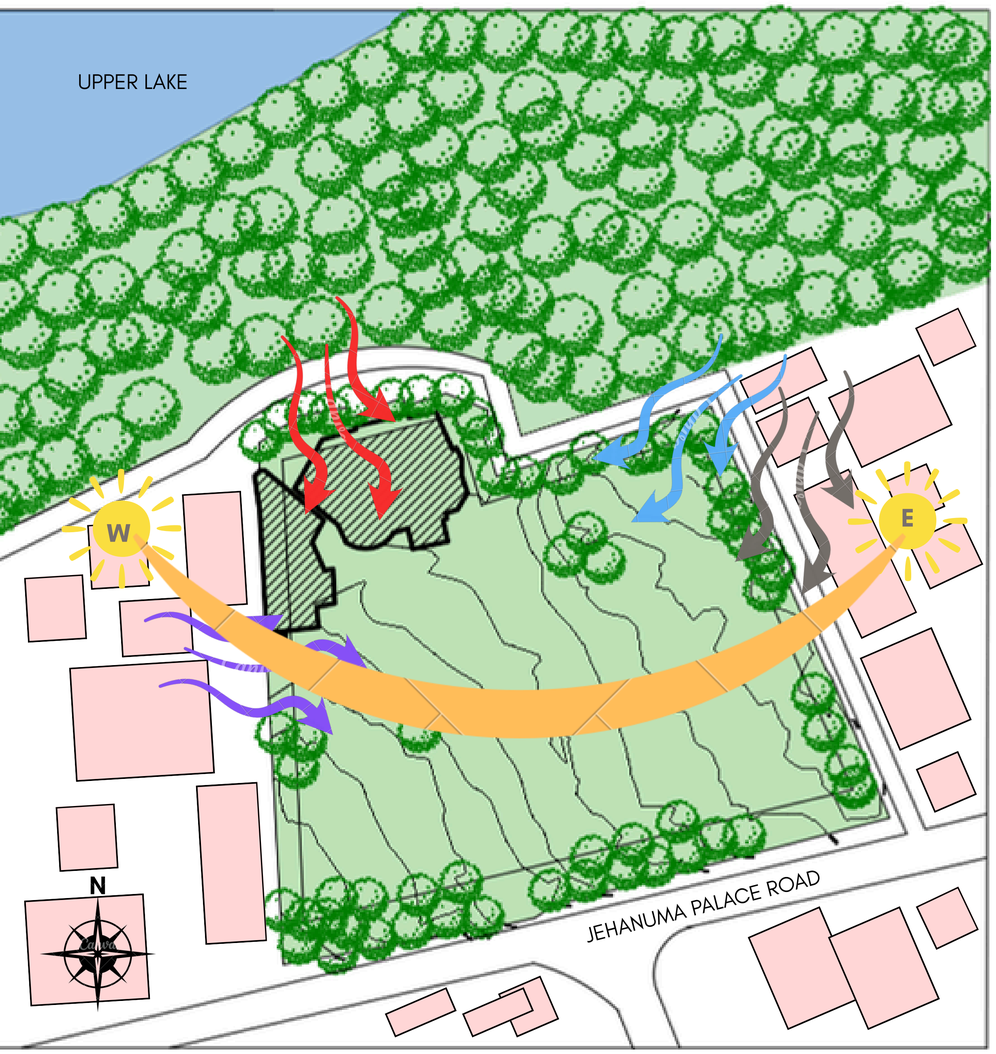
SITE ANALYSIS

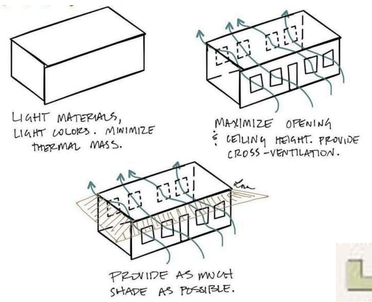
5 STAR HOTEL, BHOPAL, MADHYA PRADESH

PROXIMITY

Bhopal Junction Railway Station - 6 km
Raja Bhoj International Airport - 14 km
ISBT Bus Terminal - 8 km
New Market Commercial Area - 3 km
Van Vihar National Park - 1 km
State Museum & Tribal Museum - 1.5 km
Taj Lakefront Hotel - 1.5 km
Jehan Numa Palace Hotel - 0.5 km
VIP Road Lakefront Promenade - 1km

LOCATION:
Shymala Hills, Bhopal, Madhya Pradesh, 462013
SITE AREA:
7.16 Acres (28,975.5 sqmt)
SURROUNDING
NORTH: LAKE FRONT AND GREEN ZONE
SOUTH: ROAD
EAST: OTHER PROPERTY
WEST: OTHER PROPERTY



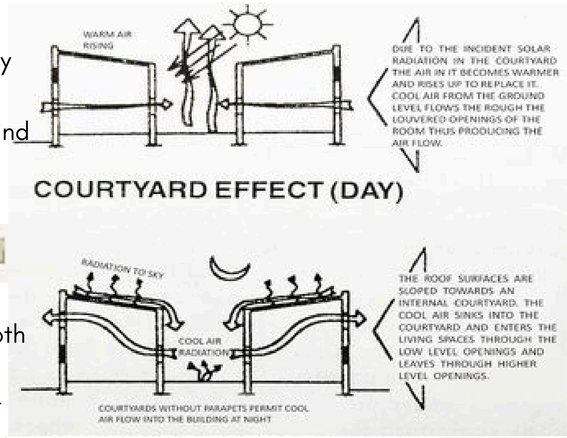


Hot summers (40–42°C), mild winters, humid monsoons
Passive cooling, cross ventilation, shaded open spaces

SW–SE breezes during monsoon; W–NW hot dry winds in summer; NE in winter
Courtyards aligned to SW, shaded openings; wind corridors



South-facing facades receive consistent sunlight in both seasons
East and West facades get harsh low-angle sunlight
elongated floor plan can help maximize cross ventilation in hot climate



Strong south & west solar gain; low glare from east; sunset on lake side
Minimize west glazing, use shading/overhangs

winter	dec-feb	~38-42 °C / 24-28 °C	Cool, dry air; low humidity; clear skies; occasional foggy mornings; breezes often NE-E.
summer	mar-may	~38-42 °C / 24-28 °C	Hottest period; very low humidity early, rising by May; hot winds (loo) often W-NW; dust possible.
monsoon	jun-sep	~28-32 °C / 22-24 °C	Heavy rainfall and cloud cover; high humidity; prevailing winds largely SW; frequent overcast; mold risk if poorly ventilated.
post-monsoon	oct-nov	~30-33 °C (Oct) → 28-30 °C (Nov) / 16-20 °C	Humidity drops from monsoon; occasional late showers; clearer skies; comfortable diurnal range; winds variable, trending NE by late Nov.

WIND DIRECTION
WINTER - NE to SW
SUMMER- NW to W
MONSOON- W
POST-MONSOON- NE

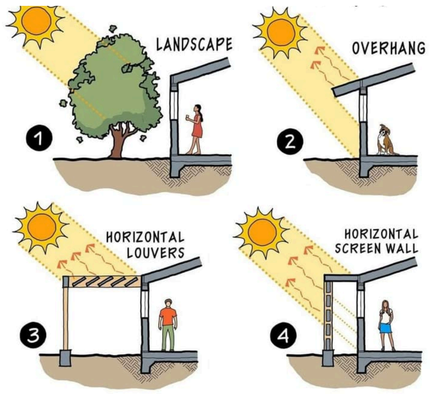
CLIMATE ANALYSIS
SUMMER: 40-45°C
WINTER: 8-10°C
AVG. MAX. TEMP: 42°C
AVG. MIN. TEMP.: 12°C
RAINFALL: ANNUAL-1100mm
HEAVY MONSOON
SUN- HARSH WESTERN SUN

S
- prime lakefront location
- large plot size
- connectivity
- natural landscape

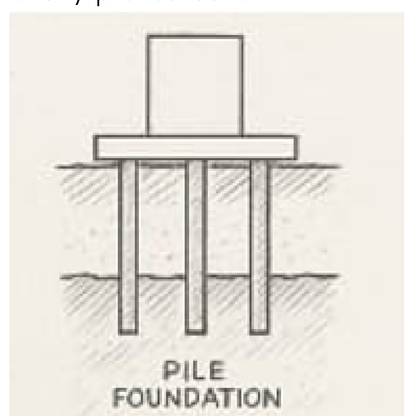
W
- soil condition
- regulatory constraints
- construction complexity
- complete demolition

T
- strong competition
- environmental regulation
- climate stress

O
- fresh design freedom
- multi-functional development
- tourism growth
- economic boost



SOIL CONDITION AND FOOTING
Black cotton soil with shrink- swell behaviour needs strong foundation like raft/ pile foundation



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THESIS GUIDE: DR. VINAY MOHAN DAS

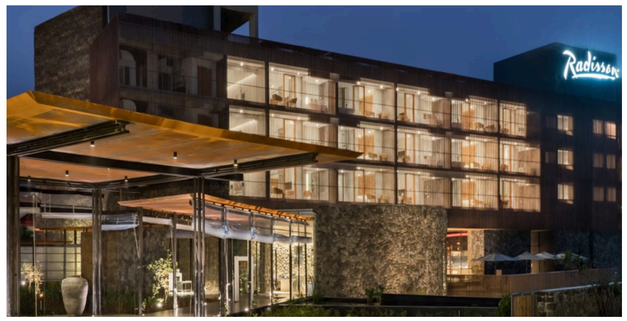
CASE STUDY

5 STAR HOTEL, BHOPAL, MADHYA PRADESH



Located on the Shyamla Hills with commanding views of the Upper Lake, Taj Lakefront employs **terraced massing** to step down towards the lake. The hotel integrates **public spaces with waterfront vistas**, uses an **axial entrance approach**, and separates **guest, banquet, and service circulation** effectively.

Parameters	Taj Lakefront, Bhopal	Radisson, Bhopal	Avasa, Hyderabad	Vivanta, Gurgaon
Site Context	Lakefront, Shyamla Hills, sloping site	Urban arterial road, dense city fabric	Business hub, compact site	Corporate zone, Gurgaon, flat site
Planning & Zoning	Terraced blocks towards lake, axial entry	Podium (banquet) + tower (rooms)	Compact rectilinear block, central atrium	Winged blocks around landscaped courtyards
Architectural Style	Contemporary luxury with regional influence	Modern urban, glass façade	Modern minimalist with bold interiors	Modern with local motifs and landscape integration
Materials	Glass, stone, luxury finishes	RCC, glass curtain walls	RCC, glass, steel	RCC, glass, stone, pergolas
Sustainability	Orientation towards lake, terraces reduce heat load	Efficient land use (podium + tower)	Compact footprint, reduced external exposure	Shaded courts, landscaped microclimate



Situated on a busy arterial road, Radisson follows a podium + tower configuration, with banquets and public amenities in the podium and guestrooms in a slender tower above. Distinct entries for banquets, hotel guests, and services ensure smooth circulation. Rooftop pool and dining optimize space.



Avasa sits on a compact urban site in a dense commercial zone. Its design emphasizes efficiency through a rectilinear massing with a central atrium. The atrium becomes a social heart, minimizing dependence on external views. Interiors are bold, contemporary, and highly experiential.



Vivanta uses **winged blocks around landscaped courtyards**, blending indoor-outdoor spaces. MICE facilities spill into shaded lawns. The architectural language balances **modern sleekness with subtle local motifs**, while pergolas and screens improve climate comfort.

Design Inferences & Findings

Taj Lakefront, Bhopal	Radisson, Bhopal	Avasa, Hyderabad	Vivanta, Gurgaon
Terraced massing works well for sloping/contour sites.	Podium + tower zoning optimizes land use in dense urban contexts.	Central atrium becomes a social hub and improves internal spatial quality.	Winged blocks around courtyards provide climatic comfort and privacy.
Axial approach creates a strong sense of arrival.	Segregated entrances (guest, banquet, service) reduce circulation conflicts.	Compact rectilinear planning suits constrained sites.	Integration of subtle local motifs strengthens identity.
A **stepped, view-oriented design** with a clear entrance axis enhances both function and guest experience.	**Vertical zoning with a podium base** ensures efficiency while maintaining functional separation.	An **atrium-based planning approach** creates vibrancy and efficiency within a compact footprint.	**Courtyard-based zoning** with landscape integration creates a balance of modernity and cultural connection.

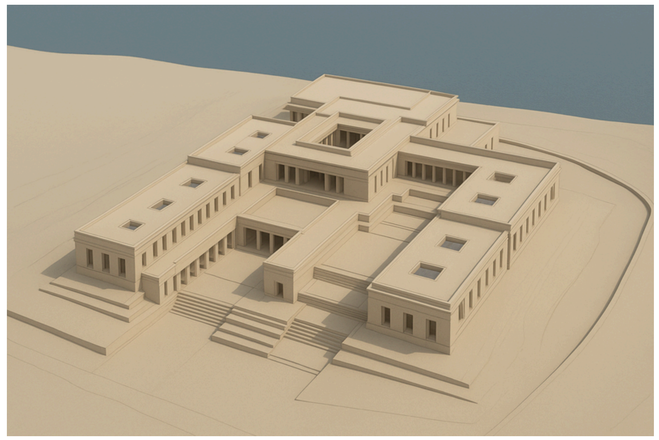
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THESIS GUIDE: DR. VINAY MOHAN DAS

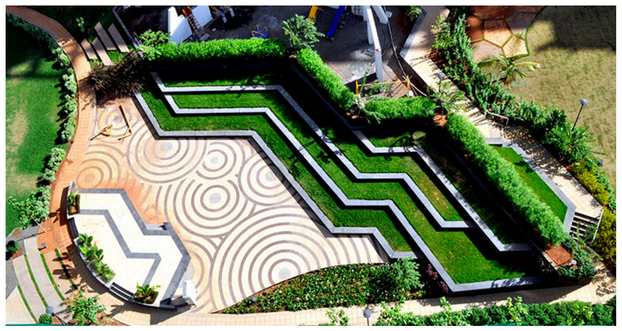
CONCEPT DESIGN

5 STAR HOTEL, BHOPAL, MADHYA PRADESH

FORM INSPIRATION

Ghats and Lakefront Orientation with Skylight covered Courtyards





Preserve/introduce green buffers along road to reduce noise.
Step-down terraces and lawns can serve as event spill-out zones.



Stepped massing to follow contours and highlight lake views.
Orient public spaces (lobby, restaurants, lounges) towards the lakefront views.
Use level differences to separate functions naturally (public ↔ private).

HOTEL THEME

Modern- luxury with subtle Heritage hints

The design aims to create a luxury hotel that embodies modern sophistication while subtly weaving in the cultural and historical essence of Bhopal. The theme integrates sleek, contemporary forms and materials with delicate references to local heritage in patterns, textures, and spatial experiences.

Form & Massing: Clean, modern geometry with terraces and courtyards, softened through traditional proportions and symmetry.



Entrances: Grand yet understated, with elements like colonnades or heritage-inspired arches simplified into modern forms.



Façade Design: Use of glass, stone, and perforated jaalis (screens) to merge transparency with local craftsmanship.







DESIGN CONSIDERATION

ZONING

Public Zone → Oriented towards the lake, including reception, lobby, restaurants, lounges, and pool deck.
Semi-Public Zone → Banquet halls, conference areas, and event spaces located in a podium level with direct access from a separate entry.
Private Zone → Guestrooms placed above in stepped terraces, ensuring privacy and lake views.
Service Zone → Located towards the road edge and rear, with independent access to kitchens, housekeeping, and deliveries.
Outdoor / Landscape Zone → Terraces, courtyards, and lawns integrated as spill-over areas for banquets and leisure activities.

TRANSITIONONG SPACES

Entrance Lobby & Drop-off: Serves as the first transition from outside chaos to controlled interior environment.
Foyers & Pre-function Areas: Act as buffers between banquets/conference halls and the main circulation.
Atriums & Courtyards: Provide social and climatic transition between different functional zones.
Corridors & Bridges: Act as linear transition spaces connecting public and private zones.
Terraces & Decks: Offer semi-open transitions between indoor functions and outdoor views.

ACCESS AND CIRCULATION

Vehicular access from road edge; pedestrian entry highlighted by an axial approach.
Service access segregated at rear/side for efficiency.
Pathways, drop-offs, and parking zones planned to avoid conflicts.

FORM MASSING

Taj Lakefront: Terraced form for sloping sites and lake orientation.
Radisson: Podium + tower zoning for compact urban sites.
Avasa: Atrium as central social hub in limited footprints.
Vivanta: Courtyard-based zoning for climate comfort and cultural identity.

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SITE PLAN & AREA CALCULATION



HOTEL FLOOR AREA CALCULTION

Function / Space	Area (m2)	% of total built-up
Guestrooms (150 keys)	6240	10.77
Lobby & Arrival / Public Lobby areas	2000	3.45
F&B (restaurants, bars, kitchens)	6000	10.35
Banquet & Conference (ballroom + breakouts)	10000	17.26
Back-of-House (kitchen, laundry, staff rooms)	8000	13.8
Wellness (spa, gym, pool area)	2500	4.31
Retail / Shops	1000	1.73
Circulation & Common Areas	5000	8.63
Services & MEP Plant rooms	2500	4.31
Parking (if counted in FAR)	8750	15.1
Admin & Sales offices	1000	1.73
Terraces / Roof plant rooms / extra support	2000	3.45
Extra meeting rooms / banquet support	2000	3.45
Contingency / unallocated	961	1.66
TOTAL	57951	100

Level	Area (m2)	Primary functions
Basement B2 (parking & plant)	4375	Parking, plant, laundry, service
Basement B1 (parking & plant)	4375	Parking, plant, service
Ground Floor	7243.87	Arrival, lobby, main F&B, retail
Podium / Level 1	7243.87	Banquet/ballroom, pre-function, back-of-house support
Guestroom Floor 1	7243.87	Guestrooms & corridors (part)
Guestroom Floor 2	7243.87	Guestrooms & corridors (part)
Guestroom Floor 3	7243.87	Guestrooms & corridors (part)
Upper Floors (suites / admin / meetings)	7243.87	Executive suites, offices, meeting rooms
Roof / Plant / Amenities	7243.87	Pool deck, plant rooms, roof amenities

Floor	Deluxe	Superior	Suites	Accessible	Total Rooms	Rooms Area (m²)	Net Usable Area (m²)	Non-room Usable Area (m²)	Typical Non-room Uses
Guest F4	15	6	3	1	25	2030	4507.3	2477.3	Corridors, housekeeping hub, mini-lounge, service rooms, MEP riser share
Guest F5	15	6	3	1	25	2030	4507.3	2477.3	Corridors, housekeeping hub, mini-lounge, service rooms, MEP riser share
Guest F6	15	6	3	1	25	2030	4507.3	2477.3	Corridors, housekeeping hub, mini-lounge, service rooms, MEP riser share
Guest F7	15	6	3	1	25	2030	4507.3	2477.3	Corridors, housekeeping hub, mini-lounge, service rooms, MEP riser share
Guest F8	15	6	3	1	25	2030	4507.3	2477.3	Corridors, housekeeping hub, mini-lounge, service rooms, MEP riser share
Guest F9	15	10	0	0	25	1950	4507.3	2557.3	Corridors, housekeeping hub, executive lounge, service rooms, MEP riser share
Total (Guest Floors)	90	40	15	5	150	12100	27043.8	14943.8	

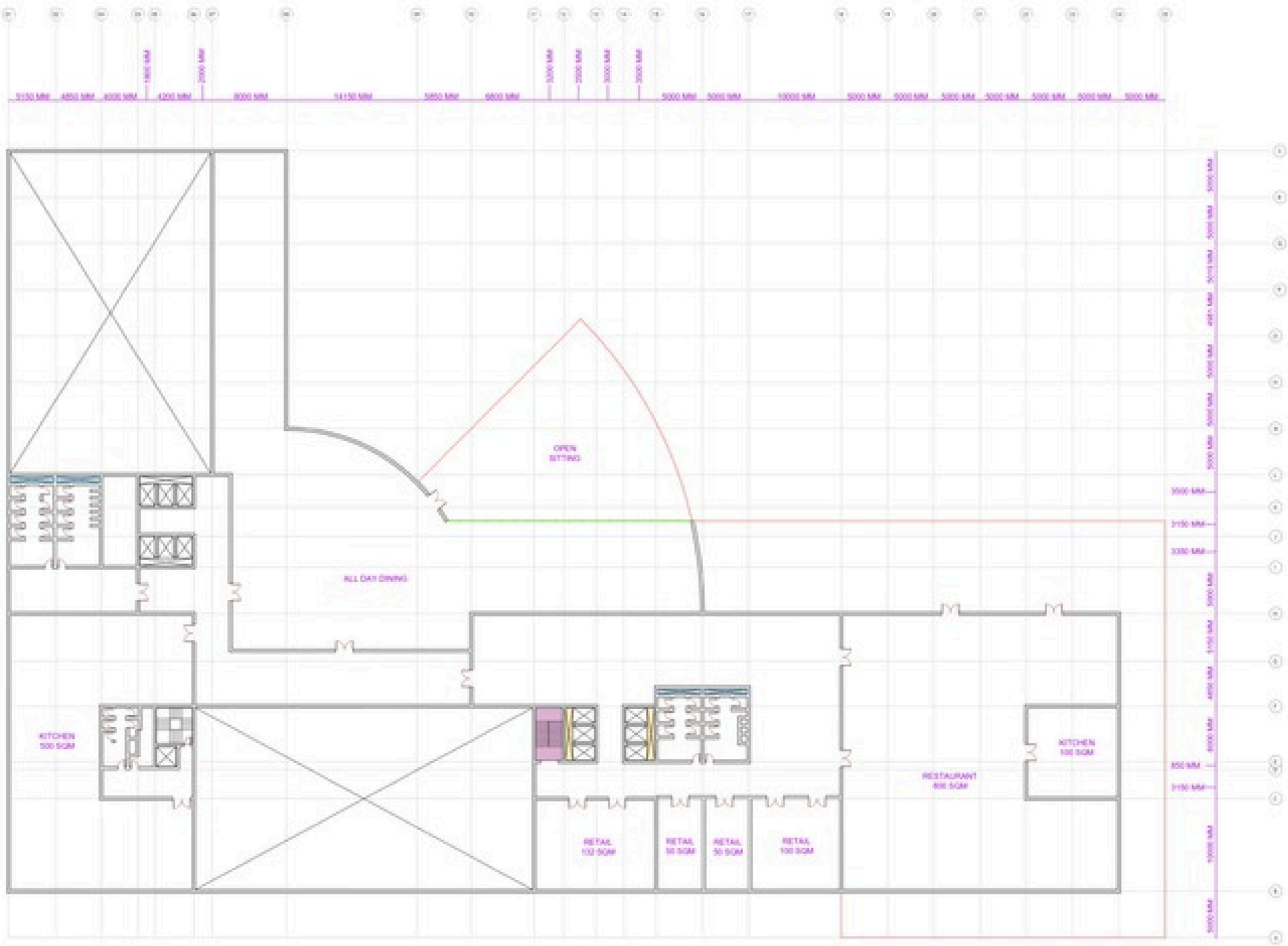
GUEST FLOOR AREA CALCULTION

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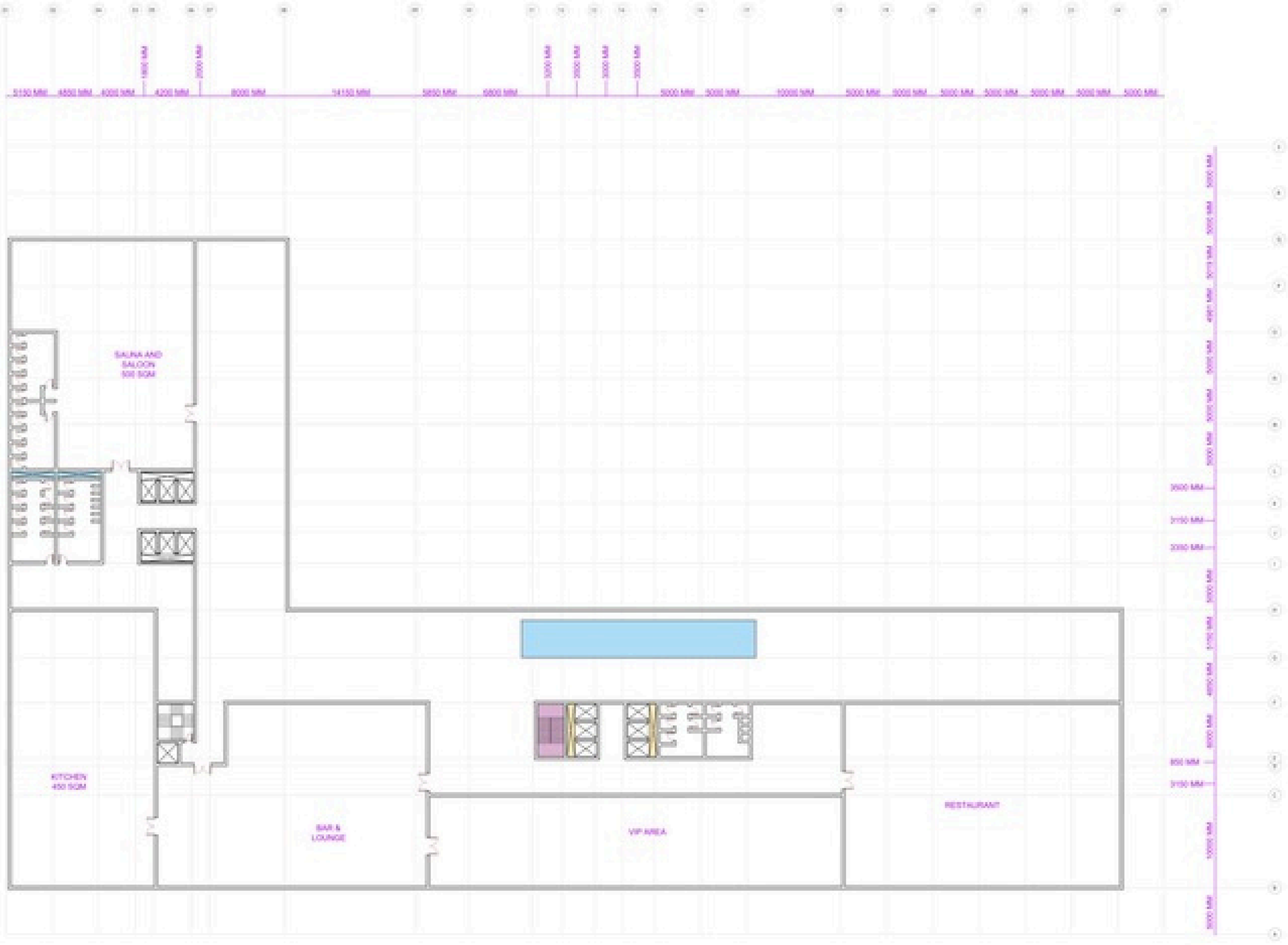
GROUND FLOOR PLAN

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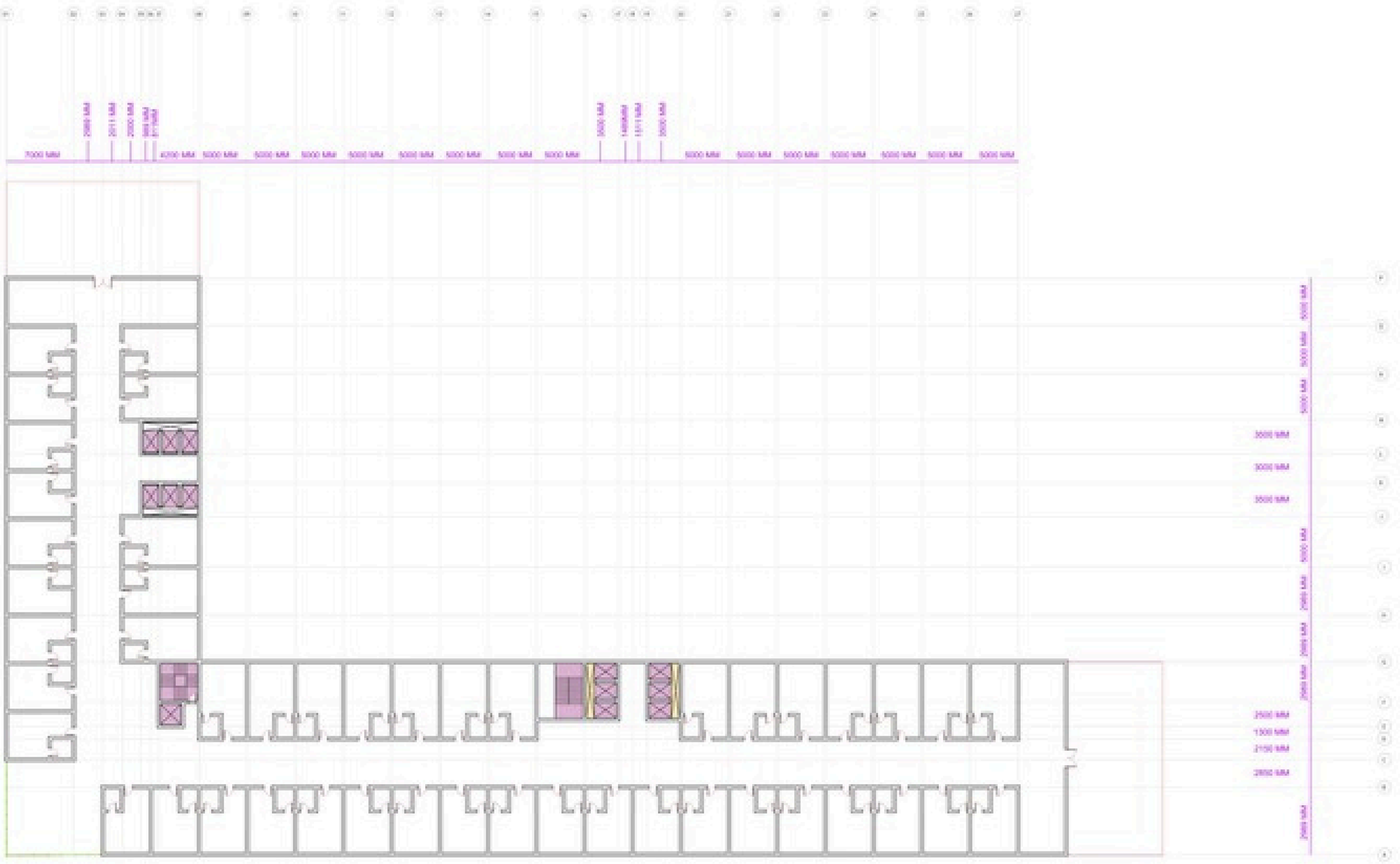
FIRST FLOOR PLAN

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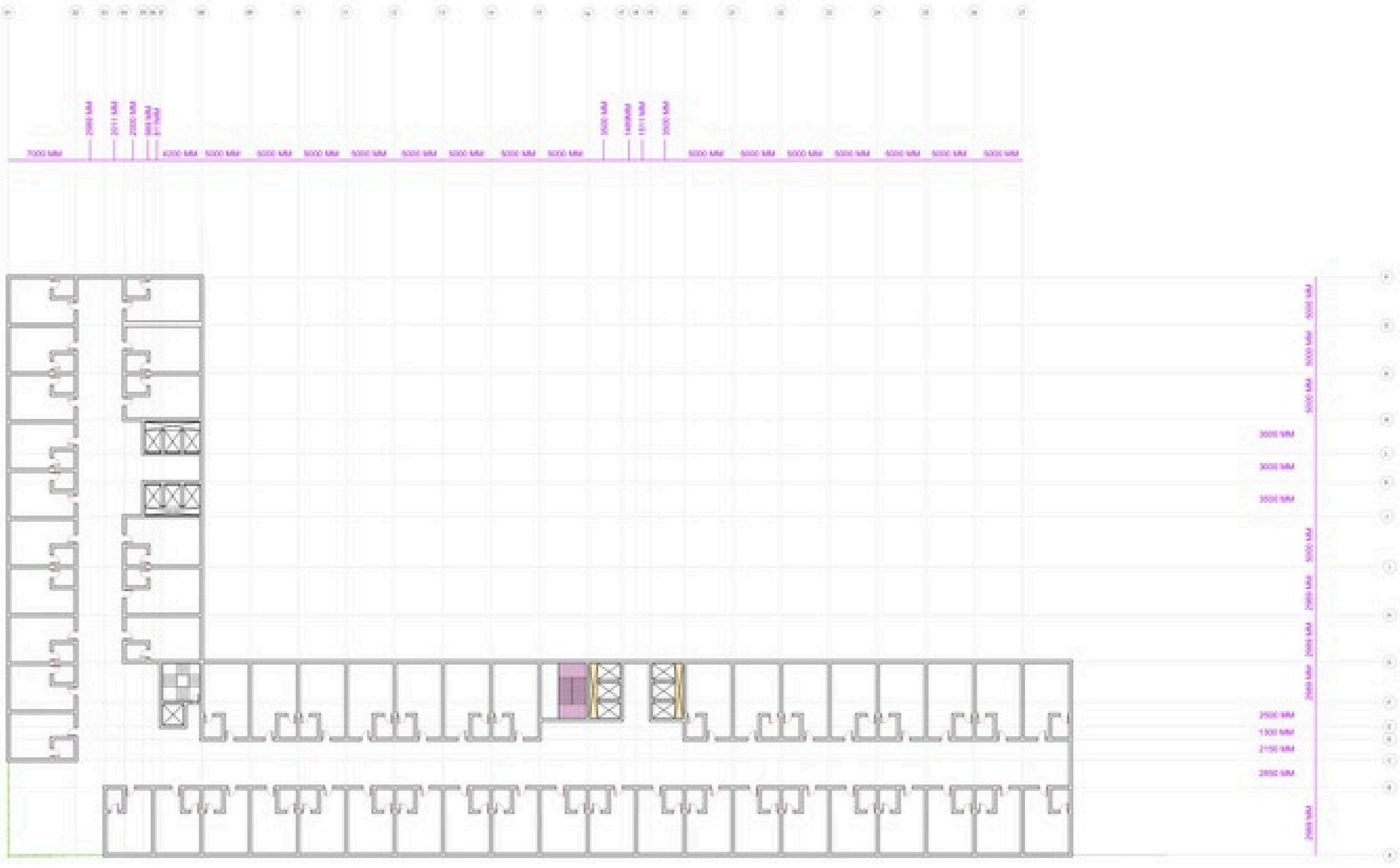
SECOND FLOOR PLAN

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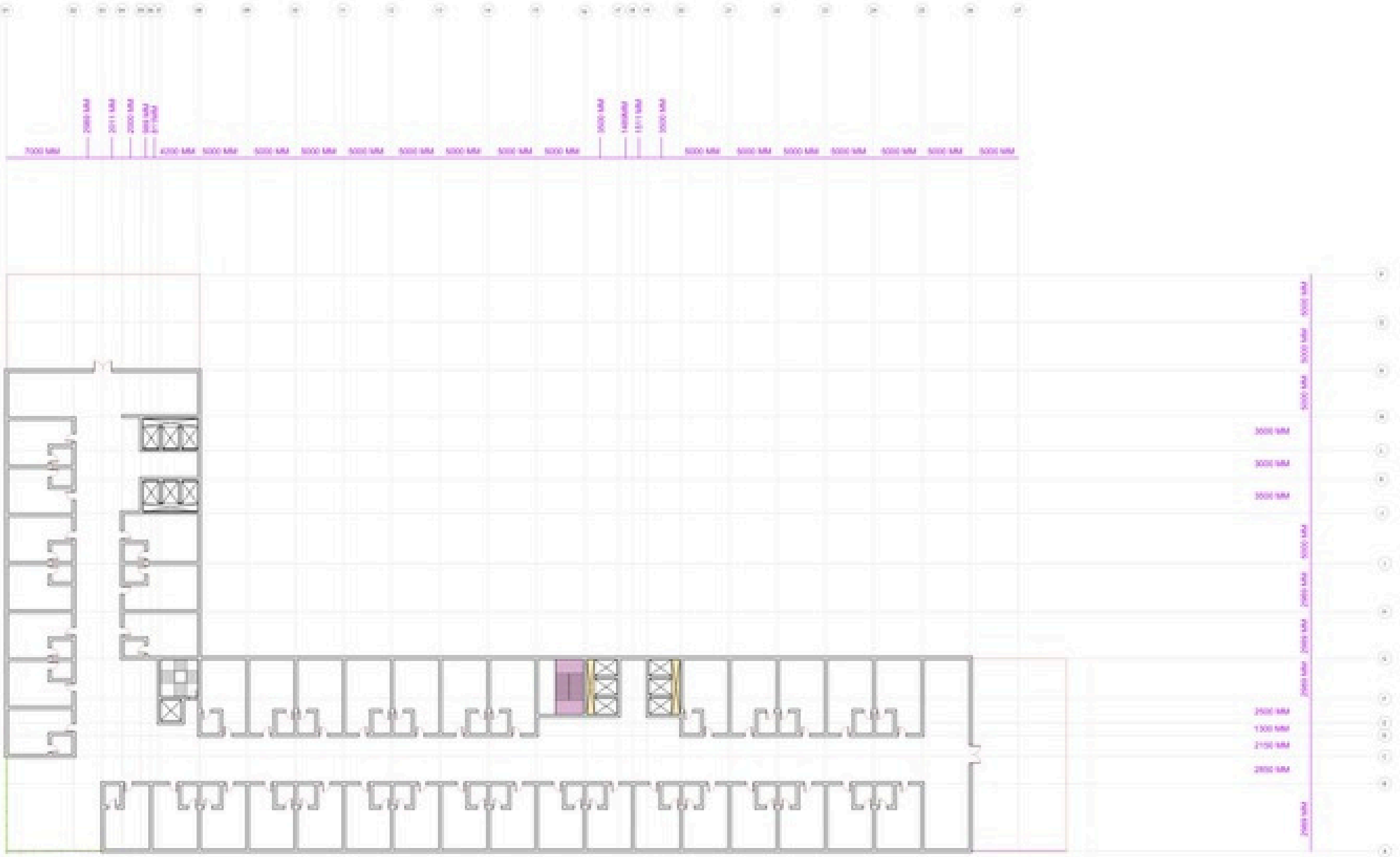
THIRD FLOOR PLAN

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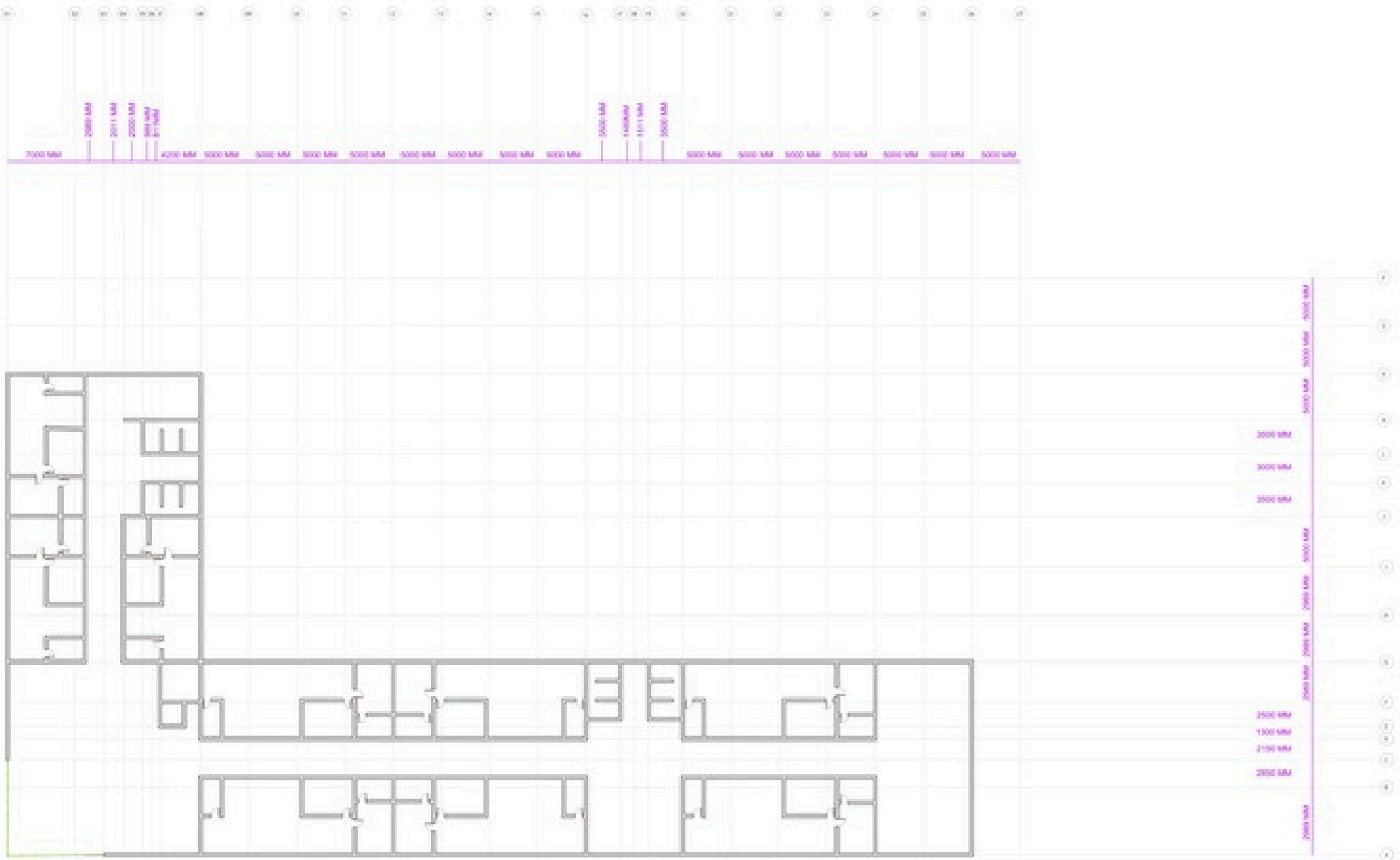
FOURTH FLOOR PLAN

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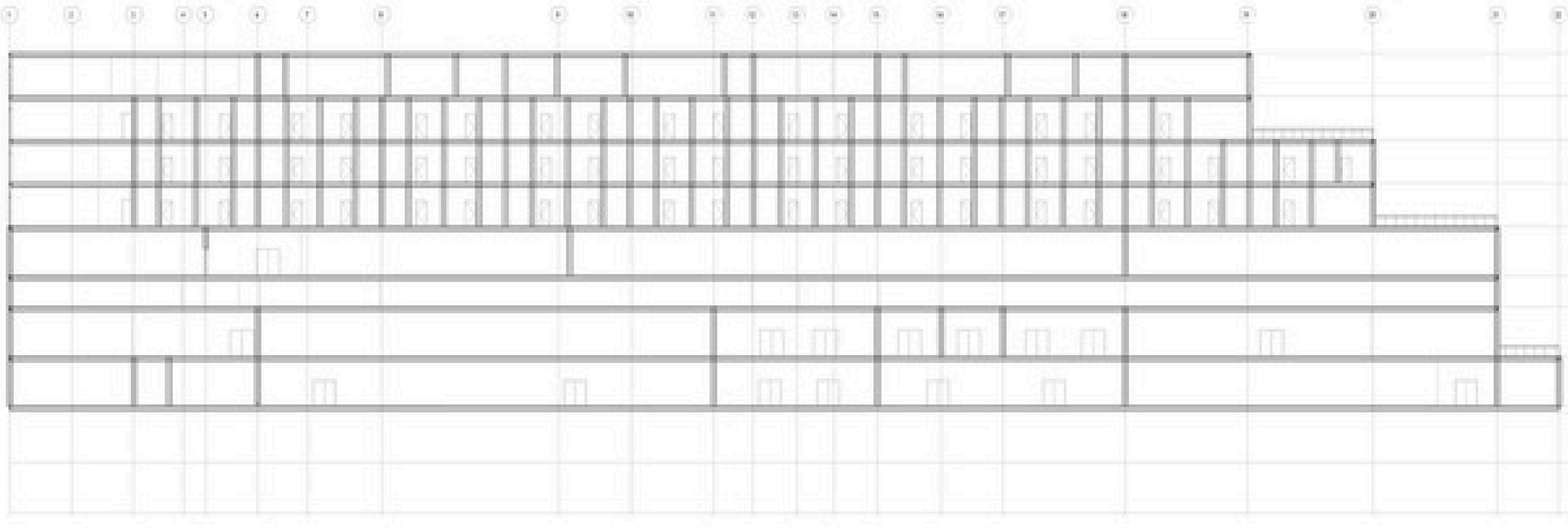
FIFTH FLOOR PLAN

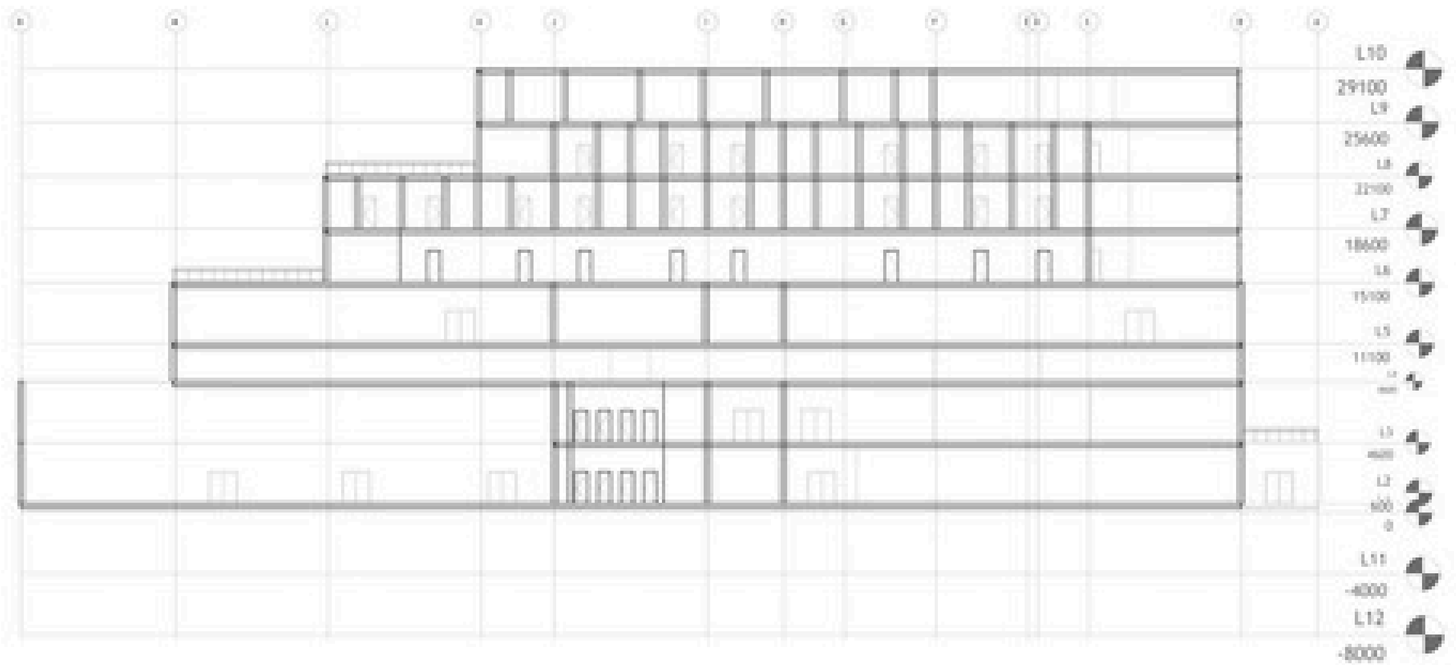
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SIXTH FLOOR PLAN

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SECTION

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Permeable pavement

Specifically cementitious permeable pavement (CPP), is a passive structural low impact development material & green infrastructure system for rainfall-runoff control.Multifunctional engineered CPP can fulfill requirements as a infrastructure material that functions to restore the in situ hydrology while also functioning as a passive treatment unit operation & process. As an infrastructure material; CPP reducesrunoff, filters, and treats infiltrating runoff, reduces thermal pollution and temperature, provides the load-carrying capacity of conventional rigid concrete pavement, and leaches environmentally beneficial Ca and alkalinity, as compared to flexible asphalt.

Outsoor sitting

The outdoors of a hotel are without a doubt one of the most important areas of the structure. The entrance, patio, and the surrounding nature in fact, are the first things guests will see & come in contact with upon arrival. Gardens, balconies and any facility, amenity and furniture placed in those spaces will be immediately visible and will be the ones welcoming guests as they enter the hotel.

Open Amphitheatre

The open square amphitheatre is designed as an interactive focal point within the hotel landscape. Featuring a central stage surrounded by stepped seating, it provides an inviting space for cultural performances, live music, and informal gatherings. The use of locally inspired sandstone materials and traditional detailing seamlessly integrates it with the surrounding natural and architectural context, enhancing the overall aesthetic appeal while promoting community engagement and outdoor recreation.

Reflected Water Pond

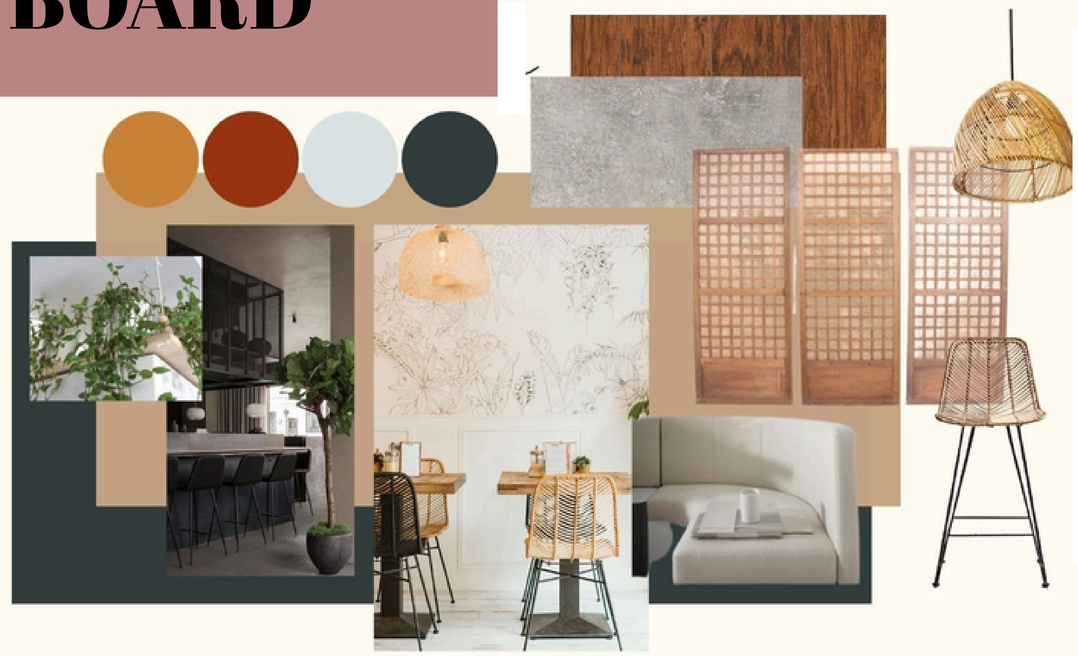
The reflected water pond is designed as a serene focal element within the hotel landscape, enhancing the aesthetic and sensory experience of the outdoor environment. The still surface of the water creates a mirror-like reflection of the surrounding architecture and greenery, adding depth and tranquility to the space. Integrated with subtle lighting and natural stone edging, the pond not only provides visual calmness but also helps in moderating the microclimate, making it an ideal spot for relaxation and visual contemplation.

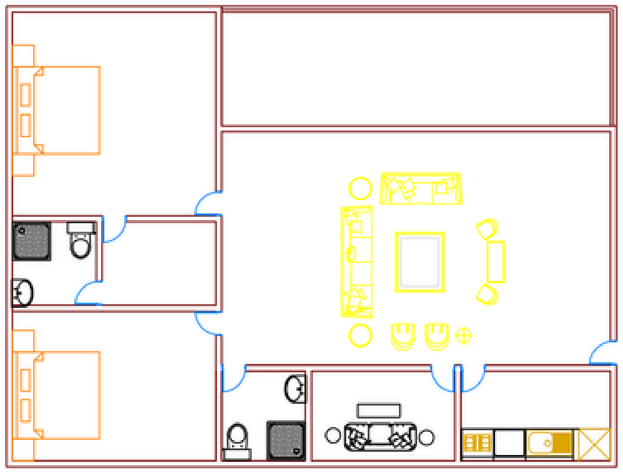
LANDSCAPE

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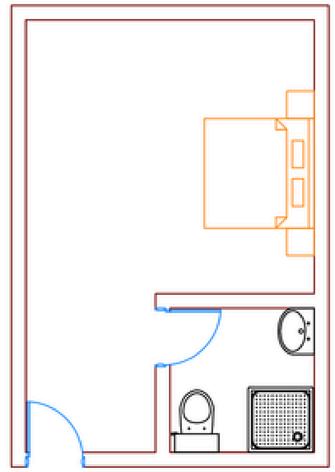
MOOD BOARD

The design blends tribal artistry with bohemian warmth and minimal aesthetics. Earthy tones, natural textures, and handcrafted elements create a calm and grounded ambiance. The use of wood, marble, and linen adds elegance while maintaining simplicity and cultural richness.





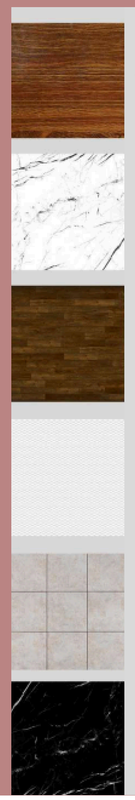
SUITE



DELUXE



MATERIAL PALETTE



WOOD VEENERS

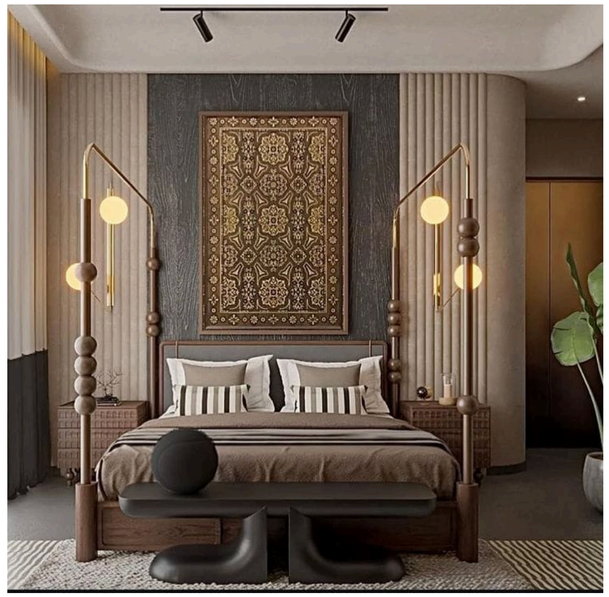
WHITE MARBLE

DARK WOOD VEENERS

WHITE LINEN FABRIC

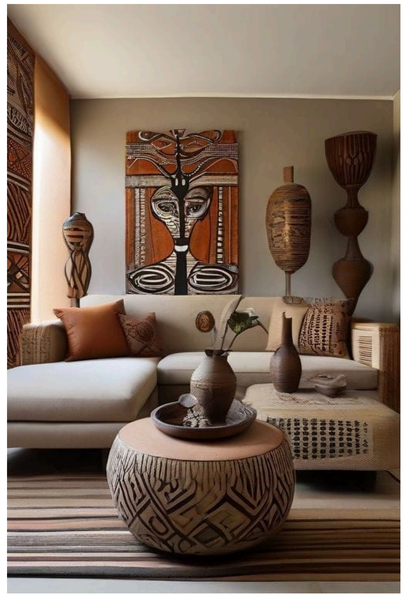
CERAMIC TILES

BLACK MARBLE



WALL TREATMENT

TIMBER BLOCKS BEHIND BED'S BACK REST
CUSHIONED PANELS
DARK WOOD CLADDING



TYPE OF FLOORING

LAMINATED TIMBER PANEL FLOORING
WHITE MARBLE FLOORING
BLACK MARBLE FLOORING



WINDOW

CENTRAL FIXED DOUBLE GLASS

WALLS

AERATED CONCRETE BLOCKS

N

INTERIOR

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