

Objective:
Control heat gain while maximizing daylight and ventilation.

Simulation Results:
Ventilation: Effective air circulation with operable louvers.
Daylight: High daylight autonomy without excessive glare.
Heat Gain: Substantial reduction in heat gain through shading control.

Conclusion:
This was the optimal solution, balancing daylight, ventilation, and thermal comfort effectively.

Optimized Design Outcome:
Daylight Autonomy improved from 13.7% to 56.4%.
Energy Use Intensity reduced by 2 kWh/m².
Thermal comfort significantly enhanced with controlled heat gain.

05. Conclusion and Future Research

Summary: The BIM-enabled window optimization demonstrated significant improvements in thermal comfort, natural ventilation, and daylighting. The integration of BIM tools enabled precise design iterations and performance analysis, resulting in practical, scalable solutions for slum housing.

Future Research:
Explore solar panel integration with window designs and urban-scale applications of BIM for slum redevelopment.

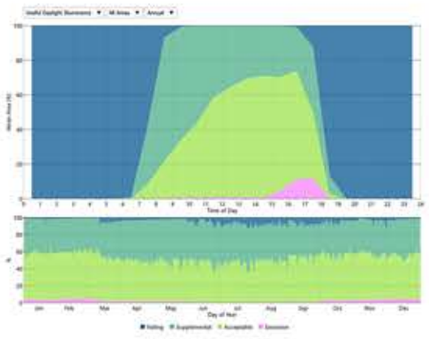


Fig : Daylight autonomous

Fig : Useful daylight illuminance

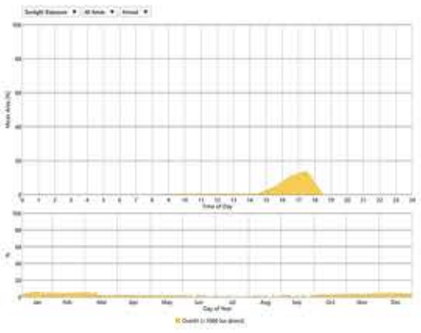
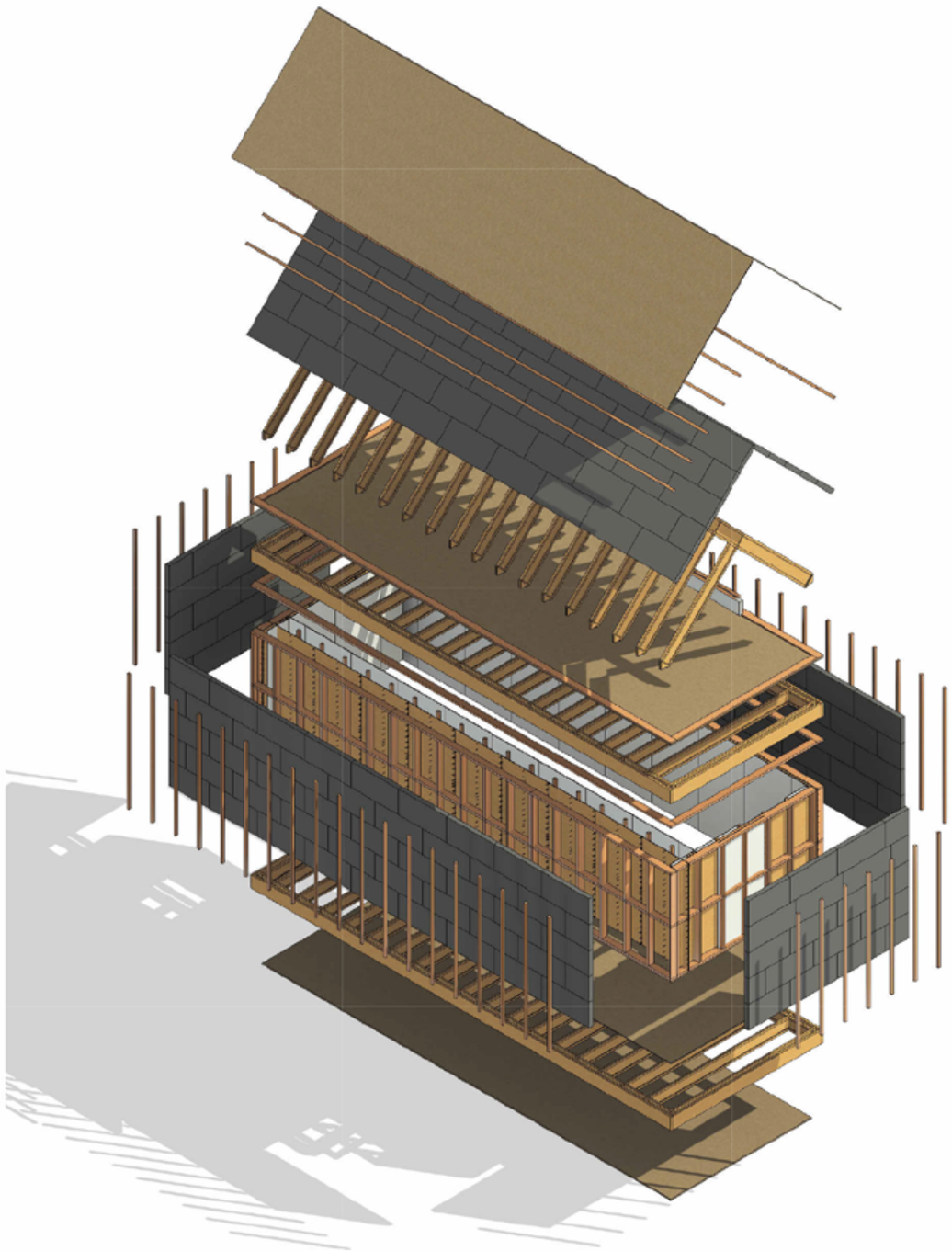


Fig : Sunlight exposure

Fig : Graph comparing before and after performance for daylighting and energy use.



04. WOODEN PORTABLE HOUSE

Parametric BIM Modelling for Modular Timber Prototypes

This project was developed for Hoose Pvt Ltd, Glasgow, as part of their work on portable and modular timber housing systems. The focus of the project was on developing a flexible BIM framework to support ongoing prototyping, rather than producing a single fixed house design.

The design team's priorities included material performance, thermal resistance (R-values), airtightness, and construction detailing, aligned with applicable building standards. Due to the evolving nature of the product, the house was not defined by a fixed overall dimension. Instead, a standardised timber structural framing system was used as the basis for testing multiple prototype configurations.

My role in this project was as a BIM Parametric Modeller, responsible for proposing and implementing a parametric modelling strategy in Revit. I developed floor, wall, and roof systems as independent parametric families, with all material layers modelled separately. This allowed dimensional changes and material adjustments to be applied consistently across all prototypes without re-modelling.

The resulting BIM model functions as a scalable, prototype-ready system, enabling rapid iteration, controlled material variation, and consistent detailing as the product continues to evolve.

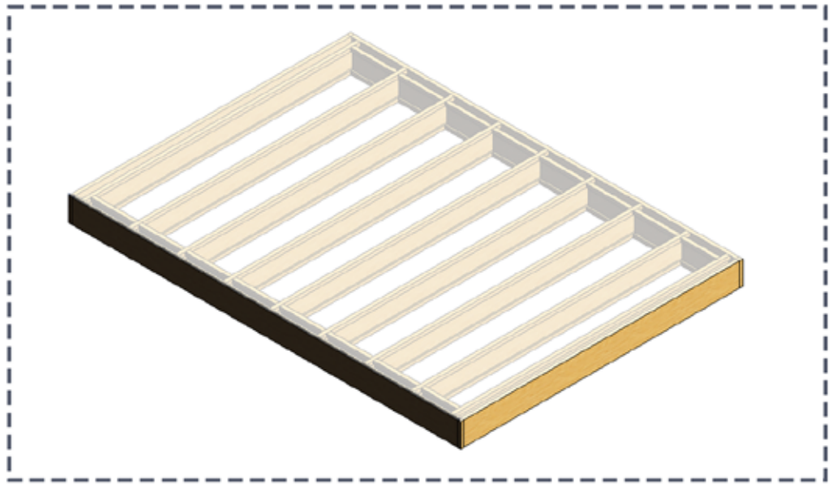
Client: Hoose Pvt Ltd, Glasgow
Role: BIM Parametric Modeller
Software: Revit

PARAMETRIC FLOOR SYSTEM – HOST & NESTED FAMILIES

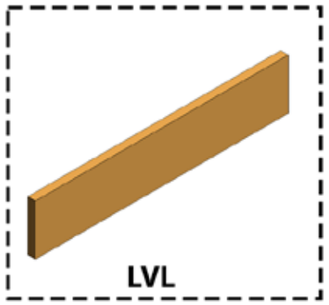
What is this system?
This floor system is developed as a host family containing multiple shared nested structural families, designed to support modular timber construction and rapid prototyping.

The host family controls the overall system dimensions, while individual nested families represent specific structural and material components. The system can be stretched in all directions, with joist spacing, depth, and quantity automatically recalculated based on the overall width and length.

HOST FAMILY

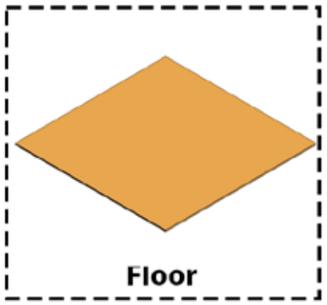


NESTED FAMILY

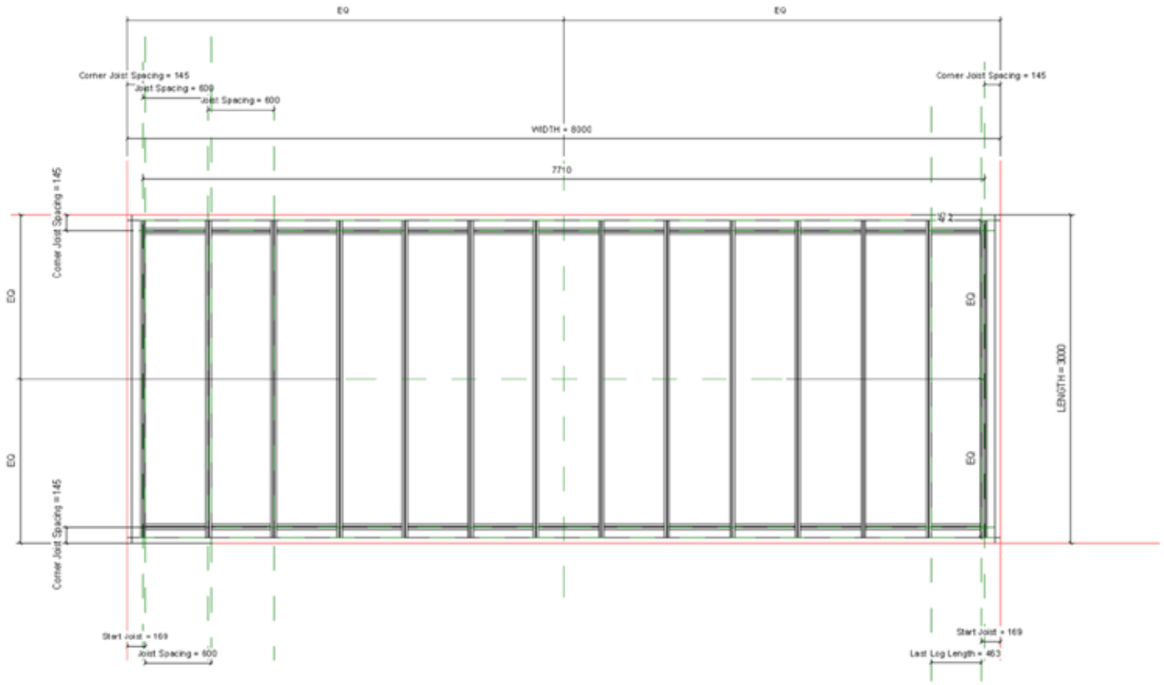


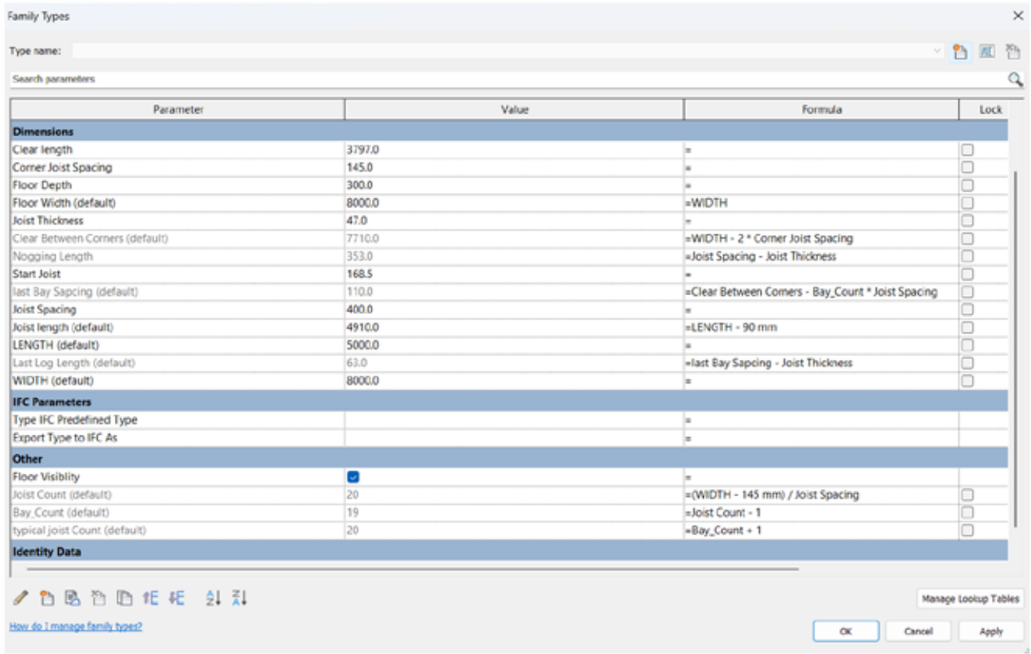
LVL

Open-Web



Floor





Family Types

Type name:

Search parameters

Parameter	Value	Formula	Lock
Dimensions			
Clear length	3797.0	=	☐
Corner Joist Spacing	145.0	=	☐
Floor Depth	300.0	=	☐
Floor Width (default)	8000.0	=WIDTH	☐
Joist Thickness	47.0	=	☐
Clear Between Corners (default)	7710.0	=WIDTH - 2 * Corner Joist Spacing	☐
Nogging Length	353.0	=Joist Spacing - Joist Thickness	☐
Start Joist	168.5	=	☐
last Bay Sapcing (default)	110.0	=Clear Between Corners - Bay_Count * Joist Spacing	☐
Joist Spacing	400.0	=	☐
Joist length (default)	4910.0	=LENGTH - 90 mm	☐
LENGTH (default)	5000.0	=	☐
Last Log Length (default)	63.0	=last Bay Sapcing - Joist Thickness	☐
WIDTH (default)	8000.0	=	☐
IFC Parameters			
Type IFC Predefined Type		=	
Export Type to IFC As		=	
Other			
Floor Visiblity	☑	=	
Joist Count (default)	20	=(WIDTH - 145 mm) / Joist Spacing	☐
Bay_Count (default)	19	=Joist Count - 1	☐
typical joist Count (default)	20	=Bay_Count + 1	☐
Identity Data			

Manage Lookup Tables

How do I manage family types?

OK Cancel Apply

Although designed for modular and portable housing, this system can be reused for other timber-based construction typologies where repeatability, accuracy, and flexibility are required.

All nested structural components within the floor system are created as shared families, meaning they remain individually identifiable within the Revit database. When the overall floor dimensions are modified, all associated elements update automatically while preserving data integrity.

Because the nested families are shared:

LVL beams remain individually schedulable

Joists update in length and quantity automatically

Floor deck dimensions and volumes adjust instantly

This allows accurate material take-offs across multiple design iterations.

<LVL>

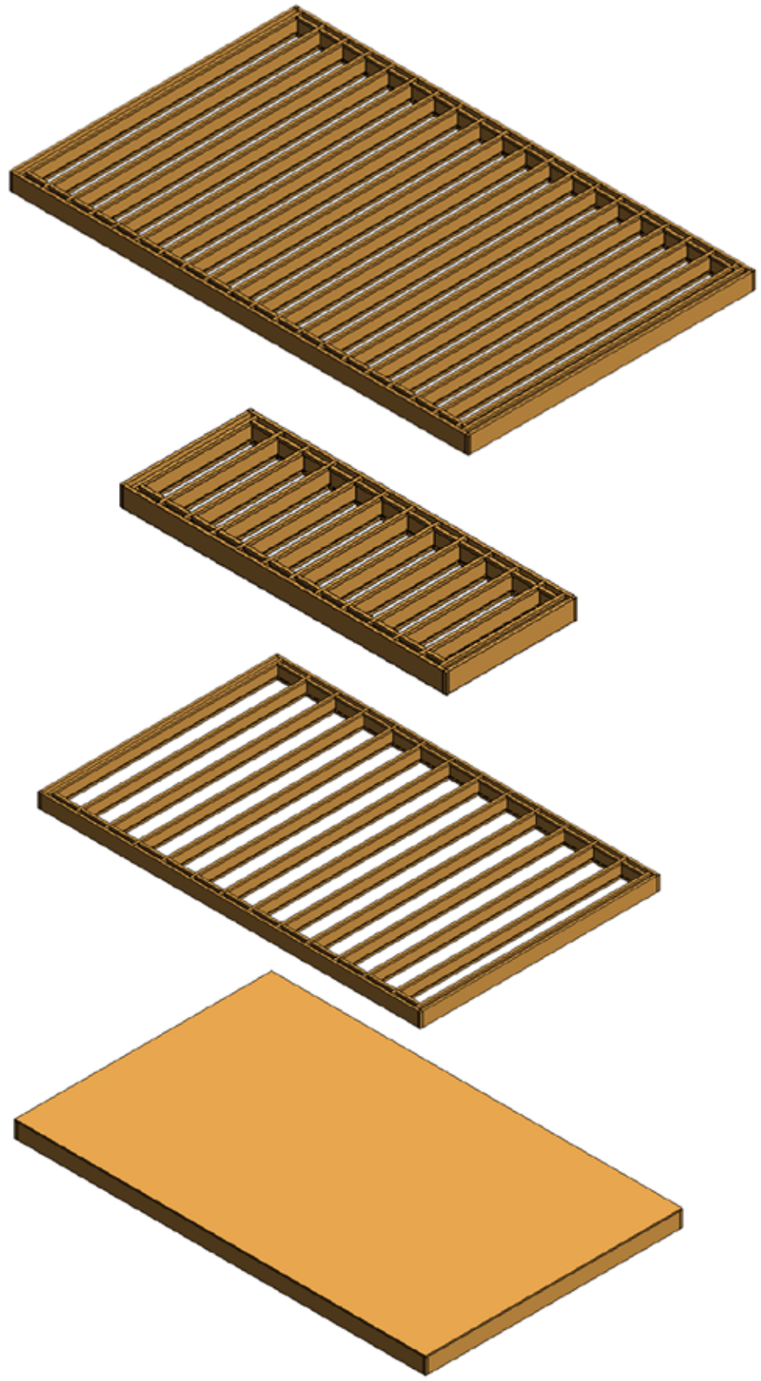
A	B	C	D	E	F
Family and Type	LVL Depth	LVL_Length	LVL_Width	LVL_Volume	LVL_Material
LVL: LVL	300	8000	45	0.11 m³	Laminated Veneer Lumber
LVL: LVL	300	6000	45	0.11 m³	Laminated Veneer Lumber
LVL: LVL	300	5000	45	0.07 m³	Laminated Veneer Lumber
LVL: LVL	300	5000	45	0.07 m³	Laminated Veneer Lumber
Grand total: 4				0.35 m³	

<Joist>

A	B	C	D	E	F
Family and Type	Joist_Depth	Joist_Length	Volume	Joist_Material	Joist_Manufacture
JJI Joist I Wooden	300	4910	0.03 m³	Glue-Laminated Timber	Hoose
JJI Joist I Wooden	300	4910	0.03 m³	Glue-Laminated Timber	Hoose
JJI Joist I Wooden	300	4910	0.03 m³	Glue-Laminated Timber	Hoose
JJI Joist I Wooden	300	4910	0.03 m³	Glue-Laminated Timber	Hoose
JJI Joist I Wooden	300	4910	0.03 m³	Glue-Laminated Timber	Hoose
JJI Joist I Wooden	300	4910	0.03 m³	Glue-Laminated Timber	Hoose
JJI Joist I Wooden	300	4910	0.03 m³	Glue-Laminated Timber	Hoose
JJI Joist I Wooden	300	4910	0.03 m³	Glue-Laminated Timber	Hoose
JJI Joist I Wooden	300	4910	0.03 m³	Glue-Laminated Timber	Hoose
JJI Joist I Wooden	300	4910	0.03 m³	Glue-Laminated Timber	Hoose
JJI Joist I Wooden	300	4910	0.03 m³	Glue-Laminated Timber	Hoose
JJI Joist I Wooden	300	4910	0.03 m³	Glue-Laminated Timber	Hoose
JJI Joist I Wooden	300	4910	0.03 m³	Glue-Laminated Timber	Hoose
JJI Joist I Wooden	300	4910	0.03 m³	Glue-Laminated Timber	Hoose
Grand total: 14			0.44 m³		

<Floor>

A	B	C	D	E	F	G
Family and Type	Floor Deck Length	Floor Deck Width	Floor Deck Thickne	Floor_Volume	Floor_Material	Floor_Manufacturar
Plywood Floor: Ply	5000	8000	30	1.20 m³	Plywood, Sheathing	Hoose Design
Grand total: 1						



System-Level Control

When the overall dimensions of the engineered floor system are modified:

- LVL lengths update automatically
- Joist quantities and lengths regenerate
- Floor deck dimensions and volumes adjust accordingly

Adjustable Parameters

- Joist spacing

- System length, width, and depth

- Structural member dimensions

Visibility Control (Documentation & Coordination)
The engineered floor system includes Yes/No visibility parameters that allow key components to be toggled on/off without duplicating families or creating separate views. This enables quick switching between presentation, coordination, and detailing outputs while keeping the model fully data-driven.

Visibility parameters can control:

LVL edge beams

Joists / open-web members

Floor deck / sheathing layer

Perimeter framing / secondary elements

PARAMETRIC WALL PANEL SYSTEM & AUTOMATED SCHEDULING

Parametric Timber Wall Panel Family

This sheet presents a parametric timber wall panel family developed in Revit to support rapid prototyping of modular housing layouts. Panel dimensions and stud configuration are driven by parameters, allowing the same family to generate multiple panel types without remodelling.

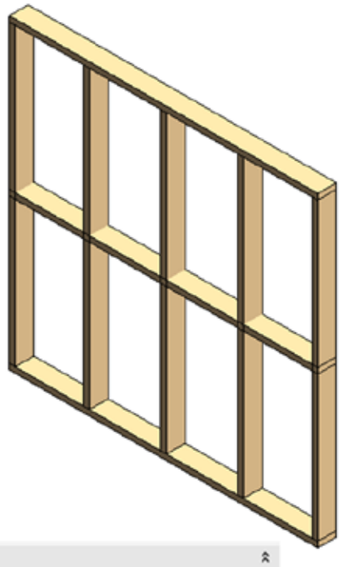
Key Parameters (Edit Type / Instance)

Panel Length & Height (prototype-dependent)

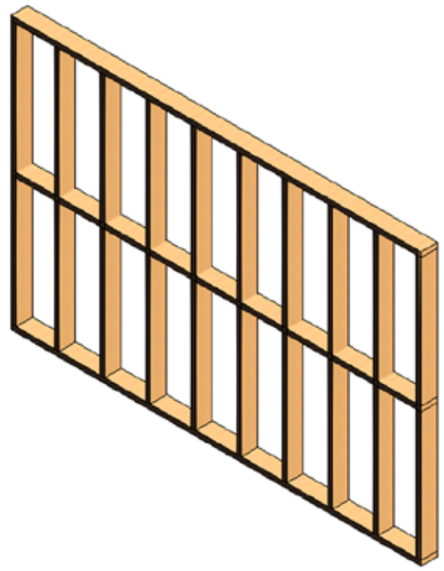
Edge Gap / Mid Gap controls (panelisation logic)

Stud spacing / stud layout rules

Timber section & material specification (e.g., Timber grade)



Dimensions	
Avaiable Length	1800.0
Edge Gap	600.0
Mid Gap	600.0
Panel Height	2390.0
Panel Length	2400.0
Volume	



Automated Quantification

- Live stud schedules (counts, sizes, lengths)
- Material volumes per panel type
- Specification tracking (timber grade / material assignment)
- Faster checking across multiple prototype variations

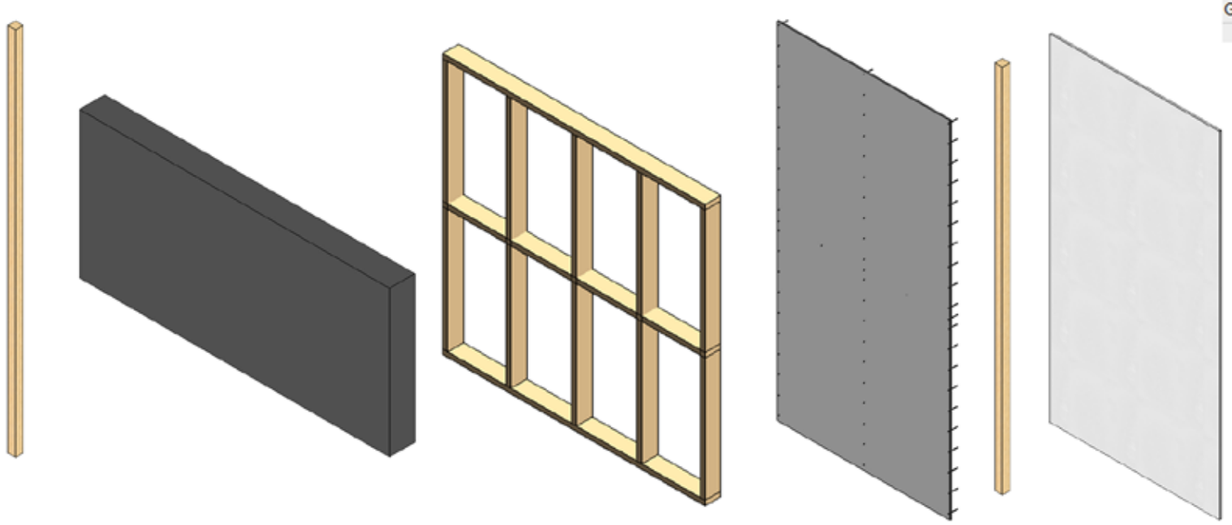
Dimensions	
Avaiable Length	3200.0
Edge Gap	400.0
Mid Gap	400.0
Panel Height	2390.0
Panel Length	3600.0
Volume	

<Stud Schedule>

A	B	C	D	E	F	G	H
Family and Type	Stud_Length	Stud_Height	Stud_Depth	Stud_Width	Stud_volume	Total Nails	Stud_Material
3600 x 2390 Woode						40	
44 x 145 Wooden S		2302	145	44	0.01 m³		Timber, C24
44 x 145 Wooden S		2302	145	44	0.01 m³		Timber, C24
44 x 145 Wooden S		2302	145	44	0.01 m³		Timber, C24
44 x 145 Wooden S		2302	145	44	0.01 m³		Timber, C24
44 x 145 Wooden S		2302	145	44	0.01 m³		Timber, C24
H.Stud: H.Stud	2400	44		145	0.02 m³		
H.Stud: H.Stud	2400	44		145	0.02 m³		
H.Stud: H.Stud	2400	44		145	0.02 m³		
Grand total: 9					0.12 m³	40	

<Stud Schedule>

A	B	C	D	E	F	G	H
Family and Type	Stud_Length	Stud_Height	Stud_Depth	Stud_Width	Stud_volume	Total Nails	Stud_Material
3600 x 2390 Woode						80	
44 x 145 Wooden S		2302	145	44	0.01 m³		Timber, C24
44 x 145 Wooden S		2302	145	44	0.01 m³		Timber, C24
44 x 145 Wooden S		2302	145	44	0.01 m³		Timber, C24
44 x 145 Wooden S		2302	145	44	0.01 m³		Timber, C24
44 x 145 Wooden S		2302	145	44	0.01 m³		Timber, C24
H.Stud: H.Stud	3600	44		145	0.02 m³		
H.Stud: H.Stud	3600	44		145	0.02 m³		
H.Stud: H.Stud	3600	44		145	0.02 m³		
44 x 145 Wooden S		2302	145	44	0.01 m³		Timber, C24
44 x 145 Wooden S		2302	145	44	0.01 m³		Timber, C24
44 x 145 Wooden S		2302	145	44	0.01 m³		Timber, C24
44 x 145 Wooden S		2302	145	44	0.01 m³		Timber, C24
44 x 145 Wooden S		2302	145	44	0.01 m³		Timber, C24
Grand total: 14					0.22 m³	80	

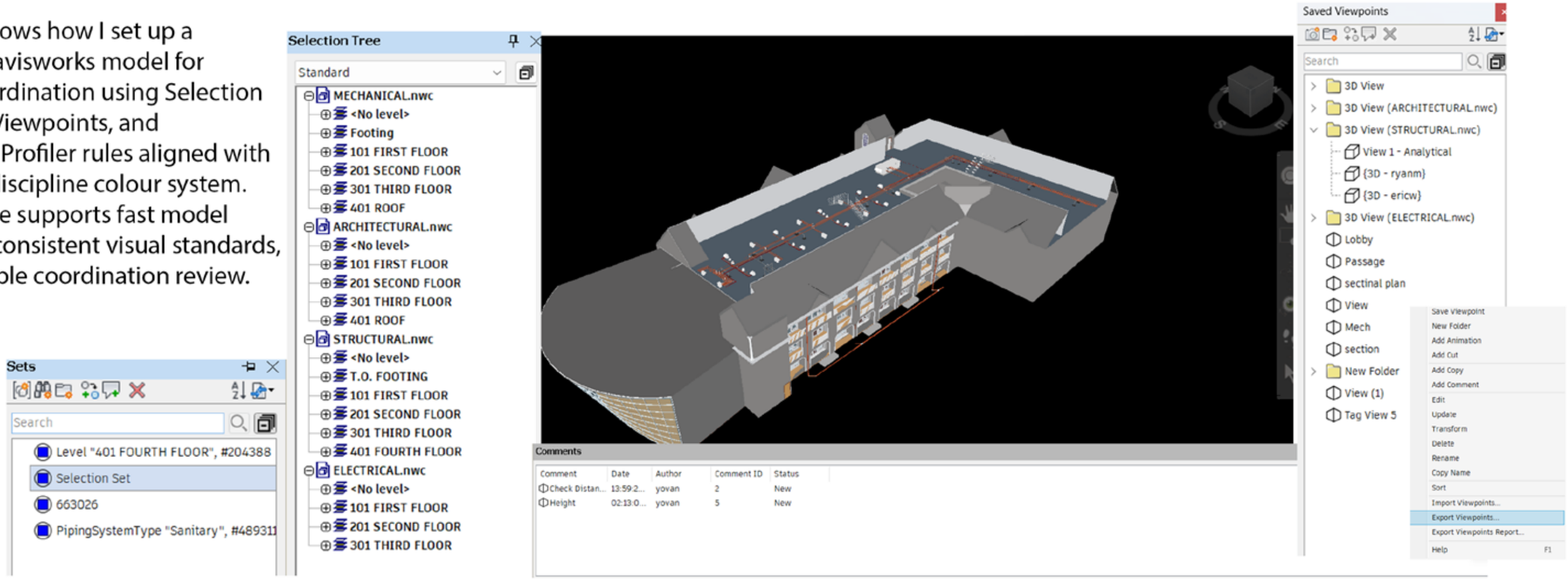


Frame and layers modelled as distinct elements to support detailing and coordination

05.NAVISWORK

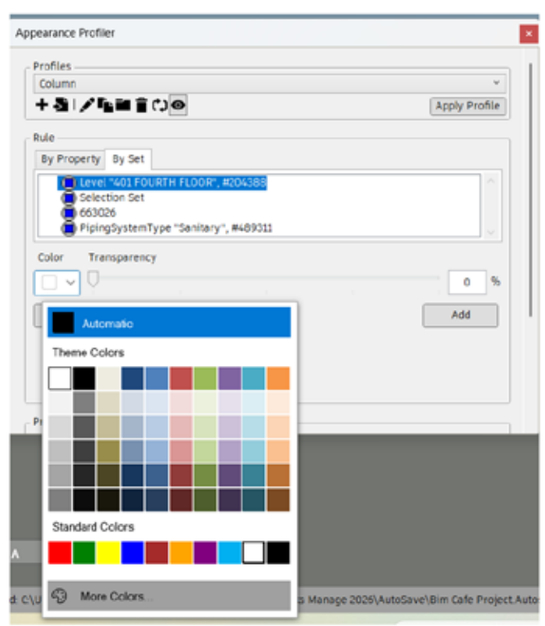
Navisworks Manage – Coordination Setup (Sets, Viewpoints & BEP Colour Coding)

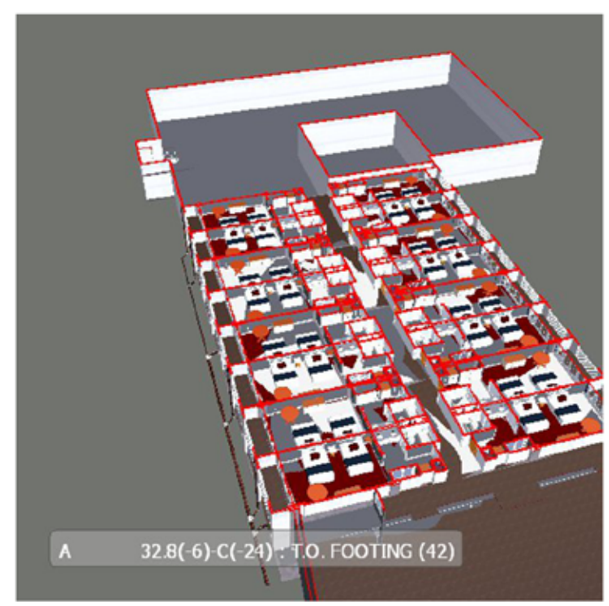
This page shows how I set up a federated Navisworks model for efficient coordination using Selection Sets, Saved Viewpoints, and Appearance Profiler rules aligned with a BEP-style discipline colour system. This structure supports fast model navigation, consistent visual standards, and repeatable coordination review.



BEP Colour Code (Appearance Profiler)

DISCIPLINE	COLOUR	R	G	B	COLOUR
Architecture	White	255	255	255	
Structural Steel	Maroon	165	0	33	
Concrete	Gray	192	192	192	
HVAC Equipment	Orange	255	191	0	
HVAC Supply Duct/Diffuser	Blue	0	0	255	
HVAC Return Duct/Diffuser	Magenta	255	0	255	
HVAC Pipe	Orange	255	191	0	
Electrical Equipment	Dark Yellow	199	199	0	
Electrical Conduits	Light Yellow	255	255	190	
Communication Conduit	Light Blue	194	240	255	
Electrical Cable Tray	Dark Orange	224	112	0	
Electrical Lighting	Yellow	255	255	0	
Plumbing Water	Cyan	0	255	255	
Plumbing Sewer	Magenta	255	0	255	
Plumbing Storm Drain	Green	0	255	0	
Fire Fighting	Red	255	0	0	
Pneumatic Tube	Dark Green	95	127	0	
Equipment (Medical)	Brown	127	95	0	
Medical Gas	Light Green	191	255	127	
Security Systems	Orange	255	191	0	
Fire Alarm	Fuchsia	255	0	127	



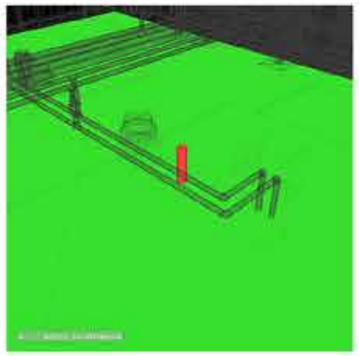


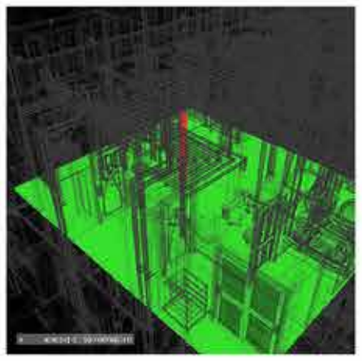
BIM Value

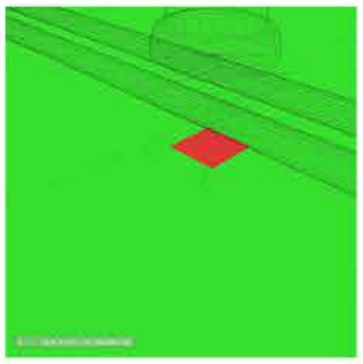
- Faster model navigation and scope control
- Consistent discipline visual standards
- Clear issue communication through viewpoints
- Repeatable workflow for weekly coordination reviews

Navisworks Manage – Clash Detection, Reporting & Model Publishing

This page demonstrates the coordination workflow from clash test creation to issue reporting and publishing a review model for stakeholders. Outputs include XML clash reports and an exported NWD for viewing.





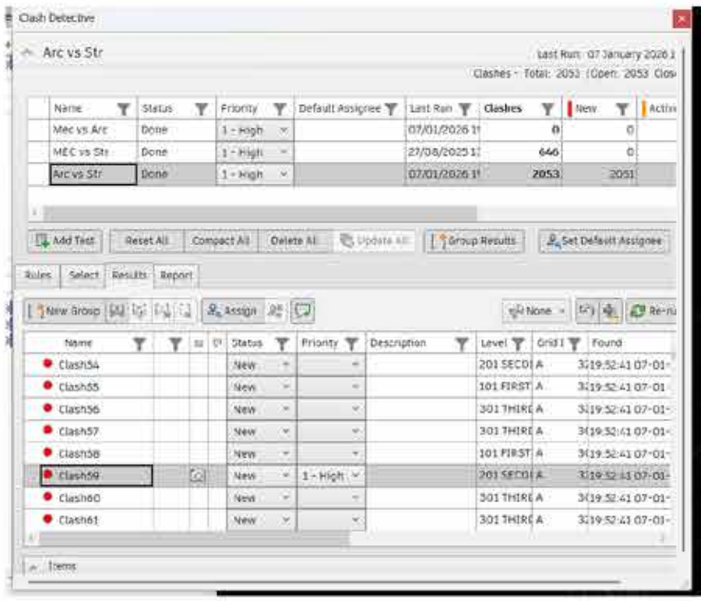


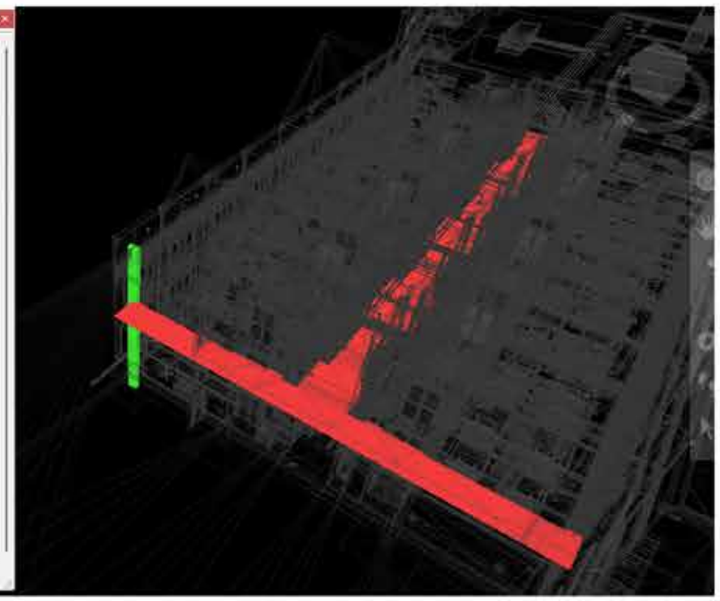
Clash tests were created between federated models (e.g., Architecture vs MEP / Structure) and reviewed using isolated views and prioritised clash grouping to support resolution.

Clash results were exported as XML to support structured reporting, traceability, and coordination feedback. Each clash includes element data, location

Publish Model for Viewing (.NWD)

Published the federated project as an NWD to share a controlled coordination snapshot for review, enabling stakeholders to view and navigate without authoring files.



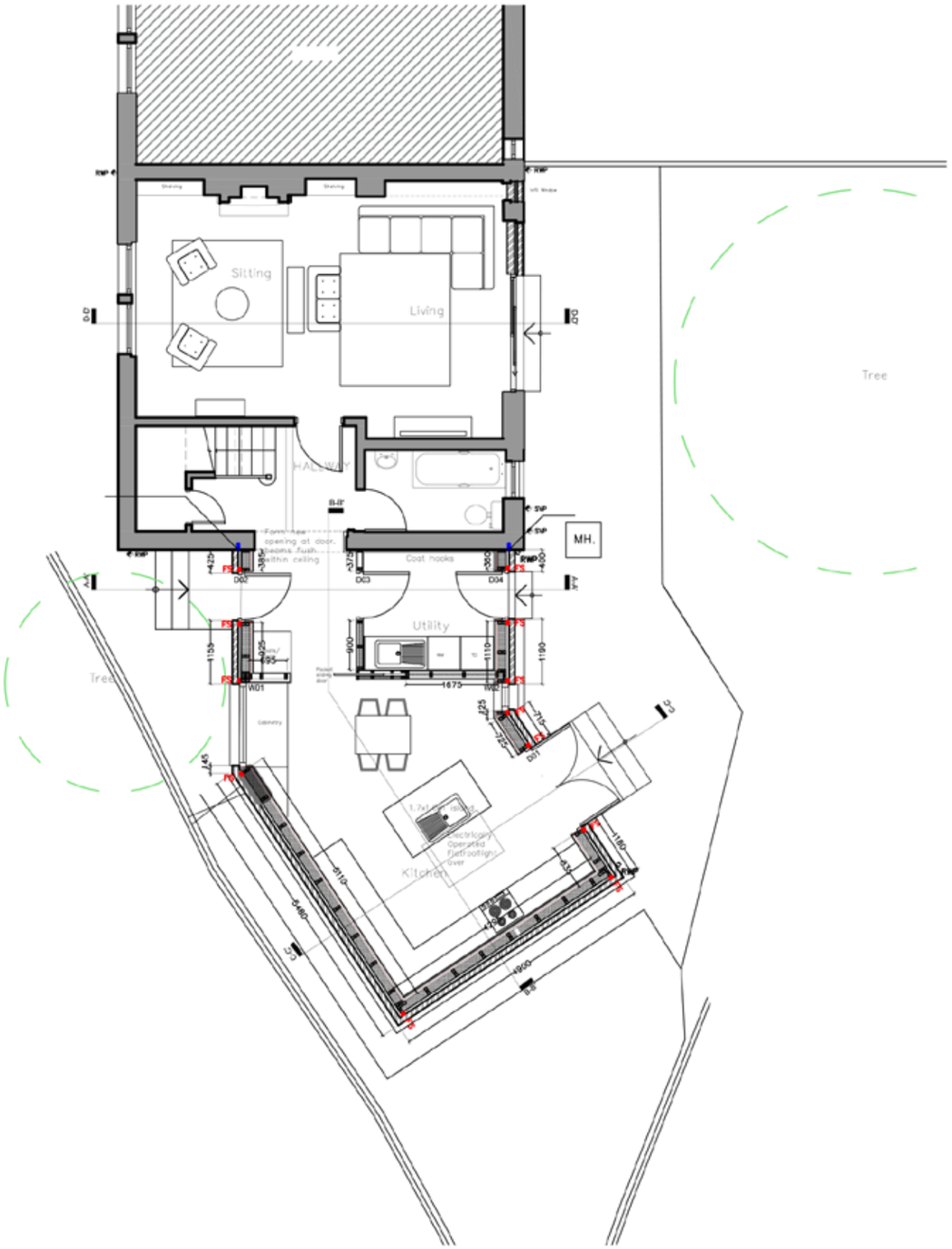


ARCHITECTURAL WORKS

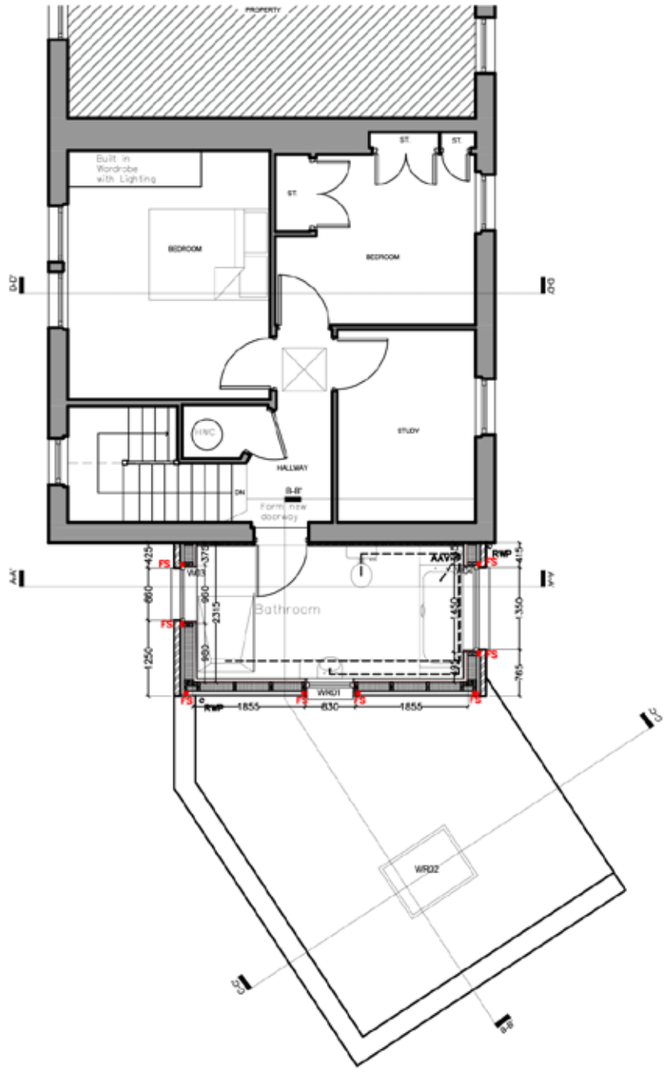
01. WAVERLY CRESCENT STIRLING
Internal Alterations and Extension to House

Client: Hearth Architects
Role: Architectural Technician

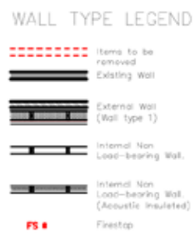
Proposed Plan

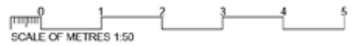


Ground Floor Plan

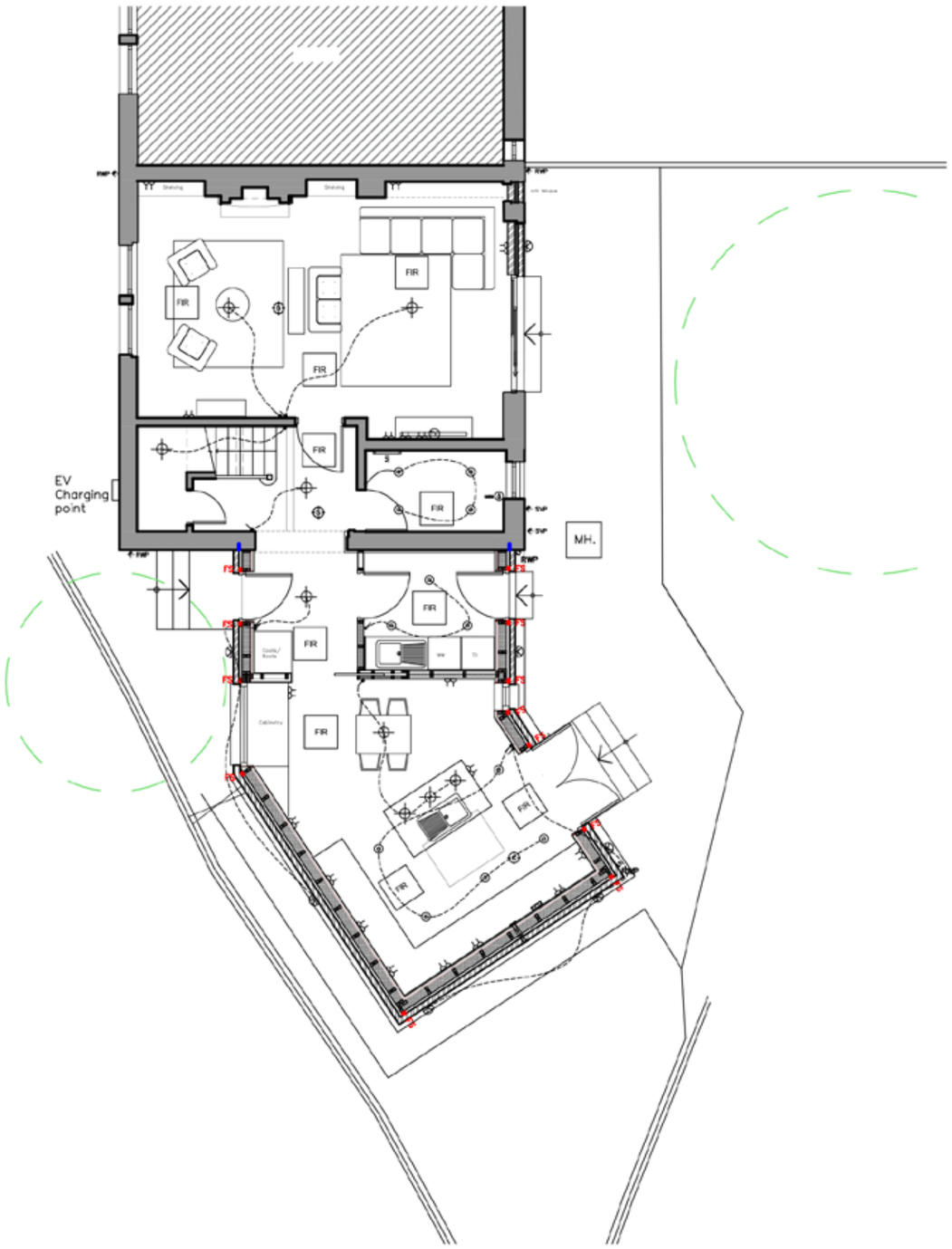


First Floor Plan

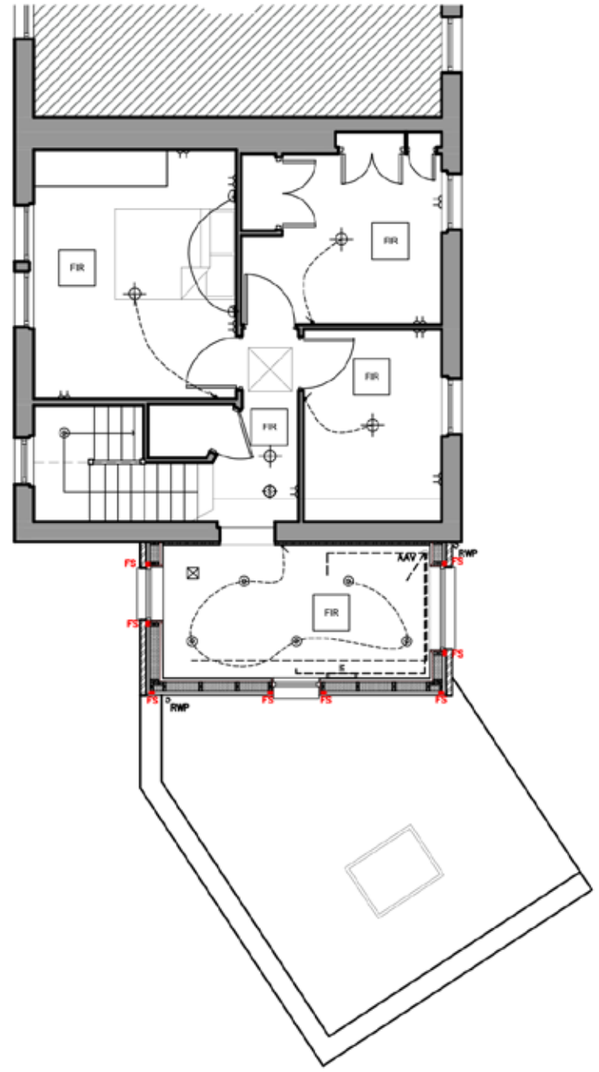




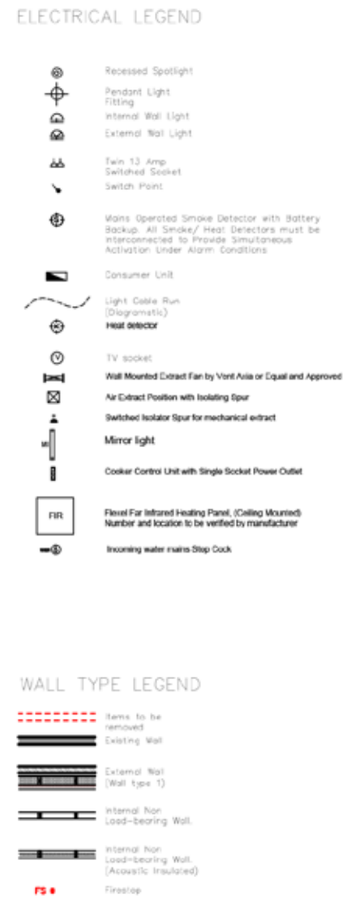
Electrical Layout



Ground Floor Plan

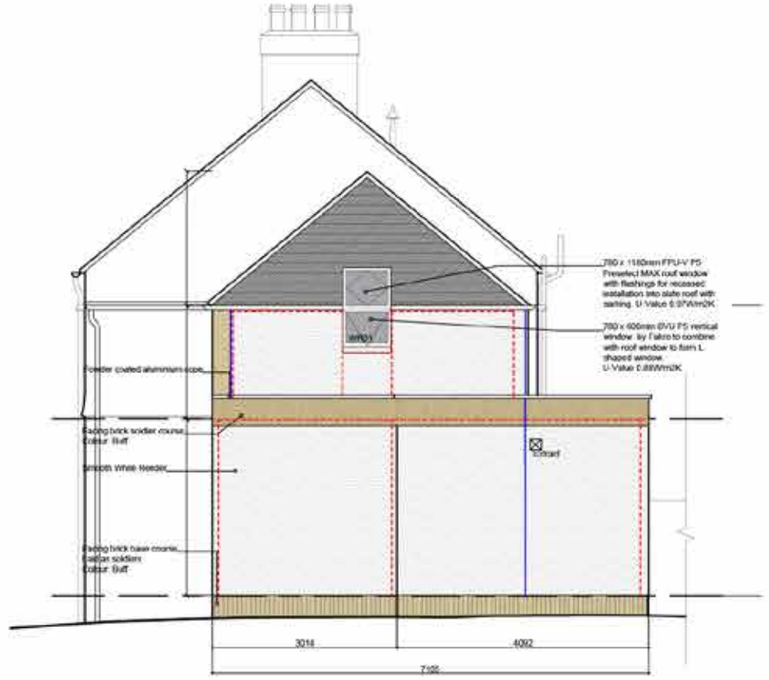


First Floor Plan



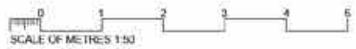
Elevation

Front Elevation

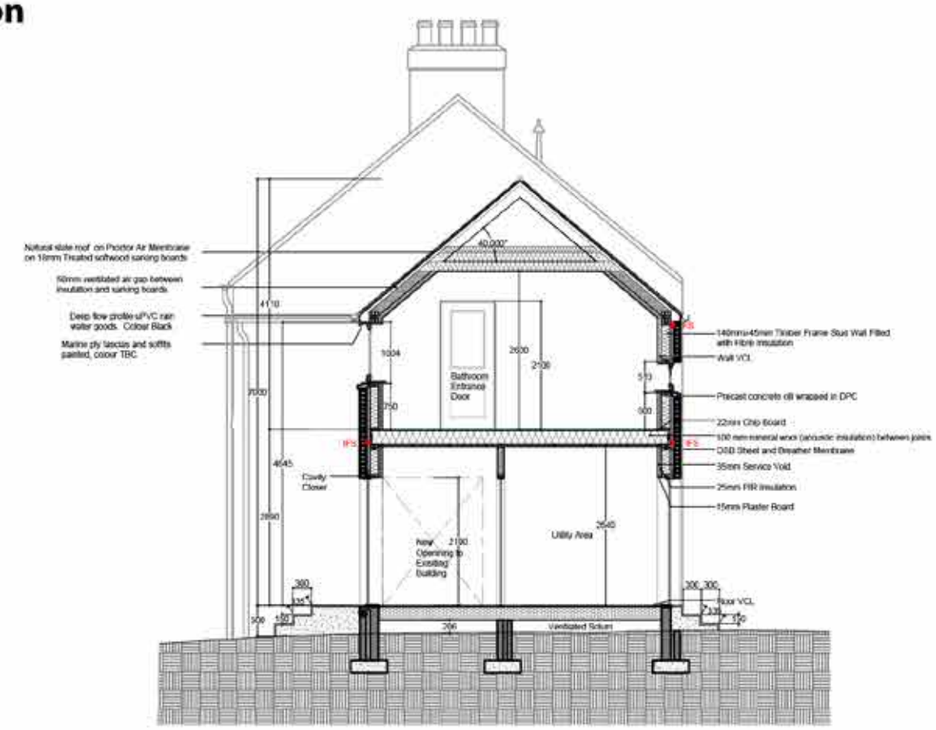


Side Elevation

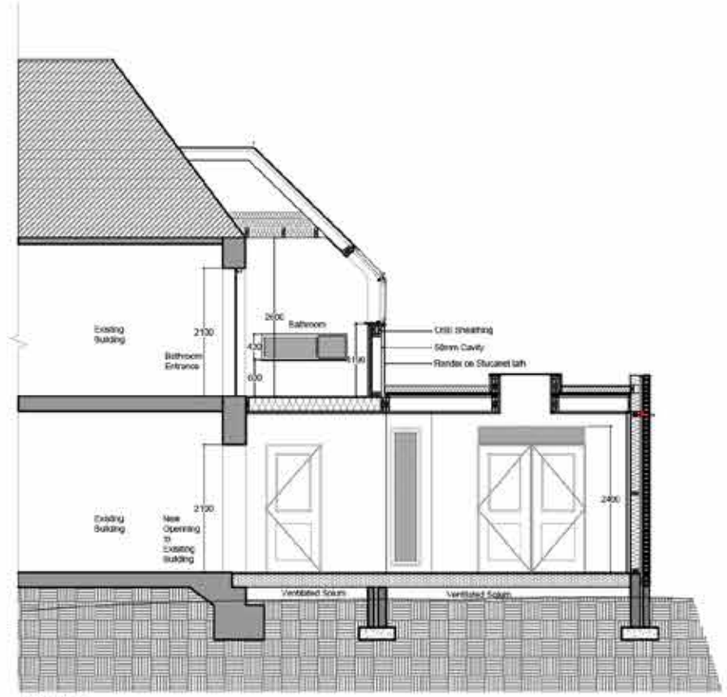
Rear Elevation



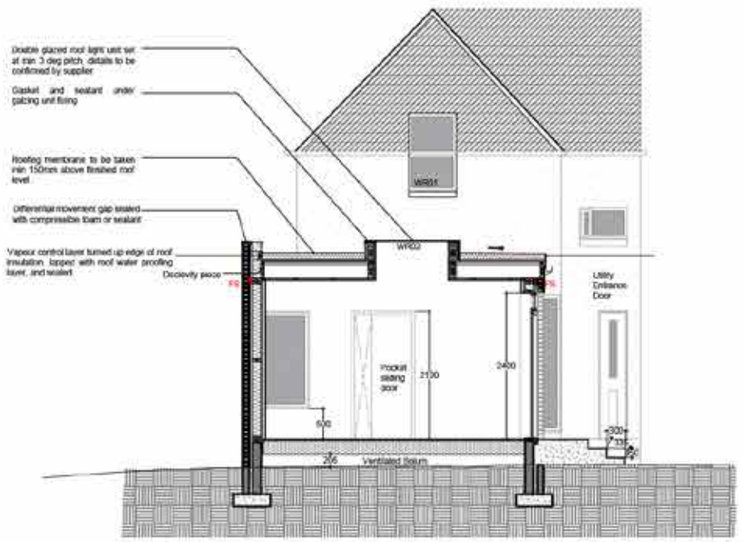
Section



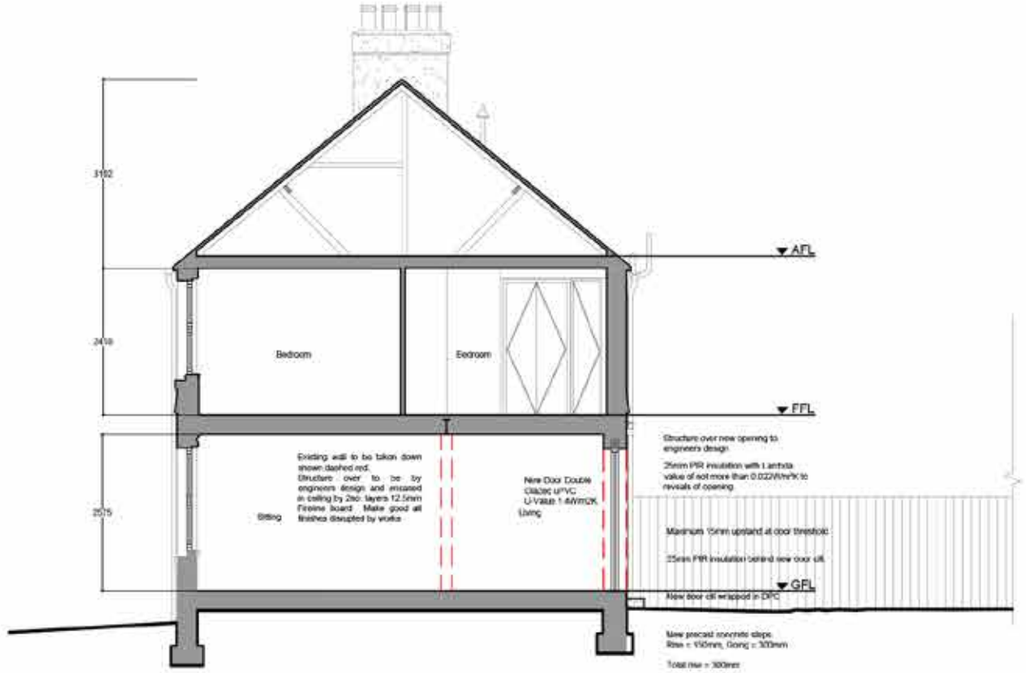
Section - AA' 1:50



Section - BB' 1:50



Section - CC 1:50



Section- DD' 1:50

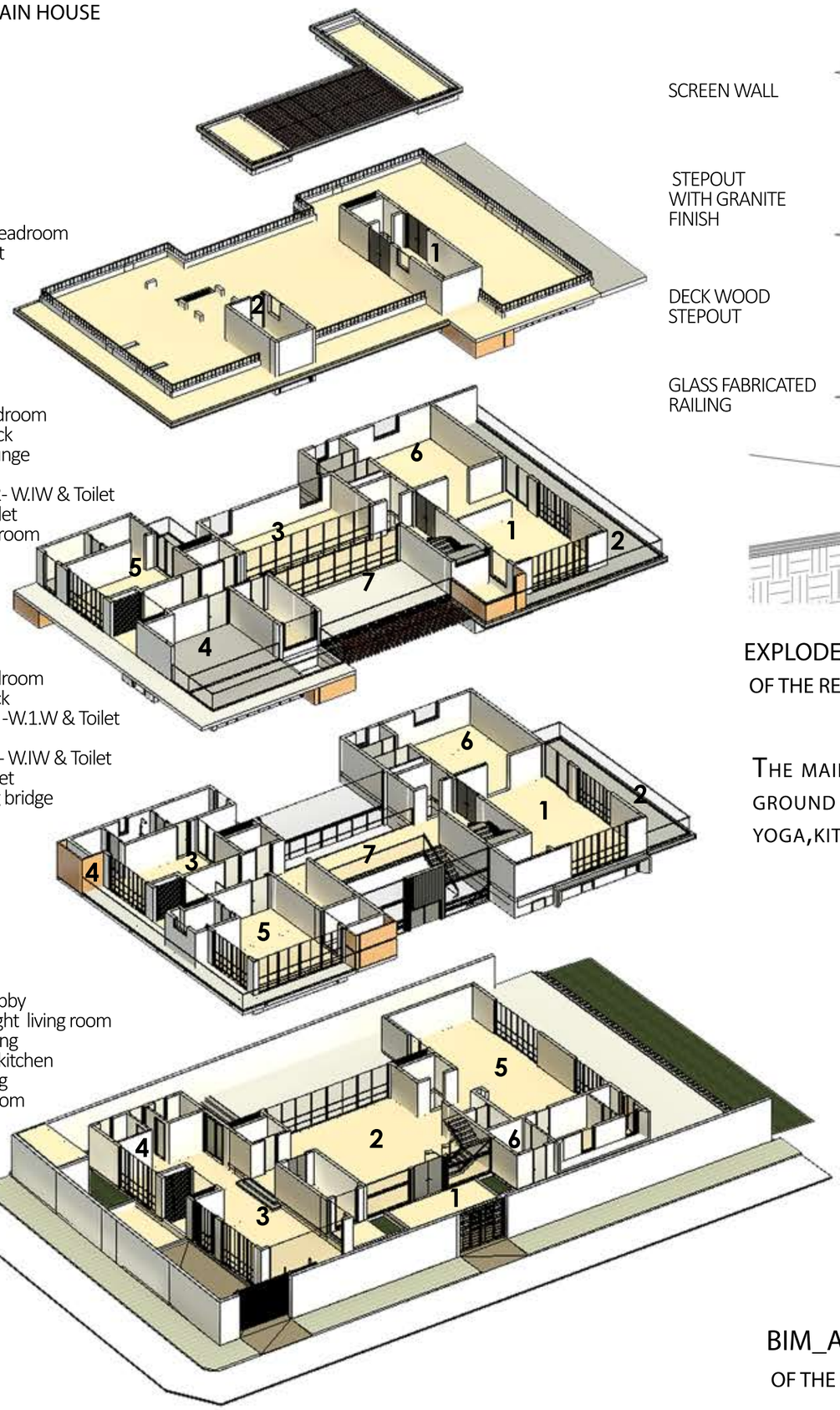
02.VAJRAM'S MAIN RESIDENCE

The residence and the clubhouse is being built for the Tech-entrepreneur and the infrastructure developer brothers from the Vajram groups.This plot is subdivided into equal halves with the main residence at the narrow plot with G+2 structure and the annexe club house at the elongated plot with Basement ,G+3 structure.

Location :EPSILON, Bangalore
Builiding type:Residence
Site Area : 12500 sqft
Role :BIM Architect

EXPLODED ARCHITECTURAL VIEW

OF THE MAIN HOUSE



TF

1.Staircase headroom
2.Storage unit

2F

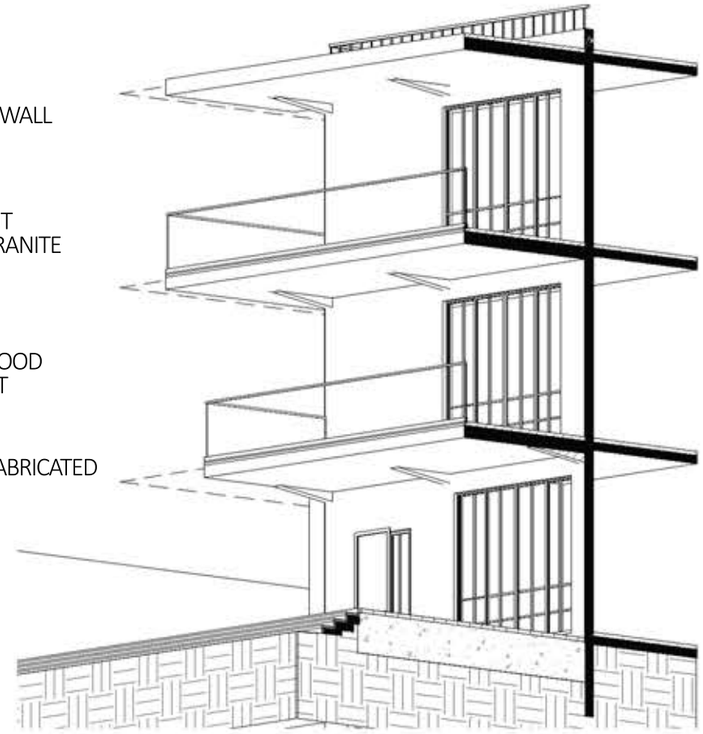
1.Master Bedroom
2.Master Deck
3.Theatre lounge
4.Deck
5.Bedroom 2- W.IW & Toilet
6.W.IW & Toilet
7.Gym/Yoga room

1F

1.Master Bedroom
2.Master Deck
3.Bedroom 1 -W.1.W & Toilet
4.Deck
5.Bedroom 2- W.IW & Toilet
6.W.IW & Toilet
7.Connecting bridge

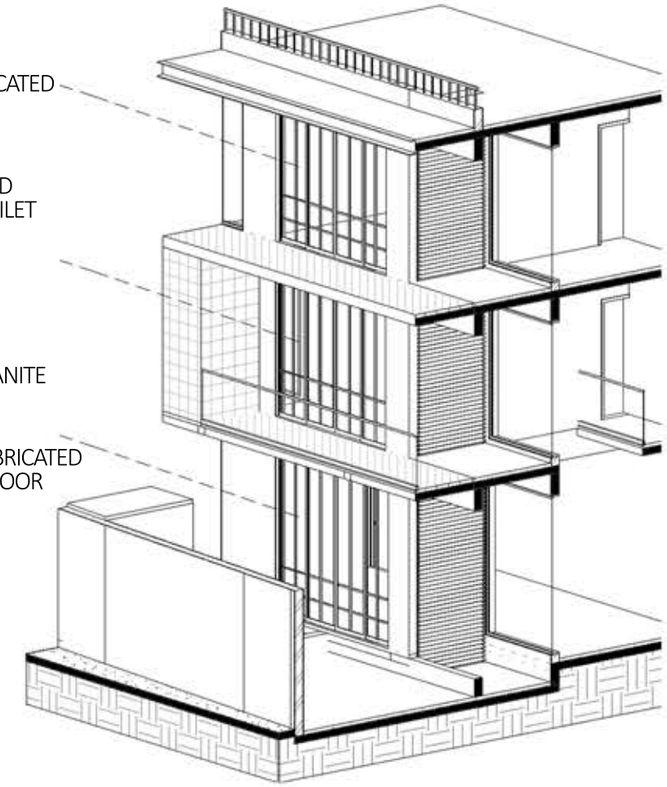
GF

1.Entrance lobby
2.Double height living room
3.Informal living
4.Pantry and kitchen
5.Formal living
6.Electrical room



EXPLODED SECTIONAL VIEW

OF THE RESIDENCE



EXPLODED SECTIONAL VIEW

OF THE RESIDENCE

THE MAIN UNIT WAS DESIGNED TO CATER HOME FOR BOTH OF THE BROTHERS WITH LIVING AND LOUNGING SPACES AT GROUND LEVEL AND MASTER BEDROOMS AT THE UPPER LEVEL WITH ROOMS FOR OTHER AMENITIES SUCH AS GYM, YOGA,KITCHEN AND HOME THEATRE.

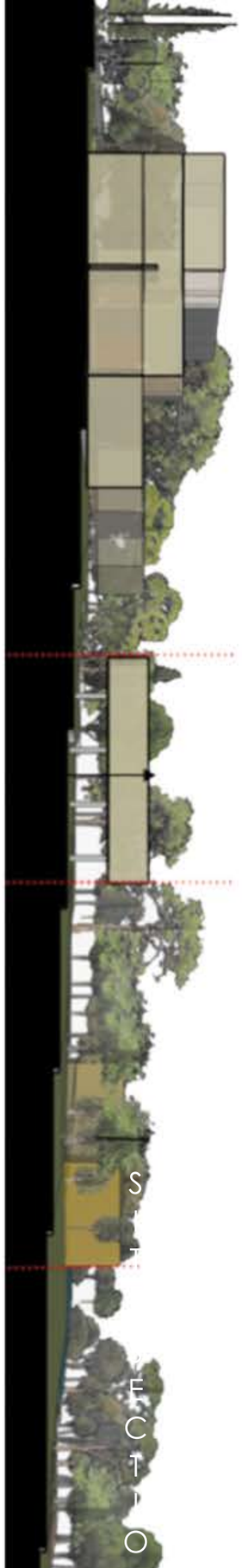
BIM_ARCHITECTURAL VIEW

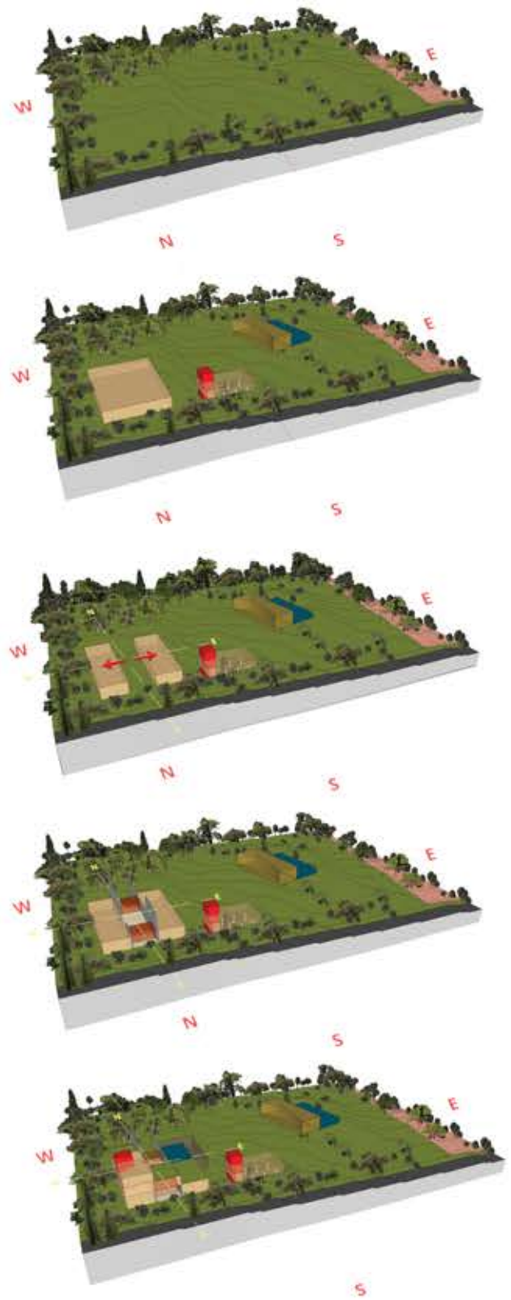
OF THE RESIDENCE

03.NIRVANA FARMHOUSE

For a family of four, I'm tasked with designing a contemporary farmhouse on the outskirts of Bangalore, emphasizing a harmonious blend with nature. The design includes a guest block comprising four units, each thoughtfully oriented to offer picturesque views of the lush garden.

LOCATION :COORG, KARNATAKA
BUILIDING TYPE: FARM HOUSE
SITE AREA : 100000 SQFT
ROLE : ARCHITECT





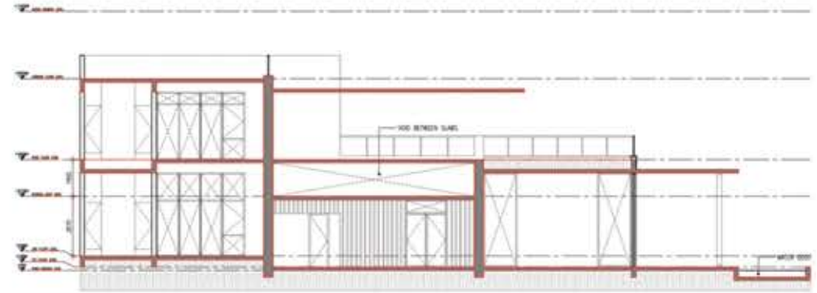
FORM EVOLUTION

- SWIMMING POOL
- CLUB HOUSE
- MAIN UNIT
- BUFFER
- CIRCULATION CORE
- TERRACE GARDEN

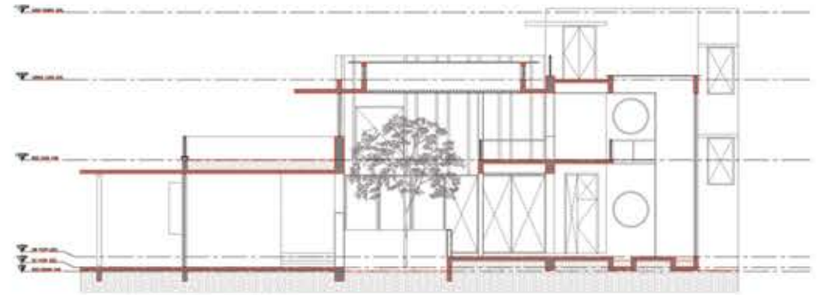
Ground Floor Plan

First Floor Plan

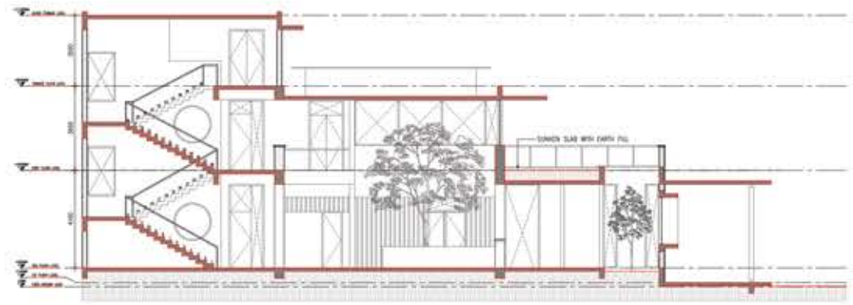
Second Floor Plan



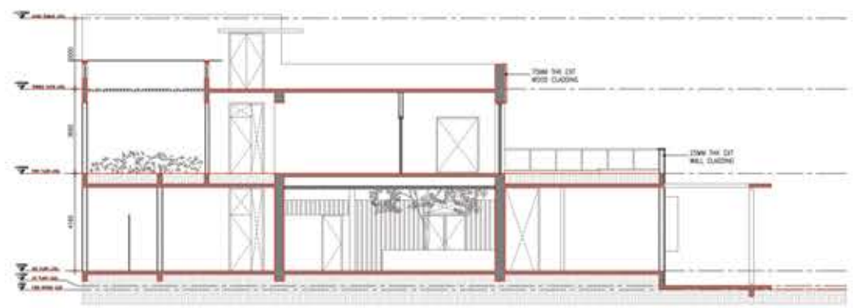
VAISHNAVI - NIRVANA
SECTIONAL ELEVATION CC'
SCALE 1:100



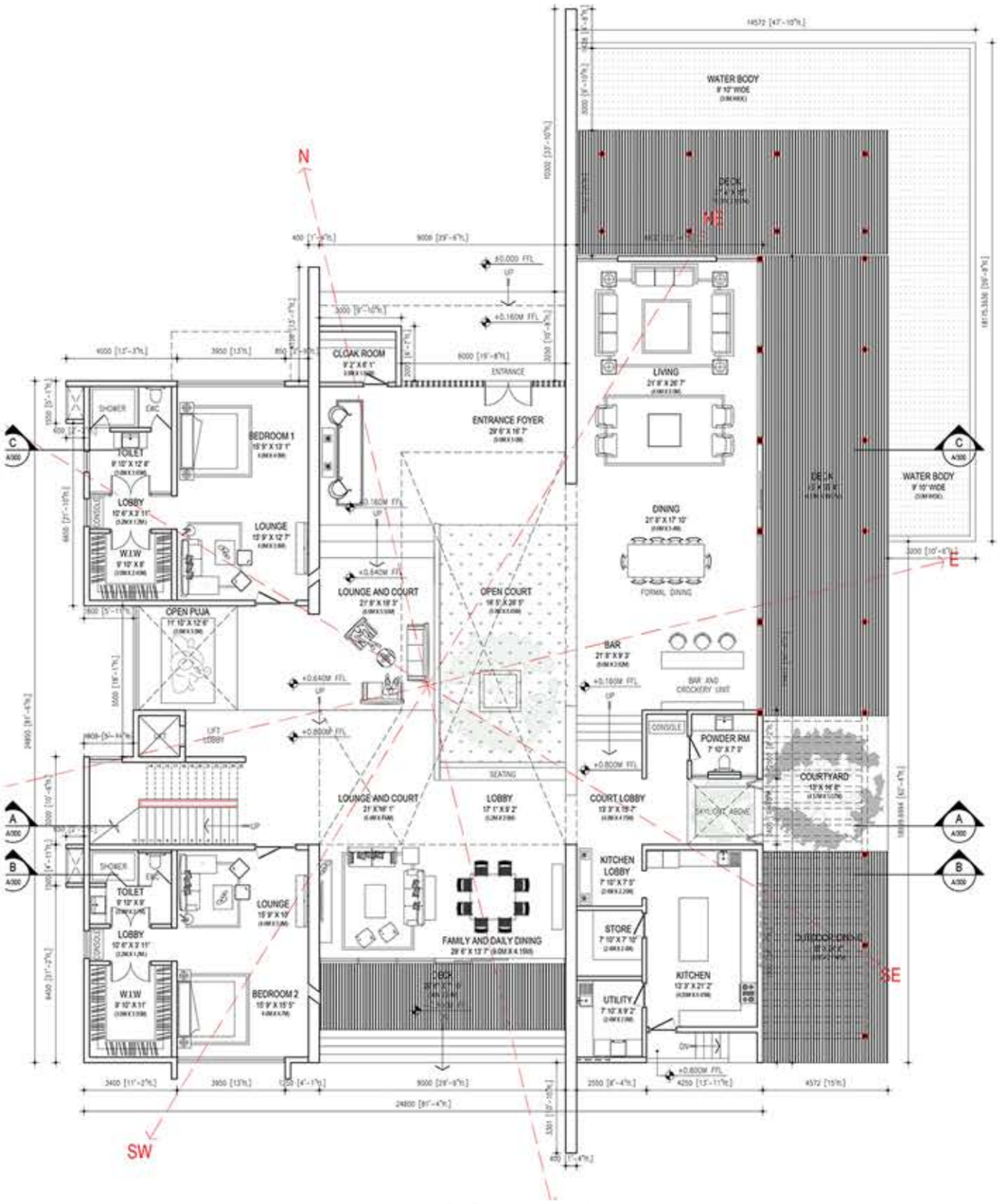
VAISHNAVI - NIRVANA
SECTIONAL ELEVATION DD'
SCALE 1:100



VAISHNAVI - NIRVANA
SECTIONAL ELEVATION AA'
SCALE 1:100



VAISHNAVI - NIRVANA
SECTIONAL ELEVATION BB'
SCALE 1:100



FLOOR PLAN

Main unit Exterior Render

Conceptual Section

Exterior Render

THANK YOU..