



**THESIS REPORT ON
“CONVENTION CENTER , DELHI“**

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENT FOR THE DEGREE OF:**

BACHELOR OF ARCHITECTURE

BY

(ANJALI RAWAT)

(ROLL NO - 1200101005)

THESIS GUIDE

(AR. SHAILESH KUMAR YADAV)

SESSION

2024 - 25

TO THE

SCHOOL OF ARCHITECTURE & PLANNING

BABU BANARASI DAS UNIVERSITY

LUCKNOW.

SCHOOL OF ARCHITECTURE AND PLANNING
BABU BANARASI DAS UNIVERSITY, LUCKNOW (U.P.).

CERTIFICATE

I hereby recommend that the thesis entitled “CONVENTION CENTER” at ON NAHARPUR ROHINI EAST, SECTORE 3, NORTH WEST DELDI, under the supervision of AR.SHAILESH KUMAR YADAV, is the bonafide work of ANJALI RAWAT (1200101005) and can be accepted as partial fulfilment of the requirement for the degree of Bachelor of Architecture, School of Architecture and Planning, BBDU, Lucknow.

Prof. SUMIT WADHERA
Dean of Department

Prof. SANGEETA SHARMA
Head of Department

Recommendation Accepted

Not Accepted

External examiner - I

External examiner - II

BABU BANARASI DAS UNIVERSITY, LUCKNOW (U.P.).

Certificate Of Thesis Submission for Evaluation

1. Name: **ANJALI RAWAT**
2. Roll No.: **1200101005**
3. Thesis Title: **CONVENTION CENTER**
4. Degree for which the thesis is submitted: **BACHELOR OF ARCHITECTURE**
5. Faculty of University to which the thesis is submitted: **SCHOOL OF ARCHITECTURE AND**
PLANNING, BBDU, LUCKNOW

6. Thesis preparation guide was referred to for preparing the thesis.	Yes / No
7. Specification regarding thesis format have been closely followed.	Yes / No
8. The content of the thesis have been organized based on the guidelines.	Yes / No
9. The thesis has been prepared without resorting to plagiarism	Yes / No
10. All the sources used have been cited appropriately	Yes / No
11. The thesis has not been submitted elsewhere for a degree.	Yes / No
12. Submitted 2 hard bound copies plus one CD	Yes / No

.....
(Signature(s) of the supervisor)
Name:

.....
(Signature of the Candidate)
Name:
Roll No.:

(Signature of the Thesis Guide)

Name: **AR.SHAILESH KUMAR YADAV**

(Signature of the Candidate)

Name: **ANJALI RAWAT**

Roll No. **1200101005**

ACKNOWLEDGEMENT

I acknowledge my sincere thanks to my Thesis Guide **AR. SHAILESH KUMAR YADAV**, who guided me through active participation in discussions and gave their kind cooperation throughout the process.

My sincere thanks to our thesis coordinator **Ar. ANSHUL SAXENA** for his cooperation and understanding at every stage of the study, which gave my study a new direction and made it more meaningful

I would also like to express my sincere thanks to **Prof. SUMIT WADHERA**, who graciously served as a Dean and **Prof. Sangeeta Sharma**, the esteemed Head of the Department for providing essential knowledge and insightful ideas through juries, which proved instrumental in the successful execution of this endeavour.

I would also like to extend my heartfelt appreciation to my friends and batch mates, whose direct and indirect assistance has greatly contributed to progress of my project. Last but certainly not least, I would like to express my profound gratitude to my parents and family for their unwavering encouragement, patience, and understanding throughout this journey.

I am truly privileged to have had the support and guidance of such remarkable individuals and loved ones, and I will forever cherish their contributions to my success.

Thankyou.

ANJALI RAWAT

CONTENTS

CHAPTER - 1

1. INTRODUCTION

- 1.1 About convention center
- 1.2 Validity of project
- 1.3 Reasons for selecting the project
- 1.4 Aims and objectives
- 1.5 Site selection
- 1.6 Why site is appropriate
- 1.7 Proposed methodology

CHAPTER - 2

2. ANALYSIS OF ENVISAGED ACTIVITY

- 2.1 Role of convention center
- 2.2 History of convention center
- 2.3 Modern Convention center
- 2.4 Types of Convention center
- 2.5 Need of convention center
- 2.6 Different types of convention center
- 2.7 Convention center of Characteristics and Architecture

CHAPTER - 3

3. THE USER PROFILE

- 3.1 User groups
- 3.2 Economic status
- 3.3 Social aspects
- 3.4 Psychological aspects

CONTENTS

CHAPTER - 4

4. THE STANDARDS

4.1 Standards

4.2 Flow diagrams of various convention center

4.3 Anthropometrics

4.4 other standard configurations

CHAPTER - 5

5. LITERATURE STUDY

5.1 BHARAT MANDAPAM

5.2 HAYDERABAD CONVENTION CENTER

CHAPTER - 6

6. CASE STUDY

6.1 INDIA HABITAT CENTER DELHI

6.2 I.G.P. LUCKNOW

1. INTRODUCTION

1.1 THE PROJECT

PROJECT NAME	Convention Center
LOCATION	Rohini East sector 3, Delhi
SITE AREA	21 acres

INTRODUCTION

A convention center is a large building that is designed to hold a convention, where individuals and groups gather to promote and share common interests. Convention centers typically offer sufficient floor area to accommodate several thousand attendees. Very large venues, suitable for major trade shows, are sometimes known as exhibition halls. Convention centers typically have at least one auditorium and may also contain concert halls, lecture halls, meeting rooms, and conference rooms. Some large resort area hotels include a convention center.

HISTORY AND BACKGROUND

The original convention centers or halls were in castles and palaces. Originally a hall in a castle would be designed to allow a large group of lords, knights and government officials to attend important meetings with the king. A more ancient tradition would have the king or lord decide disputes among his people. These administrative actions would be done in the great hall and would exhibit the wisdom of the king as judge to the general populace.

SCOPE AND LIMITATION OF THE PROJECT

To evolve a design with forms and spaces with distinct architectural characteristics focusing on space utilization and functions. This project deals with the design which is well adoptable in terms of typology, function and climatic conditions. The project will be design oriented and detailing of structural elements and services detailing are come under the limitations

TENTATIVE PROJECT REQUIREMENTS

- Library
- Conference Hall for 200 persons with Audio-Visual facilities and Media Centre of appropriate size.

- Auditorium with seating capacity of 1000 persons
- Facilities for holding work-shops & Exhibitions
- A display gallery of approx. 2000 sq. ft.
- Guest House

General Requirements:

Reception / waiting be provided separately for various components.

Area of various components / items not specified in the client's Brief but necessary for a particular purpose, may be purposed by the Architect and provided in the scheme.

The architectural design character of the project should be in harmony with the Chandigarh Architecture.

Parking lots should be un-obtrusive and designed to allow free pedestrian movement. Separate parking lots be provided for different activities based on the capacity of each facility.

Ramps, lifts and stairs may be provided where-ever necessary.

Public conveniences.

Service Areas:

All building areas except area under building services, circulation etc. are to be air-conditioned. Electrical sub –station, generator room, under ground water reservoir, A/C plant and workshop etc. are to be provided in the basement separately for Memorial and Centre for Performing & Visual Arts. We would be interested in making this an intelligent building complex.



1.2 CONVENTION CENTER

CONVENTION CENTRE, since its very inception has been the centre of learning and research. It draws scholars and researchers from all over the world. It provides a platform for the influx of visitors who come to avail the wealth of the knowledge thus providing an opportunity to interact with people of similar interests and pursuit.

NECESSITY OF CONVENTION CENTRE

A convention centre offers a pragmatic approach for creating a harmonious environment to hold meetings and enhance communication at personalized level, initiate program and encourage innovation. It caters the delegates representing top expertise in their respective fields and aimed to provide a conducive environment to hold conferences, exhibitions, etc.

NEED OF MEETINGS:

The main drawing factor which generates a continuing demand for meetings is a need for communication at a personalized level, the opportunity for individuals, particularly in those activities which involve problem solving and innovations to exchange views and ideas.

CONVENTIONS:

It is a forum of annual or total membership meeting. And usually general sessions, mostly information giving, often formed around a particular theme or subject matter of interest and accomplished by exhibition.

NEED OF PROJECT:

The need is to set up a permanent conference and business centre to give a boost to the trade and commerce of Indian industries.

REASON FOR TAKING UP THE TOPIC:

Though convention centre is considered as a place assigned for people to meet but there are several possibilities in this project which to have explored. This project is one which appeals to both my aesthetic and technical sensibilities. For e.g. while designing an auditorium and conference hall I will have to pay attention to the acoustics as well as services and will also have to make sure that the surroundings should be such that people attending a conference should feel comfortable. Not only this various other requirements like library, exhibition hall, guest room, VIPs lounges etc. require different planning because they are designed for different purposes, thus give me a chance to understand different approaches required for these different structures and their interconnection with each other which will help me in the long run. Thus my reason to take up the project is its varied space requirement and it not only appeals to my senses as an architecture student but also gives me a chance to understand various possibilities of construction.

AIMS AND OBJECTIVES:

- Program consist of varied function having work which will require high level of detailing of services.
- To create inter relationship of different structure forms of different functions.
- The circulation of the project is very important at some times there will be need to segregate the V.I.P. and the other gentry.
- Exhibition, library etc. are some spaces where proper provision for natural lighting and ventilation should be assured along with artificial lighting.
- To promote a platform for interactions between various sections of society . This would lead to better understanding of each others trade and spread awareness among people which is a need of this era.
- To provide a conducive atmosphere for discussions this will help in efficient exchange of useful data and information.

METHODOLOGY:

- Detailed study in terms of features, climate etc.
- Detailed study of specific building typology in term of nature, quality and space requirements including services, equipment etc.
- The study of similar building types to familiarize the existing building solutions to similar related requirements.
- The study of context in which the project is to frame out.
- Framing of requirements, concept and finalization of design.

SPATIAL REQUIREMENTS:

1. Office Complex for Admin.
2. Multipurpose Hall (5000 Peoples)
3. Conference Rooms
4. Restaurants
5. Exhibition Spaces
6. Media Room
7. Banquet Hall
8. Mini Auditorium
9. Parking
10. library
11. Outside landscaping with tree plantation, garden area etc.



BACKGROUND AND HISTORY

The first convention centre can be traced back to mid-19th century Britain. Commonly known as exhibition halls, the centre were designed to bring together people to discuss and explore their mutual interest of a subject.

The convention center, designed by architect Charles Luckman, opened in 1971 and expanded in 1981, 1993 and 1997. It was originally built as a rectangular building, between Pico Boulevard and 11th Street.



THE HISTORY OF CONFERENCE CENTRES

The first convention centre can be traced back to mid-19th century Britain. Commonly known as exhibition halls, the centre were designed to bring together people to discuss and explore their mutual interest of a subject. These imposing Victorian buildings often covered several acres and were multi-functional incorporating lecture halls, libraries, galleries, theatres and exhibition areas.

They can be typically described as-

- **Trade Convention-** It typically Lays focus on a particular industry or industry segment, and feature Keynote speakers, Vendor displays, and other information and activities of interest to the event organizers and attendees.
- **Professional Conventions-** They focus on issue of concern to the profession and advancements in the profession. such conventions are generally organised by society's dedicated to promotion of the topic of interest.
- **Fan Convention-** they usually feature display shows, and sales based on pop cultures and guest celebrities.
- **Seminar-** They are meetings organised to celebrate major events and religious ceremonies. Common social event include - Anniversary's wedding and Birthdays.
- **Tradeshow/ Exhibitions** -They are an opportunity for companies to exhibit some of their latest products, as well as yet to be released prototypes to journalists as well as others in the industry.

SCOPE OF PROJECT:

- The project is layout/ planning oriented.
- The need of such type of spaces is provide for multi functional activity like conferences, seminars, and exhibitions etc.
- there are many technical aspects involved in the design of library , auditoriums and exhibitions etc.
- parking segregation is also very important for the purpose of security.
- To exchange ideas and views.

To bring people of different religions, language and social background together and to create a better understanding of each other personnel contact In splite of higher technological advancements in the field of science and technology.

The land has been allotted by DDA for the development of Hotel/Commercial use . The surrounded area is developed area. The site is well connected by road network and Metro also. The proposed project will result in the increase in the social infrastructure as the population related to commercial use in form of supporting staff, working staff and visitors will increases.

Soil

The soils of the Delhi area are mostly light with subordinate amount of medium texture soils. The light texture soils are represented by sandy, loamy, sand and sandy loam.

TOPOGRAPHY

THE SITE IS FLAT LAND, JUST LIKE THE SURROUNDING AGRICULTURE LANDS, AND NEED NOT TO BE REFILL.

VEGETATION:

The vegetation of Delhi is thorny scrub which are found in arid and semi arid Zone. The main forest i.e., Ridge Forest fall in the forest type as per classification of Champion and Seth in the category of 'Tropical Thorn Forest' and more especially as 'Semi Arid Open Scrub'.

Bye Laws

GROUND COVERAGE, FAR, HEIGHT CONTROL.

Building Regulation to be adhered to are given below: International Convention centre & Exhibition Centre will be built on a plot of 10Acres.

Climatic Data

New Delhi - the capital of India - is a land locked city.

The distance from the sea gives Delhi an extreme type of continental climate with the prevalence of continental air during major parts of the year. Only during the three monsoon months of July, August and September does the air of oceanic origin penetrate to this region and causes increased humidity, cloudiness and rain. The year can be broadly divided into four seasons.

Cold season - December to February

Hot weather season – March to June

Monsoon season – July to September

The two post monsoon months of October and November constitute a transition season from monsoon to winter conditions.

The temperature may rise up to about 45 degrees Celsius in summers, though the average temperature is around 39-40 degree Celsius. There are about 4-6 days of heat wave when the maximum temperature of a day rises 46 degree Celsius above the normal values.

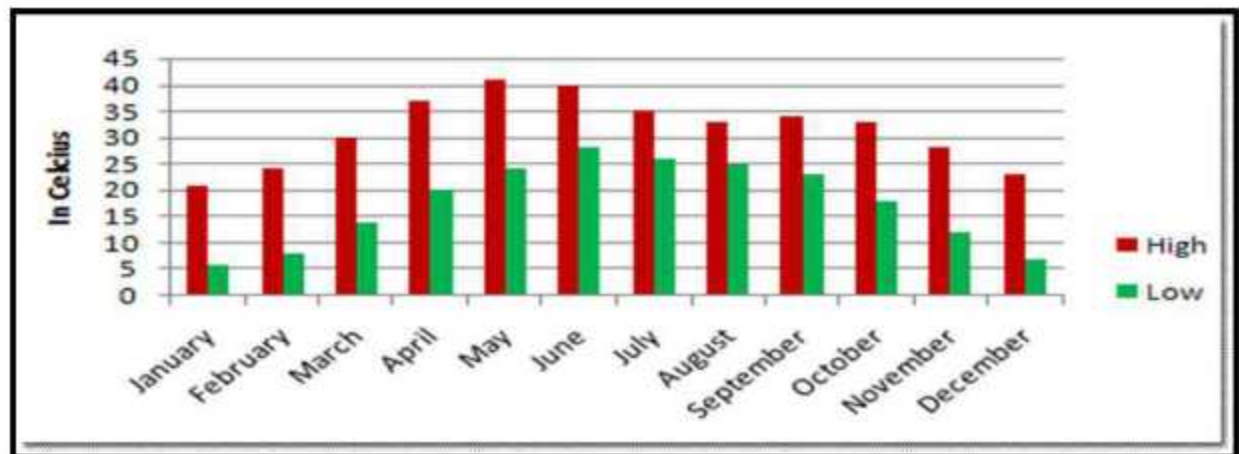
The winters are not bitterly cold on most of the days, the temperatures may fall to 3-4 degree Celsius on for a few days in winters when the cold winds from the Himalayas prevail over the region making the winters chilly.

DESIGN CONSIDERATION IN COMPOSITE CLIMATE

Objectives

Physical Manifestation

- 1) Resist Heat Gain In Summer And Resist Heat Loss In Winter
 - Decrease Exposed Surface Area - Orientation And Shape Of Building.
 - Use Of Trees As Wind Barriers
 - Increase Thermal Resistance - Roof Insulation And Wall Insulation
 - Increase Buffer Spaces - Air Locks/ Balconies
 - Decrease Air Exchange Rate - Weather Stripping
- Increase Surface Reflectivity - Pale Colour, Glazed China Mosaic Tiles Etc.
- 2) Promote Heat Loss In Summer/ Monsoon
 - Increase Air Exchange Rate - Courtyard/ Wind Tower/ Arrangement Of Openings
 - Increase Humidity Levels -Trees And Water Ponds For Cooling Effect
 - Decrease Humidity In Monsoon - Dehumidifiers/ Desiccant Cooling
 - Vegetation - “Deciduous” These Type Of Trees Are Less Dense Than Evergreen Trees And Shed Their Leaves In Particular Season Of A Year.



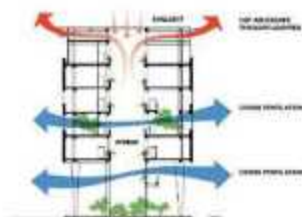
AIR MOVEMENT

In taller buildings, STACK VENTILATION can be used to draw fresh air through a building, and IN deeper building, atriums or courtyards can be introduced to allow light into the center of the floor plan.

EARTH TUBES are often a viable and economical alternative or supplement to conventional central heating or air conditioning systems since there are no compressors, chemicals or burners and only blowers are required to move the air.

Light color coatings with high reflection.

Active Techniques which can be used are HVAC System.



Swot Analysis

STRENGTH:

Research and knowledge based city character-Presence of nearly 15 R&D Centres /PSUs, 21 MSEs.

Availability of quality sports Infrastructure-17 Stadiums, Sports university.

Availability of prominent schools/ pre-college facilities .

Presence of abundant natural spots.

Variety of flora, fauna, variety of horticulture and floriculture.

WEAKNESS:

Inadequate higher/technical education facilities.

Poor urban planning, road infrastructure, public transport system.

Lack of specialised medical facilities.

Poor road and rail connectivity. Low disaster management preparedness.

Absence of sewerage system.

OPPORTUNITY:

Opportunity to develop:

Knowledge hub/ Higher education facilities / Education hub.

Eco-tourism centre.

Sports hub.

Mineral related business hub.

Tribal tourism development culture centre / Herbal medicine hub.

Food processing hub.

THREAT:

Naxalism.

Erratic monsoon.

Depleting green cover / Indigenous plantation.

Depleting water table.

Thundering/lightning fatalities.

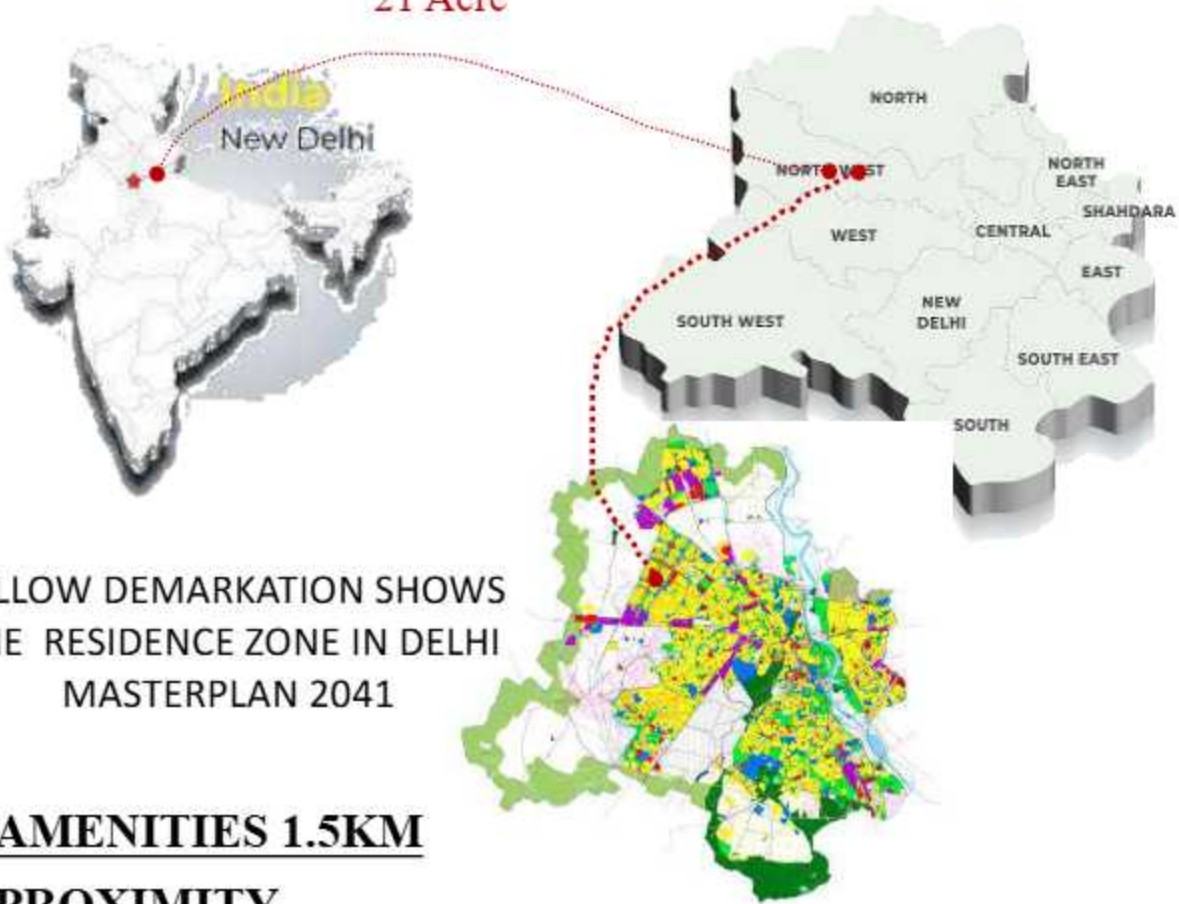
Ranchi has high migration rate.

SITE ANALYSIS

SITE LOCATION - On Naharpur Rohini East, sector 3, North West Delhi

SITE COORDINATE -28°41'59"N 77°06'43"E

SITE AREA -8.52 hect. (85,230 sq.m.),
21 Acre



YELLOW DEMARKATION SHOWS
THE RESIDENCE ZONE IN DELHI
MASTERPLAN 2041

AMENITIES 1.5KM PROXIMITY



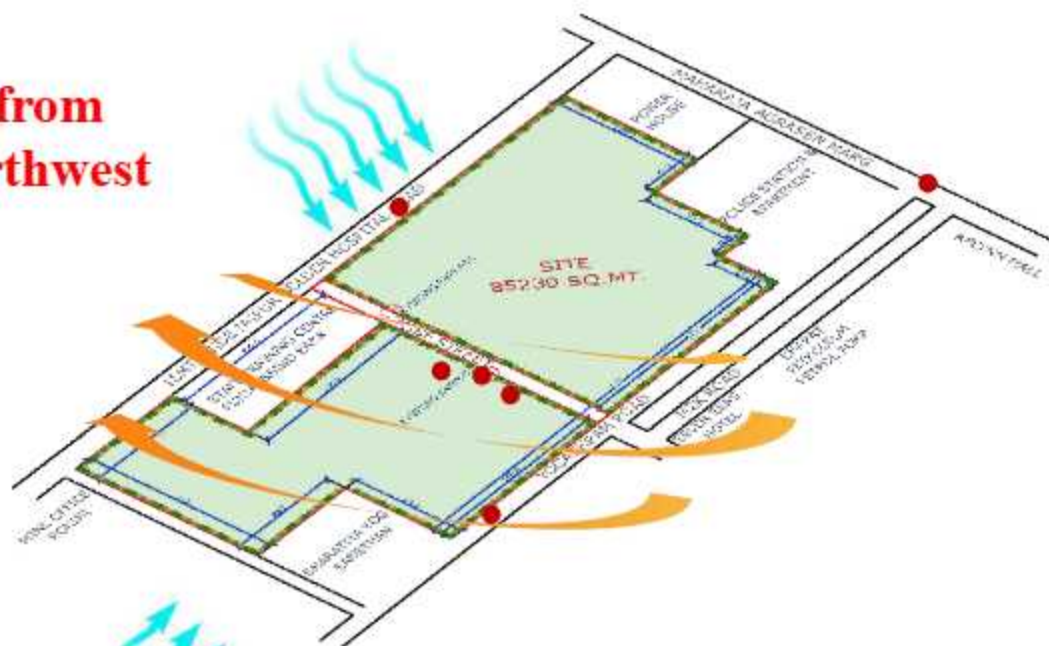
SOIL TYPES



SITE ANALYSIS

DELHI : COMPOSITE CLIMATE

**Wind from
west-northwest**



**Wind from
west-southwest**

SR.NO.	TREE NAME
1	BAMBOO
2	NEEM
3	GUAVA
4	LEMON
5	MANGO
6	FIG TREE

ANALYSIS

Soil Suitability – The area has alluvial soil (a mix of sandy loam and clayey loam), which is great for construction but requires a solid foundation.

Great Connectivity – Metro access, major roads, and public transport make it easy to get around.

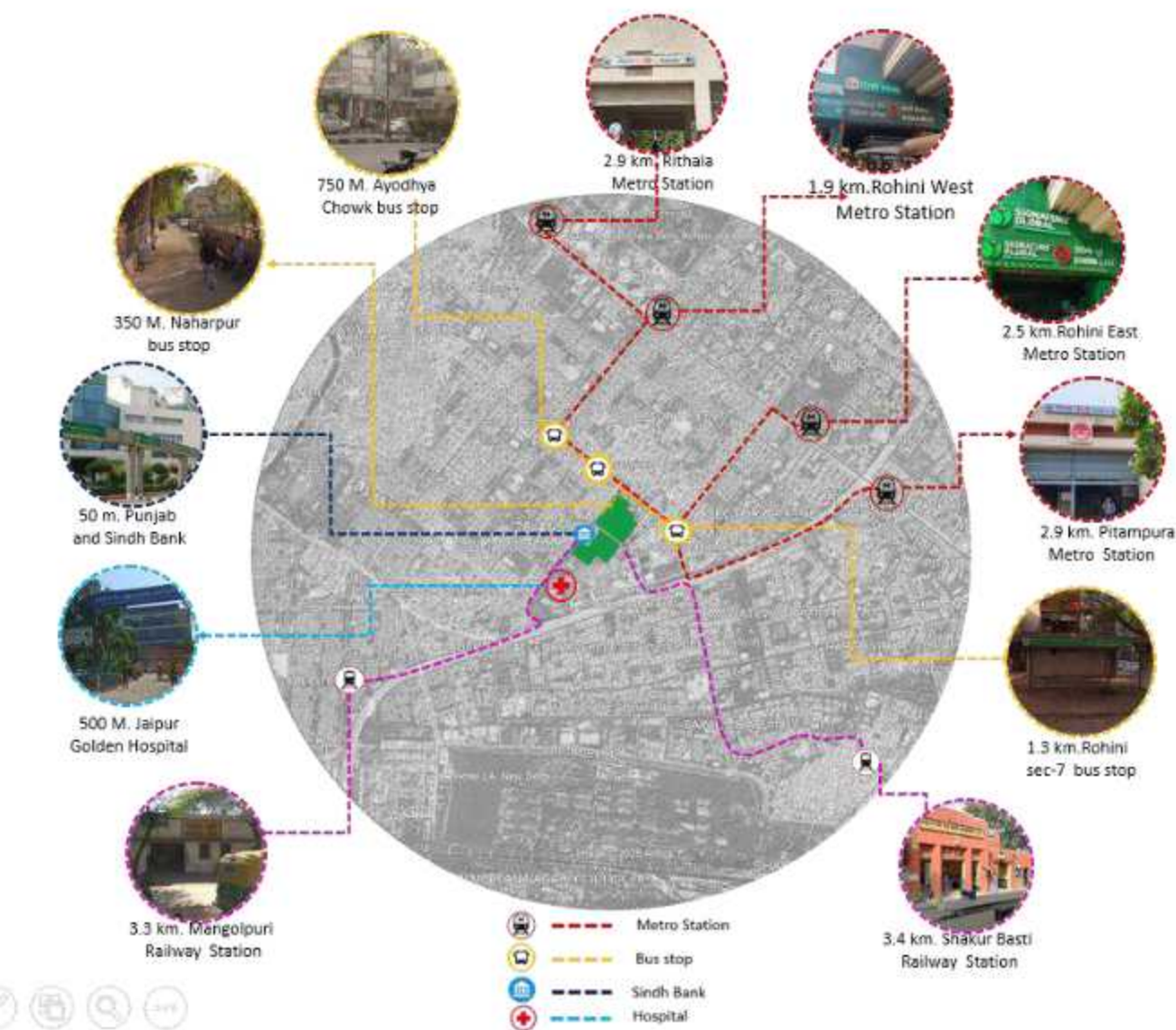
Established Infrastructure – The site is surrounded by schools, hospitals, markets, and parks, making it a well-developed neighborhood.

Climate Challenges – Urban heat and occasional waterlogging require design solutions like shaded areas and smart drainage systems.

Building Regulations – Falls under DDA guidelines, so height, density, and zoning rules must be followed.

SITE CONNECTIVITY: PRIMARY CONNECTION

PROXIMITY 3.5 KM RADIUS



Delhi: Temperature & Air Quality Trends (2015-2024)

Rising Temperatures: Gradual increase over the decade.

Air Quality Variability: Fluctuations due to seasonal and meteorological factors.

Low Wind Speeds: Worsened winter pollution by trapping pollutants.

2024 Improvements: Record "Good to Moderate" air quality days.

Challenges Remain: Meteorological conditions still impact pollution levels.

LITERATURE STUDY -1

(HYDERABAD CONVENTION CENTER)

LOCATION

- LOCATION: KOTHAUDA,
- HYDERABAD, INDIA
- ARCHITECT: EMAAR GROUP
- SITE AREA: 60000 SQM
- CAPACITY: 5000 DELEGATES



ABOUT HYDERABAD CONVENTION CENTER

- H.I.C.C IS INDIA'S FIRST PURPOSE-BUILT AND STATE-OF-THE-ART CONVENTION FACILITYMANAGED BY ACCOR, THE WORLD'S LEADING HOSPITALITY AND TOURISMMANAGEMENT GROUP.
- HICC IN EVERY ASPECT, BE IT INFRASTRUCTURE, SERVICE OR TECHNOLOGY, COMPARESWITH THE BEST IN THE WORLD. IT HAS BEEN CONCEIVED AND DESIGNED TO ASSIST INEXECUTING WORLD CLASS EVENTS, WHETHER THEY ARE CONVENTIONS FOR 5000DELEGATES, SEMINARS FOR 500 OR MEETING FOR JUST 50. THIS AIR CONDITIONEDCENTRE CAN BE CONFIGURED TO INCREASE SEATING CAPACITY TO ABOUT 6500.

Location: Cybercity, Hyderabad

Site: 15 Acres

Capacity: 5000

Architect: EMAAR Group

It is first green gold certified convention center. It is 32 km far from Rajiv Gandhi Airport

Selection Criteria

Similar function & catering internal standards in south Asian region

Similar site condition

To study spatial planning

Parking

It can park 300 cars at surface & there is provision 1000+ car parks. In addition there is 25 parking for bus & 500 two wheelers.

Visitor Parking

The visitor can park the vehicles either in the front or rear depending on the mode of transportation .in case of meetings and conventions the visitors are dropped near the main entrance approached by a roundabout.

Main entrance approached by 8m wide road.

Parking for 300 cars at the surface level at the centre itself for delegates The Hyderabad international convention Centre's car park entrance is at the western side of the building, accessible from traffic lights off the HITEX city

CONCEPT

THE HYDERABAD CONVENTION CENTRE IS A STATE-OF-THE-ART FACILITY DESIGNED TO HOST INTERNATIONAL CONVENTIONS, CONFERENCES, AND EXHIBITIONS. THE CENTRE'S CONCEPT IS BASED ON PROVIDING A WORLD-CLASS PLATFORM FOR BUSINESS, CULTURAL, AND SOCIAL EVENTS, WHILE SHOWCASING THE CITY'S RICH HERITAGE AND CULTURE. THE DESIGN OF THE CENTRE INCORPORATES MODERN ARCHITECTURE WITH SUSTAINABLE AND ECO-FRIENDLY FEATURES, CREATING A UNIQUE AND IMPRESSIVE VENUE FOR NATIONAL AND INTERNATIONAL EVENTS.

ZONING

CIRCULATION:

TWO STAIRCASE

TWO LIFTS

TWO ESCALATORS

RECEPTION

ORGANIZATION MANAGER'S OFFICE

BANQUET MANAGER'S
OFFICE

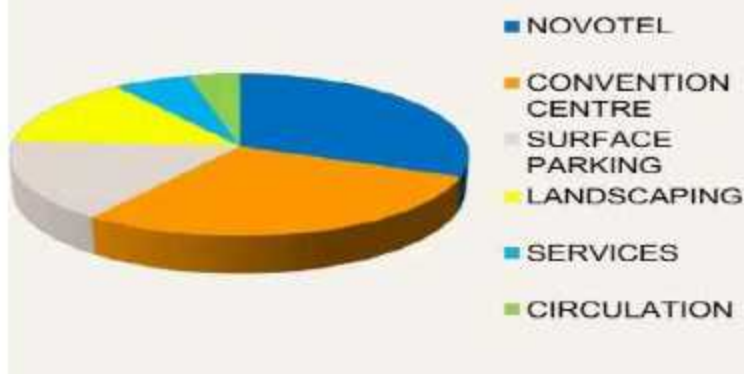
ORGANIZER'S OFFICE

(WAITING LOUNGE, MEETING SPACE AND OFFICE)

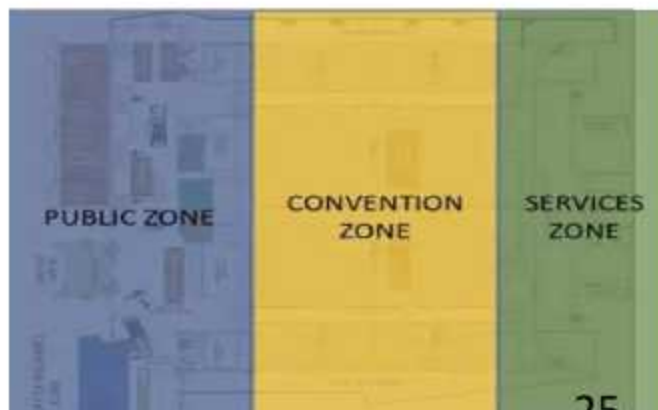
BUSINESS CENTRE

REGISTRATION CENTRE

AREA ANALYSIS:



AREAL VIEW OF SITE



CAPACITY AND ACCESS

CLIENT - EMAAR PROPERTIES DUBAI AND
ANDRA PRADESH INDUSTRIAL
INFRASTRUCTURE CORPORATION LTD.

TYPES - HOSPITALITY , COMMERCIAL
SIZE - 27,000 SQM
PROJECT DESCRIPTION

Venue	Theatre Back Projection	Theatre Front Projection	Classroom Back Projection	Classroom Front Projection	Cluster Back Projection	Cluster Front Projection	U-Shape	Board Room	Area in Square Metres	Area in Square Feet	Ceiling Height in Metres	Ceiling Height in Feet	L X B (Metres)	L X B (Feet)
-------	-------------------------------	--------------------------------	---------------------------------	----------------------------------	-------------------------------	--------------------------------	---------	---------------	-----------------------------	---------------------------	--------------------------------	------------------------------	-------------------	-----------------

GROUND FLOOR

Organizer's Suite 1									96	602	2.9	9.5		
Organizer's Suite 2									62	667	2.9	9.5		
Registration Centre									429	4616	3.2	10.5	33 X 13	106 X 42
Convention Hall - 1	250	300	125	150	125	150			442	4790	12.5	42	15 X 29.5	49 X 96
Convention Hall - 2	250	300	125	150	125	150			442	4790	12.5	42	15 X 29.5	49 X 96
Convention Hall - 3	1350	1500	750	850	600	725			1914	20600	12.5	42	33 X 58	108 X 190
Convention Hall - 4	1350	1500	750	850	600	725			1914	20600	12.5	42	33 X 58	108 X 190
Convention Hall - 5	250	300	125	150	125	150			442	4790	12.5	42	15 X 29.5	49 X 96
Convention Hall - 6	250	300	125	150	125	150			442	4790	12.5	42	15 X 29.5	49 X 96
Corridor 'A' or Corridor 'B'									283	3046	12.5	42	4.8 X 55	16 X 192
Hall - 1&2 or Hall - 5&6	700	800	400	425	350	400			565	6022	12.5	42	15 X 58	49 X 192
Convention Hall - 1&2 + Corridor or Hall - 5&6 + Corridor	850	950	515	525	450	525			1168	12566	12.5	42	19.8 X 59	65 X 192
Convention Hall 1-3 or Hall 4-6	2400	2800	1300	1400	1050	1200			3074	33076	12.5	42	53 X 58	173 X 190
Convention Hall - 3&4	3000	3500	1700	1900	1400	1700			3857	41500	12.5	42	66.3 X 58	216 X 190
Convention Hall 1 - 4 or Hall 3-6	4000	4900	2200	2400	1750	2100			5017	53862	12.5	42	66.3 X 58	216 X 190
Convention Hall 1 - 6	4850	5800	2750	3000	2350	2650			6177	66464	12.5	42	108.5 X 58	348 X 190
Meeting Room G.01	80			90		40	30	25	125	1345	2.9	9.5	8.75 X 13.1	29 X 43
Meeting Room G.02	80			90		40	30	25	127	1367	2.9	9.5	8.9 X 13.1	29 X 43
Meeting Room G.03	80			90		40	30	25	125	1345	2.9	9.5	8.9 X 13.1	29 X 43
Meeting Room G.04	80			90		40	30	25	127	1367	2.9	9.5	8.9 X 13.1	29 X 43
Meeting Room G.05	80			90		40	30	25	125	1345	2.9	9.5	8.9 X 13.1	29 X 43
Meeting Room G.06	80			90		40	30	25	127	1367	2.9	9.5	8.75 X 13.1	29 X 43
Meeting Room G.07									75	800	2.9	9.5	12.2 X 6.2	40 X 20

FIRST FLOOR

Meeting Room 1.01	80	90	40	30	25	127	1367	2.3	7.5	8.75 X 13.1	29 X 43
Meeting Room 1.02	80	90	40	30	25	125	1345	2.3	7.5	8.9 X 13.1	29 X 43
Meeting Room 1.03	80	90	40	30	25	127	1367	2.3	7.5	8.9 X 13.1	29 X 43
Meeting Room 1.04	80	90	40	30	25	125	1345	2.3	7.5	8.9 X 13.1	29 X 43
Meeting Room 1.05	80	90	40	30	25	127	1367	2.3	7.5	8.9 X 13.1	29 X 43
Meeting Room 1.06	80	90	40	30	25	125	1345	2.3	7.5	8.75 X 13.1	29 X 43
Meeting Room 1.07					12	48	400	2.3	7.5	5.8 X 8.0	19 X 26
Meeting Room 1.08					14	88	947	2.3	7.5	9.2 X 9.6	30 X 31
Meeting Room 1.09					14	88	947	2.3	7.5	9.2 X 9.6	30 X 31
Meeting Room 1.10					12	48	400	2.3	7.5	5.8 X 8.0	19 X 26

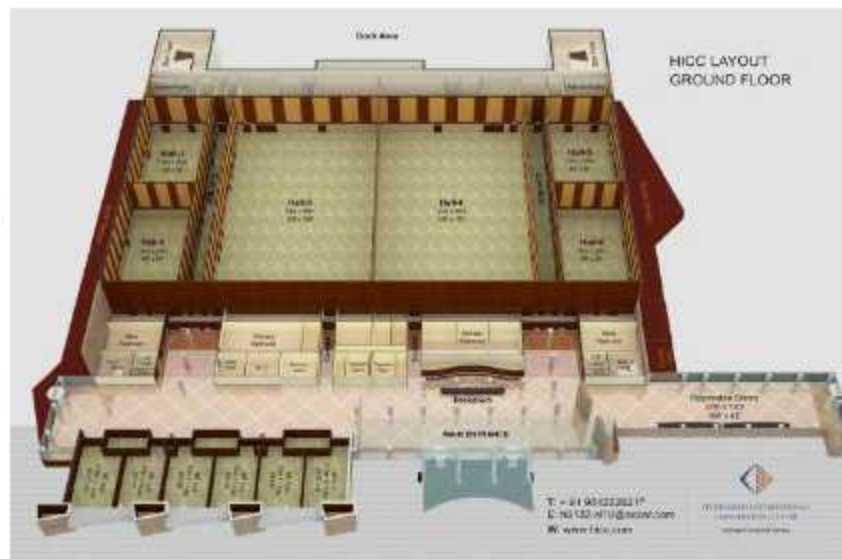
SECOND FLOOR

Meeting Room 2.01	80			90		40	30	25	125	1345	2.3	7.5	8.75 X 13.1	29 X 43
Meeting Room 2.02	80			90		40	30	25	127	1367	2.3	7.5	8.9 X 13.1	29 X 43
Meeting Room 2.03 & 2.04	180			120		104	54	44	274	2948	2.3	7.5	17.9 X 15.3	58 X 50
Meeting Room 2.05								20	125	1345	2.3	7.5	8.9 X 13.1	29 X 43
Meeting Room 2.06								20	127	1367	2.3	7.5	8.75 X 13.1	29 X 43
VIP Lounge	54			36		36	27	18	115.8	1247	2	7		
Speaker's Preparation Booth 1 or 2 or 3 or 4									25.7	255	2.3	7.5	4.1 X 5.8	13 X 19

GROUND FLOOR

PUBLIC AREAS SUCH
AS RECEPTION,
HALL, RESTAURANTS,
ORGANIZERS' OFFICES.

FLEXIBLE ROOMS
ARE MEANT FOR
THE GENERAL PUBLIC
AND DELEGATES



FIRST FLOOR

BOARD ROOMS,
BUSINESS CENTERS,
GALLERY SEATING.

FLEXIBLE ROOMS
ARE MEANT FOR THE
BUSINESS OFFICIALS



SECOND FLOOR

THE SECOND
FLOORCATERS TO THE
HIGHPROFILE
GUESTSHAVING

THE CONFERENCE
ROOMS.VIP LOUNGES



LITERATURE STUDY 2

(BHARAT MANDAPAM)

The Bharat Mandapam - Convention Centre is a world-class facility equipped with modern infrastructure and technology, suitable for hosting conclaves, summits, meetings, cultural events, and congregations. The convention centre comes with dedicated VIP and guest lounges and five-star catering services to support events of up to 7000 persons in a single format. The complex is designed to provide easy accessibility for visitors, specially abled persons and senior citizens, having a parking capacity of more than 5000 vehicles. The complex surrounded by a beautifully landscaped plaza with a musical fountain

LOCATION -PRAGATI MAIDAN NEW DELHI

COUNTRY - INDIA

SITE AREA OF PRAGATI MAIDAN - 123 ACRES

SITE AREA OF BHARAT MANDAPAM (IECC) -
12.5 ACRES

TOTAL BUILT UP AREA -390.000 SQ.MT.

GROUND COVERGE - 35%

YEAR OF COMPLETION - 26 JULY 2023

YEAR OF STARTING - NOVEMBER 2017

ARCITECT - AEDAS & ARCOP

ARCHITECTURAL STYLE - RETROFUTURISM

COORDINATES - [28° 37'10"N 77° 14'33"E](#)

COST - 2700 CRORES

CLINENT - INDIA TRADE PROMOTION ORGANISATION

OWNER - GOVERNMENT OF INDIA

HEIGHT 36.4 METRES

LOCATION OF SITE



CONCEPT

Bharat Mandapam draws its inspiration from “Lord Basaveshwara’s concept of Anubhav Mandapam,” which served as a platform for public ceremonies. It embraces this legacy by offering comprehensive facilities and extensive amenities for the public, aligning with India’s aspiration to become a contemporary and developed society.

SITE PLAN



MATERIALS

Breaking conventional practices, the structure uses concrete space frames over steel space frames as steel was not widely sourced back then in India. Inside, a free-standing coffered mezzanine floor is cantilevered out of a cylindrical shaft, offering more space for the exhibition.

Aluminium: Alufit India Private Limited

Glass: Saint-Gobain

Paints: Asian Paints , Berger Paints India Limited

Steel: Jindal Steel Power , Steel Authority of India Limited , Tata Steel

Cement: Ultratech , Rashtriya Ispat Nigam Limited

Flooring: Italian marble flooring , Granite flooring , Tile carpet flooring , Vitrified tile flooring

Texture paint: Spectrum Paints Private Limited



MONUMENTAL NATARAJA STATE

A prominent feature of Bharat Mandapam is the monumental bronze statue of Nataraja, standing at a towering height of 27 feet. Crafted from Ashtadhatu and weighing approximately 18 tons, this sculpture is a masterpiece by renowned sculptor Radhakrishnan Sthapaty



LEVEL -2 (GROUND FLOOR)

Level 2 houses the grand G20 Summit Room and Leader's Lounge, along with two large auditoriums suitable for conferences and summits. It also connects to a spacious and well-lit open-air amphitheatre which is ideal for hosting cultural events and musical performances.



LEVEL 3 (GROUND FLOOR)

Air-conditioned Plenary and Multi-Purpose Halls are equipped with all modern AV and IT systems suitable for hosting large events and gatherings of upto 7000 persons in a combined format. They also come with hydraulic stage, live audience polling facility, and 16 interpreter rooms for multilingual events.



Design Reflecting Tradition

The architectural design of Bharat Mandapam draws inspiration from India's rich traditions. The building's shape is reminiscent of the elegant form of the Shankha, or conch shell. Its elliptical design, devoid of sharp edges, mirrors the fluidity of the Yamuna River, which meanders through the city.

CASE STUDY -1 (INDIA HABITAT CENTER)

The India Habitat Centre was started in 1993. The public agency for the Housing and Urban Development Corporation (HUDCO) wanted an office building for its workers and made the unprecedented decision to invite chosen nonprofit organizations that shared their concern with habitat to share that work space.

The chairman of HUDCO Santosh Sharma and the architect Joseph Allen Stein decided to radically change the traditional image of an office building as an architectural project and transformed it into an urban design project. The space was designed to permit the members of the centre to share services both inside and outside the building with multiple courtyards, common meeting rooms, shared parking area, library, restaurants, museum, and hotels, some of which are open to the general public. Constructed on nine acres in an urban area, the building eschewed traditional building materials and techniques.

PROJECT DETAILS

Architects- Joseph Allen Stein - Stein, Doshi & Bhalla Architects

Client- India Habitat Centre Society

Site Area - 4 Ha FAR 1.4

Built up -Area 53,000 m²

Super Built-up- 97,000 m²

DESIGN PHILOSOPHY

Walking through the India Habitat Centre, you aren't just moving from one building to another; you're stepping through a series of gardens. 'Buildings in the garden' is a concept at the heart of Joseph Stein's vision; the buildings grow from the landscape rather than as parasites within it. This approach also reflects the building's apparent aspiration to be a literal living habitat in its own right— a place where interaction flourishes, where nature, people, and the built environment coexist in harmony. Comfort was paramount in this vision.

Site Conditions

Plain site located on Lodhi Road, New Delhi. The L-shaped site has frontage on three sides, all bounded by roads. The fourth side is flanked by Bal Bharthi School. The area is predominantly institutional along Lodhi Road and residential as one moves deeper inside.

Climate

Humid sub-tropical Average temperatures range from 19-32 depending on the weather summers are hot, winters are quite cold, with most amount of rain during monsoons.

Connectivity and Access

The site can be accessed from the three sides bounded by roads. Lodhi Road on the north serves as pedestrian entrance. Roads on the west, Max Mueller Marg, and south, Vardhman Marg serve as direct access roads to different areas of the complex and entry by vehicle is allowed. The site lies 1 km from the main road connecting I.T.O. and A.I.I.M.S.



Stein's design departs from the often imposing and monumental character of many modernist and [post-modernist](#) structures. He employs simple geometry, allowing the interplay of greenery and open spaces to soften the grandeur of the built form. With all vehicular movement restricted to the periphery of the site and parking located underground, the ground is designed to be a playful pedestrian realm.

The built forms at the India Habitat Center are organized as a series of blocks, each four to seven storeys high, surrounding interconnected courtyards. Spaces within the complex are carefully zoned, with areas of high public access located near the entrances. Landscaped areas seamlessly connect public and semi-public zones and offices are accessed directly from the courtyards.

Materials and Construction

The building features a thoughtfully designed reinforced concrete frame structure, creating flexible interior spaces. Massive steel girders support the entire office block, spanning large distances without intermediate supports. The facades are carefully designed to respond to the climate, with generous glazing to admit winter sun and minimize solar heat gain in summer. Strategic planting further moderates the climate.

Courts

The internal facades, supporting light hanging gardens, are characterized by horizontal ribbon windows. Aluminium-framed windows facing the central court provide diffused light and allow ventilation, reducing the cooling loads. Many of these windows incorporate slots for plants to grow in. Daylight enters the campus through strategically placed niches and the beloved space frame canopy. Some ventilation shafts also allow daylight to penetrate even the basement levels.

Building Program

IHC is programmed as a moderately dense complex with institutional and office work spaces, conference and library facilities, including a diverse range of facilities for the members.

- 40,000 sq. of office accommodation
- Conference rooms with a total capacity of 1000 in various configurations holding 30 to 450 people
- 60 guest rooms, 5 suites, 5 service apartments
- Conference rooms, cafeteria, restaurants and private dining rooms can handle around 1500 persons at a time.

700 sq. Of exhibition space

- 420 capacity auditorium, 250 capacity amphitheatre

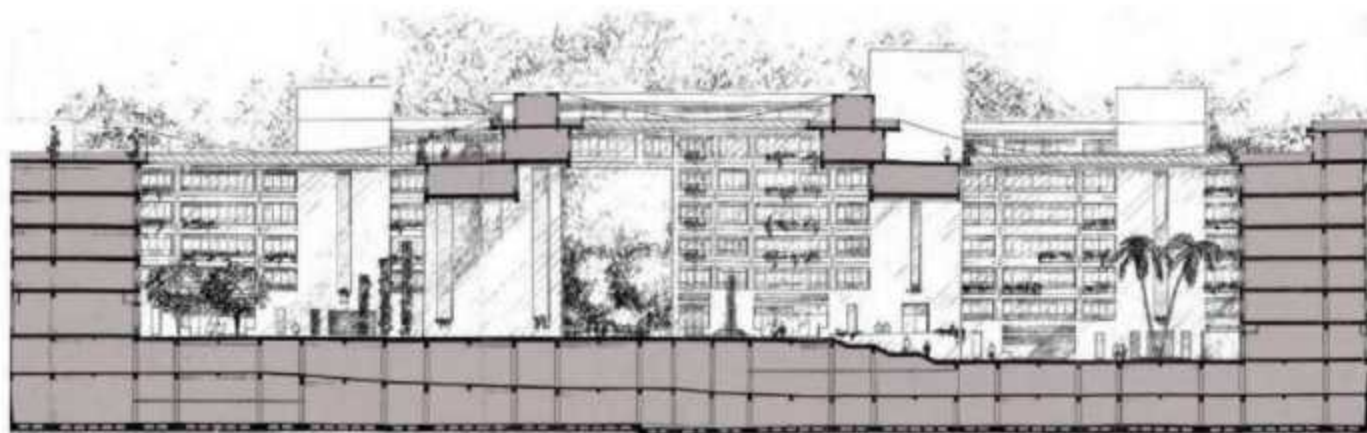
Parking for 933 cars and 2000 two-wheelers

25% of the total area goes into landscaped courts.

Climate Control

The extensive greenery and trees within the complex play a crucial role in regulating temperatures. The strategic use of water bodies, including a large fountain and multiple small pools adorned with vibrant orange fish, utilises evaporative cooling and contributes significantly to the overall climate control within the complex. The IHC also boasts a rich diversity of flora, including [green roofs](#) and [vertical gardens](#), which enhance insulation and mitigate the urban heat island effect.

SECTION ,IHC



CASE STUDY -2 (I.G.P. LUCKNOW)

INDIRA GANDHI PRATISHTHAN (IGP), Lucknow

Location- Kathauta Chauraha Road, Vibhuti Khand Gomti Nagar Lucknow

Architect- Sikka Associates

Client- Lucknow Development Authority (L.D.A.)

Area - 10 Acres

Construction Status -Completed (Restaurants, Gym, Club, Library) Proposed



Introduction:

Indira Gandhi Pratishthan is one of the largest convention centre in the city of Lucknow. The venue has been host to various national and international meetings, summits and gatherings, the venue consists of three auditoriums, lawns, banquets, meeting rooms, art gallery, exhibition space etc. Named after the former prime minister smt. Indira Gandhi the project began in 2002. This 10 acre campus has parking for 2000 cars and is accessible from all parts of the city. Many facilities have been proposed for proper utilization Of venue and increase the footfalls. The proposals include setting up gymnasium, swimming pool, library, club, restaurants etc. The venue has catered events like meetings, gatherings, seminar, product launches, business summits, exhibitions, award functions, concerts, entertainment events.

Purpose

The convention venue has served various purposes over the year from local to national to international events the venue is capable of all the events. Some of the events hosted by Indira Gandhi Pratishthan.

- 1) Meetings
- 2) Seminars
- 3) Product Launches
- 4) Business Summits
- 5) Marriage Functions
- 6) Exhibitions
- 7) Award Ceremonies
- 8) Entertainment Events
- 9) Concerts



Features of IGP:

IGP has been designed for hosting various events

there are various block in the venue

- 1) Earth (5 Moon Halls, Vip Lounge 1 Media Centre)
- 2) Mercury 400 Pax
- 3) Mars 600 Pax
- 4) Jupiter 1500 Pax
- 5) Saturn Banquet Hall
- 6) Art Gallery
- 7) Exhibition Ground



Services:

- 1) Fire hose pipes installed on site with
- 2) primary and secondary pumps
- 3) Two 320 KV generator
- 4) Three transformers installed
- 5) 12 mt wide access road



Features:

- 1) Banquet hall with 600 capacity
- 2) Separate kitchen space provided
- 3) A hall for mini function
- 4) AHU store and other area provided
- 5) Landscaping provided for good aesthetic
- 6) Solar panel installed
- 7) Service road for loading and unloading
- 8) Centrally air conditioned banquet.



Jupiter (Auditorium):

- 1) 1500 people capacity
- 2) Grand entry foyer
- 3) Lift and staircase access to first floor
- 4) Green room, control room, practice hall, Vip rooms
- 1) Basement parking for visitor
- 2) Separate VVIP entry provided to the building
- 3) Stone finishing provides lavish aesthetics
- 4) 10.8 mt wide corridor on each side
- 5) 7.2 mt wide backstage corridor
- 6) Solar panel installed on roof
- 11) 1.2 mt gangway in auditorium for proper circulation.



FACILITIES AND FEATURES:

- 4 auditoriums
- 5 meeting rooms
- Outdoor exhibition space
- 7) Banquet hall
- Art gallery , Neptune , Mercury , Mars, Saturn , Earth , Venus , Jupiter.



ABOUT EARTH: The earth block consists of

- 5 moon halls (meeting rooms 100,60,40 capacity)
- Vip/Vvip lounge
- Media centre
- Pluto auditorium (200 pax)



DETAILS:

The ground floor of earth block consists of administration, moon 1 hall, VIP/VVIP lounge

The first floor consists of moon 2, 3,4, 5 and staff rooms

The second floor of moon block consists of pluto auditorium, executive room, media centre

AHU and electrical rooms provided on each floor.

MERCURY:

Mercury is a 400 capacity auditorium

MARS:

Mars is a 600 capacity auditorium

VENUS: Venus is a 1000 capacity pavilion

NEPTUNE: Neptune is the exhibition block

ART GALLERY: The art gallery has indoor space for display of exhibits with spacious halls

JUPITER: Jupiter has following features

Jupiter is auditorium in IGP with maximum 1500 people capacity

It is typical balcony which has balcony and a projection room
The auditorium has grand foyer.

Green room, VIP room, practice room, control room, in the backstage for artists and officials.

Fire hose pipes and lifts provided with proper lobby.

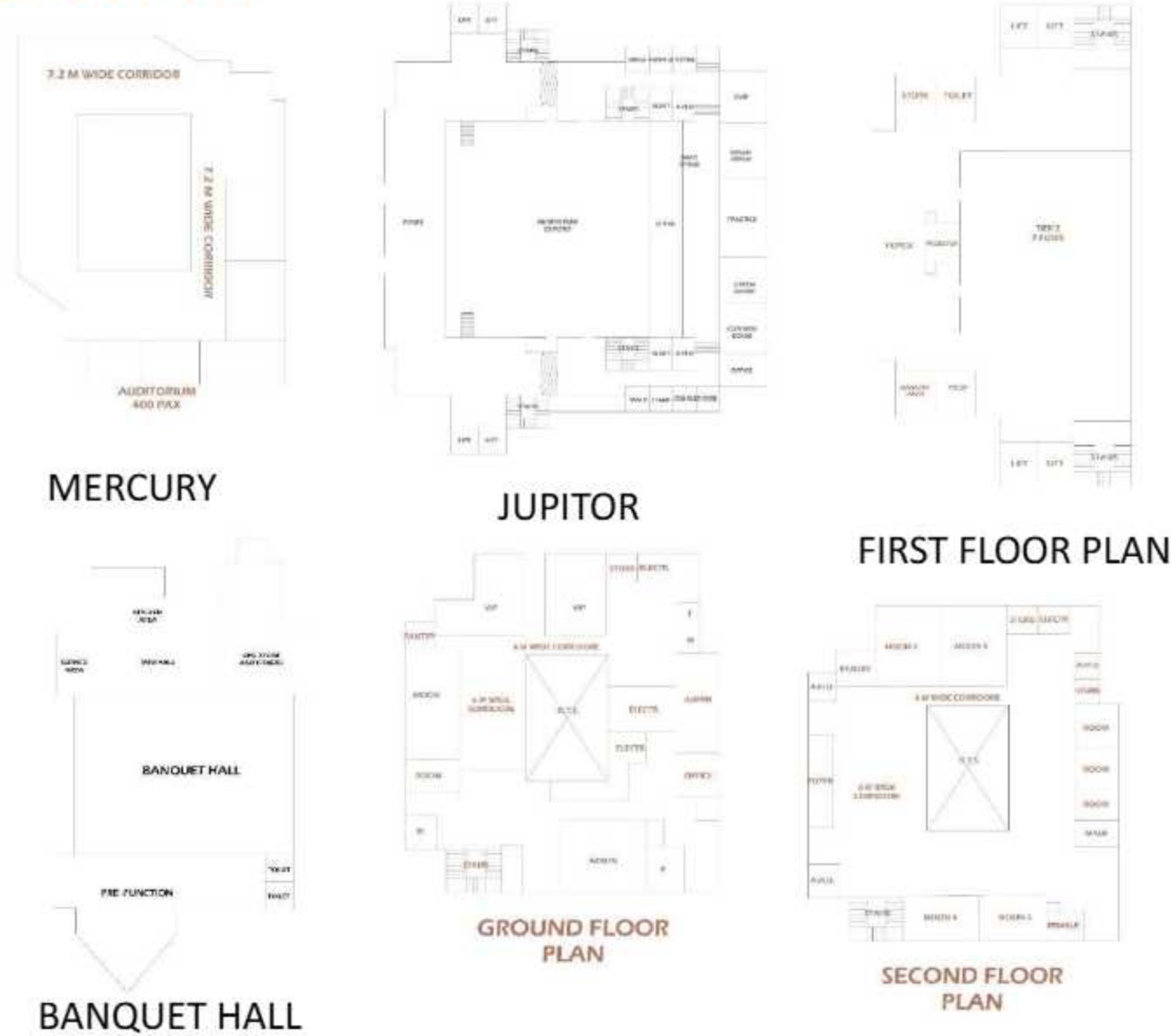
Basement parking provided for visitors.

Separate VIP entry provided for artists and guest

Stone finishing provides lavish aesthetics with

Solar panels installed on roof.

FLOOR PLAN





THIRD FLOOR PLAN



MARS

SERVICES

● LIGHTING:-

THERE IS NO CAT WALK AREA PROVIDED FOR THE LIGHTING ON THE STAGE, WALL HUNG FOCUS LIGHTS AND CEILING LIGHTS PROVIDED FOR THE LIGHTING ON THE STAGE.

FIRE:-

- FOR THE SAFTY FROM THE FIRE THE FIRE ALARM AND FIRE SAFTY SYSTEM ARE PROVIDED AND THE CYLINDER OF CO2 GAS IS ALSO KEPT IN THE AUDITORIUM.

SMOKE DETECTOR AND SPRINKLER ARE PROVIDED IN THE CEILINGS.

ACOUSTICS:-●

THE WOODEN CLADING IS USED ON THE INTERIOR WALLS OF THE AUDITORIUM WHICH IS MORE AUDIO REFLECTIVE THAN THE FABRIC.

- THE CEILING IS DESIGNED IN THE CURVED FORM FOR THE ACOUSTIC PURPOSE.

- THE FABRIC IS USED BEHIND THE STAGE WALL.

MAT IS LAID ON THE FLOOR OF HOUSE AREA AND ORCHESTRA PIT.

● SPEAKERS:-

- THE SOUNDS ARE PROVIDED ON THE VERTICAL SURFACE OF STAGE AND WALL HANGING SPEAKERS.

AIR CONDITIONING SYSTEM:-

THE CENTRALISED AC IS USED IN THE WHOLE BUILDING.

- THE AC DUCTS ARE PROVIDED IN THE CEILING AND WALLS.

THE AIR HANDLING UNIT ROOM IS PROVIDED ON THE FIRST FLOOR.

MATERIALS:-

THE STONE AND GLASS IS USED IN ELEVATION.

- TILES, MAT AND WOODEN FLOORING IS USED IN THE FLOORING.

GRANITE IS USED AT THE STAIRS.

WOODEN CLADDING IS USED AT THE INTERIOR WALLS.

- CEMENT MORTAR FINISH AND STONE TERRACING IS USED AT THE TERRACE FLOOR.



	STANDARD	COMPARISON	HGP MERCURY
CEILING	THE VOLUME PER PERSON REQUIRED TO BE PROVIDED SHOULD NORMALLY RANGE BETWEEN 0.5 TO 5.5 CU.M.		HEIGHT OF THE CEILING IS AROUND 10 M
STAGE	THE SIZE OF THE STAGE DEPENDS UPON THE TYPE OF PERFORMANCE THE HALL IS TO CATER FOR. IT WOULD BE LARGE FOR THEATRES, WHILE IT WOULD BE COMPARATIVELY SMALL FOR CINEMA HALLS WHICH AGAIN DEPENDS ON THE SIZE OF THE SCREEN		HEIGHT: 900 MM FLOORING: WOODEN (VINYL SHEET) (400X800MM) BACK STAGE DOOR: 1800X2100
REAR WALL	THE AUDITORIUM REAR WALL(S) SHOULD BE EITHER FLAT OR CONVEY IN SHAPE. THIS SHOULD NOT BE CONCAVE IN SHAPE, BUT WHERE IT CANNOT BE AVOIDED, THE ACOUSTICAL DESIGN SHALL INDICATE EITHER THE SURFACE TO BE SPALLED OR CONVEY CORRUGATIONS GIVEN IN ORDER TO AVOID ANY TENDENCY FOR THE SOUND TO FOCUS INTO THE HALL.		REAR WALL IS FLAT
FLOOR	FOR GOOD VISIBILITY AS ALSO FOR GOOD LISTENING CONDITIONS, THE SUCCESSIVE ROWS OF SEATS HAVE TO BE RAISED OVER THE PRECEDING ONES WITH THE RESULT THAT THE FLOOR LEVEL RISES TOWARDS THE REAR. THE ELEVATION IS BASED ON THE PRINCIPLE THAT EACH LISTENER SHALL BE ELEVATED WITH RESPECT TO THE PERSON IMMEDIATELY IN FRONT OF HIM SO THAT THE LISTENER'S HEAD IS ABOUT 12 CM ABOVE THE PATH OF SOUND WHICH WOULD PASS OVER THE HEAD OF THE PERSON IN FRONT OF HIM. IT IS POSSIBLE TO REDUCE THIS TO 8 CM, IF THE SEATS ARE STAGGERED. AS AN EMPIRICAL RULE, THE ANGLE OF ELEVATION OF THE INCLINED FLOOR IN AN AUDITORIUM SHOULD NOT BE LESS THAN 0 DEGREES.		
SEAT	THE WIDTH OF A SEAT SHOULD BE BETWEEN 45 CM AND 55 CM U.T		DX: 450X450MM HEIGHT OF CHAIR: 900MM
FLOOR AREA	THE FLOOR AREA OF THE HALL INCLUDING GANGWAYS (EXCLUDING THE STAGE) SHOULD BE CALCULATED ON THE BASIS OF 0.6 TO 0.9 SQ.M. PER PERSON.		30255 SQ.M 45X45 M

TOPOGRAPHY

The site is flat land, just like the surrounding agriculture lands, and need not to be refill.

VEGETATION

The vegetation of Delhi is thorny scrub which are found in arid and semi arid Zone. The main forest i.e., Ridge Forest fall in the forest type as per classification of Champion and Seth in the category of 'Tropical Thorn Forest' and more especially as 'Semi Arid Open Scrub'.

SERVICES

BUILDING SETBACKS:

- the setback from the main boulevard must be no less than 10 meters, in order to create a small square.
- the distance between buildings and the side street shall be no less than 2 meters; there shall be no building concession directly to squares, greens, streets or public spaces, without the 2 meters' setback.
- the setback from the neighboring lot shall be no less than 3 meters.
- the distance between buildings shall comply with fire control requirements.

HEIGHT OF BUILDINGS:

- the height of the covered part of exhibition space (or building height) must be less than 12 meters.
- the height limit for any additional architectural elements (such as skylights, roof elements, vertical connections to the roof, sunscreens, signals, etc.) is 17 meters.

Internal staircase:

- .All assembly buildings having area more than 500 m² on each floor shall have a minimum of two staircases.

- The minimum width for a staircase in an assembly building shall be 1500mm. The formula for most staircases of twice the rise .plus the going lies between 600 and 630mm will give a suitable relationship. The rise should .not exceed 190 mm, and the going should not be less than 250 mm.
- The top of the handrail should be between 900 and 1000 mm above the pitch line
- The minimum headroom in a passage under the landing of a staircase and under the staircase shall be 2.2 m.

Fire safety norms by the National Building Code of India

Every building shall be so constructed, equipped, maintained and operated to avoid undue danger to the life and safety of the occupants from fire, smoke, fumes or panic during the time period necessary for escape.

General Exit Requirements

An exit may be a doorway, to an Internal staircase, or external staircase, or terrace(s), which have access to the street, or to the roof of a building or a refuge area.

All exits shall provide continuous means of egress to the exterior of a building or to an exterior open space leading to a street.

Exits shall be so arranged that they may be reached without passing through another occupied unit.

LANDSCAPE:

- Trees for shading.
- Green parking minimizing the hard surface.
- Plantation of evergreen trees and native trees for low maintenance.



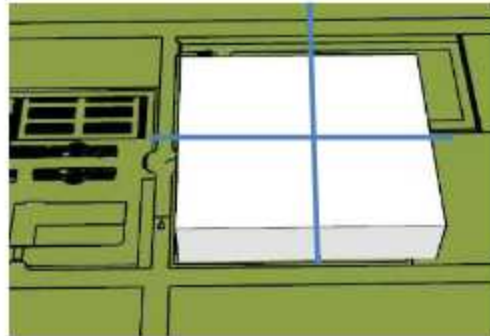
- Solid waste segregation for bio degradable and non bio degradable waste.
- A diverse variety of indigenous evergreen and ornamental trees would be planted. As the project site for construction consists of trees, herbs and shrubs it will require cutting of trees for construction purpose Total number of trees planted will be 6,713. However no of trees retained will be 913.
- The plant species will be selected on the basis of Urban Standard plantation norms and CPCB guidelines.

CONCEPT

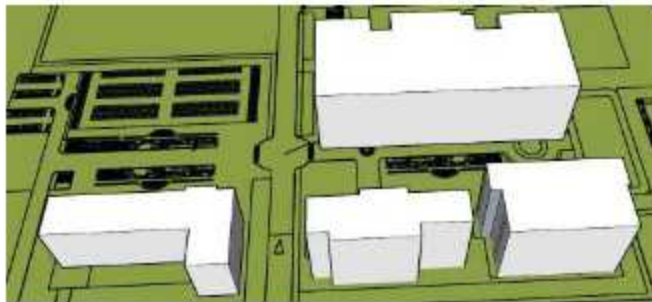


45

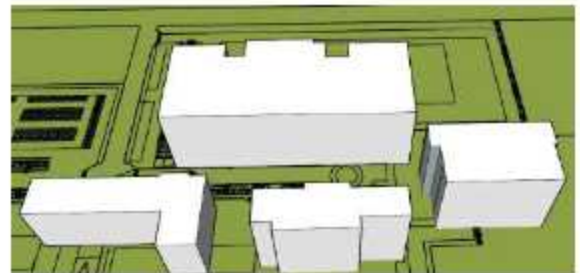
BUILT FORM



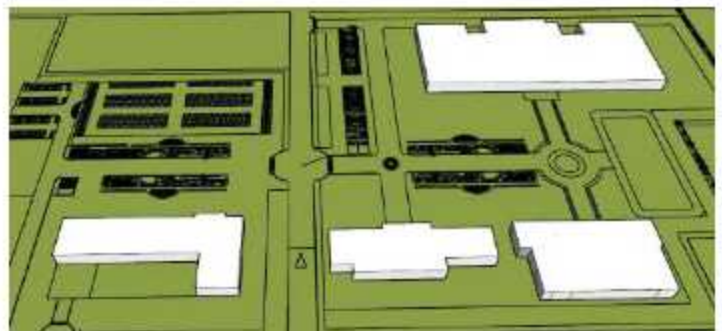
DEVIDE THE WHOLE CUBE
ACCORDING TO AREA
PROGRAM



EQUAL DISTANCE
FROM EACH OTHER



SEPARATE EACH FORM
FROM EACH OTHER



VISUALLY CONNECTING IT 46

SERVICES:

services are the systems installed in buildings to make them comfortable, functional, efficient and safe.

- Acoustics
- AHU
- Electrical supply
- Water supply
- Vertical circulation
- Storage
- Control room



SPACES OF CONVENTION CENTER:

- meeting spaces
- functional areas
- Ballrooms
- multi-purpose spaces
- exhibit halls



CIRCULATION PATTERN



CONVENTION CENTER:

A convention center is a large building that is designed to hold convention, where individuals and groups gather to promote and share common interests.

CIRCULATION:

CIRCULATION AREA Primary circulation is the main circulation route connecting to the building core and common spaces, such as elevators and exit stairs. Secondary circulation includes the aisles between individual spaces, such as offices and cubicles, and support spaces.

PRE-FUNCTION HALL:

The Pre-Function Area is an open, naturally lighted gathering space outside the Auditorium and the Theater. With a seated capacity of 80-100 and standing room capacity of 150-200, the Pre-Function Area is most commonly used for receptions before and after events and meals during the day..



MAJOR FACILITIES:-

- Multi purpose hall

Hall capacity of 5000 people.

Flexible usage-Convention, exhibition spaces & ball rooms, etc.

Conference room, Executive Board rooms, Corporate lounges.

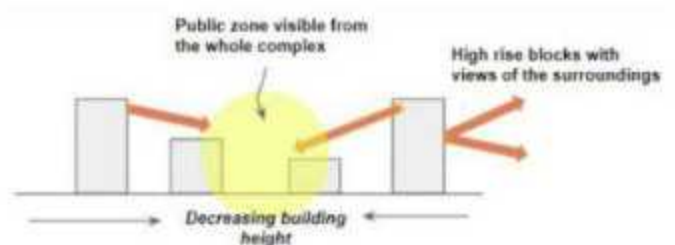
- Media rooms.

Mini Auditorium.

- Food court & beverage outlets

Sufficient space for pre-function storage, kitchen & catering and other service spaces. Underground Parking to accommodate all parking needs (1040 car parking + 641 two wheeler parking).Outside landscaping with tree plantations, Garden area etc

- THIS OPENINGS GIVES LIGHT VENTILATION TO THE BASEMENT FLOOR
- WINDOWS PROVIDING NATURAL LIGHT AND ELIMINATE HOT AIR, ACT AS A SUSTAINABLE ELEMENT
- 3M ABOVE GROUND LEVEL ,THIS CANTILEVERED STRUCTURE ACT AS A MODERN ELEMENT.

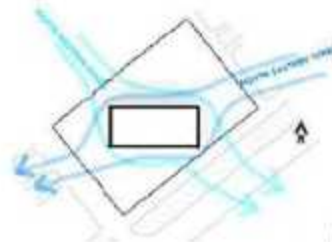
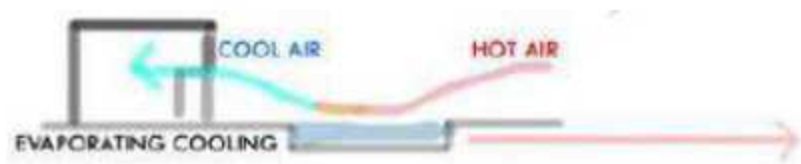


- Placing complementary functions together. The Hotel and the convention facilities need to lie in close adjacency and similarly the offices and the retail stores should be located in proximity to each other.

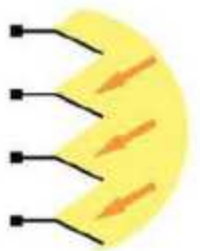


INFERENCE

Trees can be used as a part of landscaped feature which will furthur add scenic beauty of the location. Roads and Pavements can be developed without cutting of those trees.



PROMINENT WIND DIRECTION



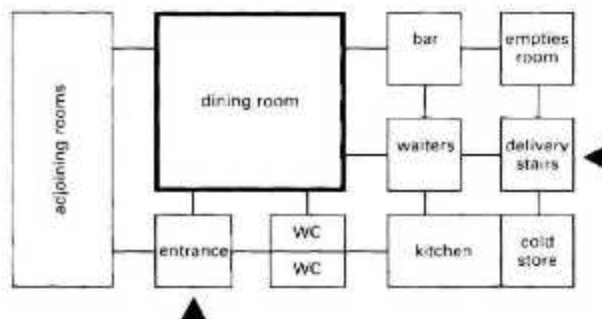
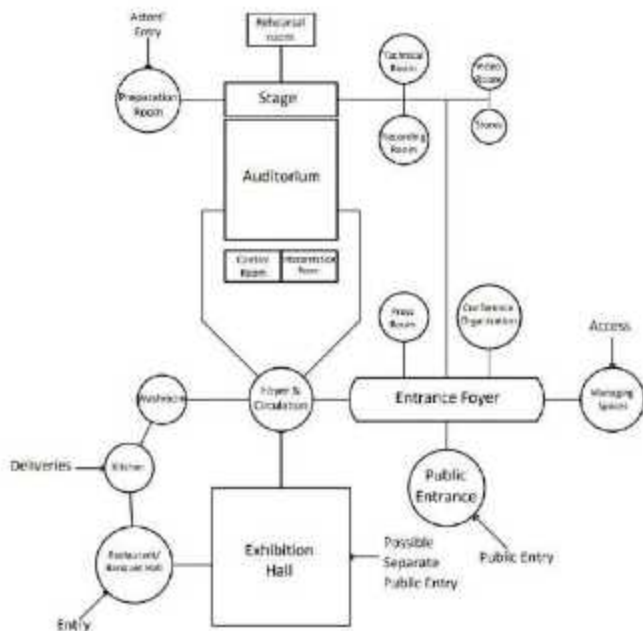
IN SUMMER, SUN RISING 25° NORTH OF EAST



IN WINTER, SUN RISING 25° SOUTH OF EAST

EAST FAÇADE

Open Exhibition facade facing east need to be well treated to avoid sunlight in summer to pass through focade while sunlight in winter should be allowed.



MATERIALS USED

Local materials used including locally harvested Douglas fir and Hemlock wood finishes.

• GLASS



- CURTAIN WALLS
- WINDOWS
- DOORS
- RAILINGS

- COLUMNS
- FRAME
- TRUSS
- FINISHING MATERIAL



• STEEL

• WOOD



- INTERIOR WALLS
- FINISHING MATERIAL
- BEAMS

Legend

1. Hotel Lobby
2. Reception
3. All-day dining
4. BOH
5. Core
6. Plenary Hall
7. Convention centre foyer
8. Restaurant
9. Kitchen
10. Retail street
11. Auditorium
12. Pre-function foyer
13. Office Lobby
14. Craft shops
15. Live demonstration court
16. Electric Substation

Legend:

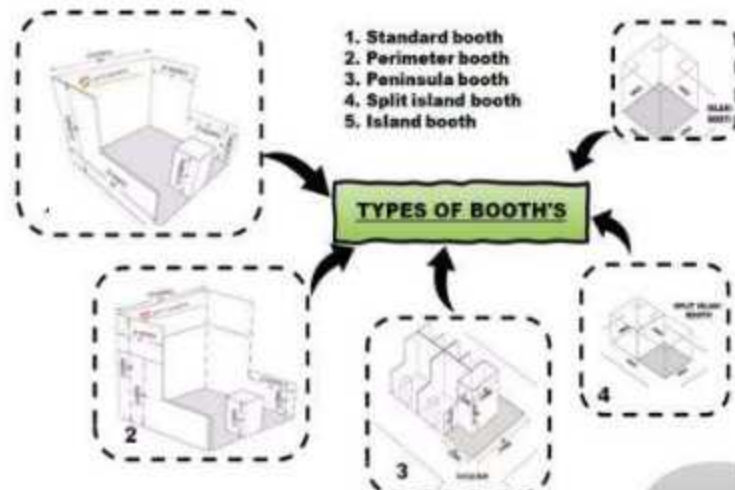
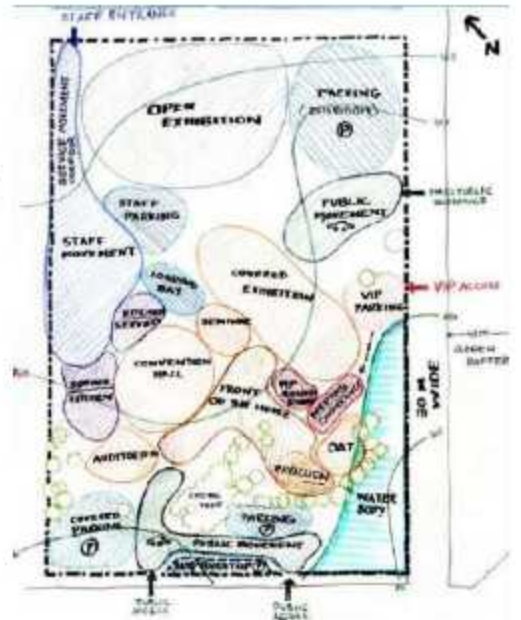
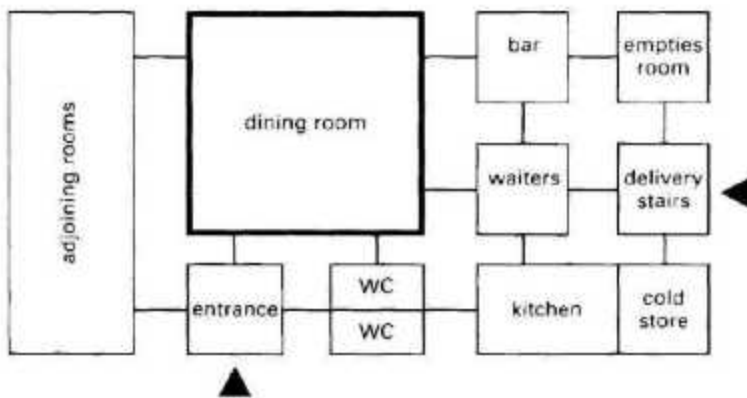
1. Auditorium pre-function foyer
2. Restaurant
3. Restaurant kitchen
4. Stepped seating
5. Spill-out terrace
6. Outdoor dining
7. Stepped plaza
8. Outdoor exhibition
9. Spill-out terrace- hotel
10. Service floor
11. Conference room
12. Hotel room
13. Hotel suite
14. Pool
15. Hotel- back office
16. Retail shops

Legend:

1. Entrance lobby- office
2. Retail court
3. Retail store
4. Co-working office
5. Food court terrace
6. Spill-out terrace- office
7. Temporary craft shops + live demonstration podium
8. Overhead bridge
9. Outdoor dining- food court
10. Stepped plaza
11. Outdoor exhibition space
12. Pre-function foyer
13. Plenary Hall
14. Exhibition hall- pre function foyer
15. Business centre- lounge area
16. Meeting rooms
17. Lecture hall
18. Informal gathering space/ workshop area

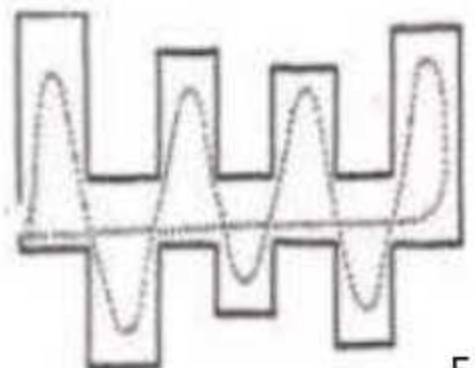
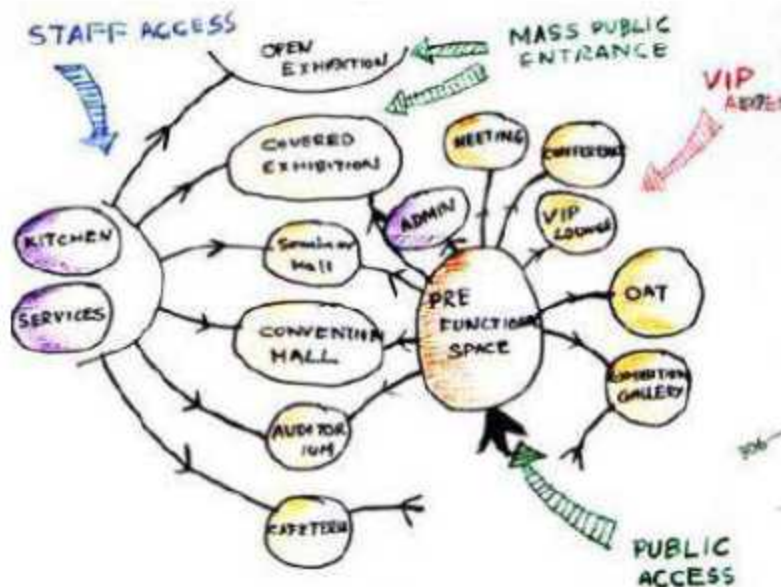
Legend:

1. Entrance foyer- convention centre
2. Registration counter
3. Plenary Hall
4. Pre-function foyer
5. Restaurant kitchen
6. Specialty Restaurant
7. Interpreter's room
8. Outdoor exhibition
9. Spill-out terrace- suite rooms
10. Lobby- for luxury suites
11. Hotel room
12. Hotel Suite
13. Service floor
14. All day dining
15. Outdoor dining
16. Medical room- staff
17. Entry porch- Hotel
18. Court
19. Sunken outdoor event space



Considerations while displaying:

	MEN	WOMEN	CHILDREN
HEIGHT	5'8"	5'3"	5'2"
EYE LEVEL	5'4"	4'11"	3'5"



NORMS:

Public movement pattern for convention centres:

Communication and functionality can be improved by implementing efficient circulation patterns in a convention centre. People visiting or working in a convention centre can be divided into 5 broad user categories:

- Public flow
- Delegate flow
- VIP flow ●
- Journalist flow
- Staff flow

Delegates flow:

Delegates form the most important group of users for a convention centre. The parking shall lead them to the main entrance foyer which further directs them to their destination. An unobstructed delegate movement is very important.

Public flow:

Dignified personalities are invited depending on the nature of conference. It can also have relatives and public guests invited by the organistaion . The public guests also have access to the exhibition areas and hence these areas shall a seperate access to manage the public flow during peak hours effeciently.

VIP flow:

They shall either directly lead to the dais of the main hall or shall enter through the VIP entrance which is connected to a VIP lounge.

Staff flow:

The staff can be divided into two categories namely the technical staff who are responsible for the effecient working of the convention centre while the others are the administrative staff who are exposed to the people coming to the centre. The paths of the technical and administrative staff diverse at the staff entrance.

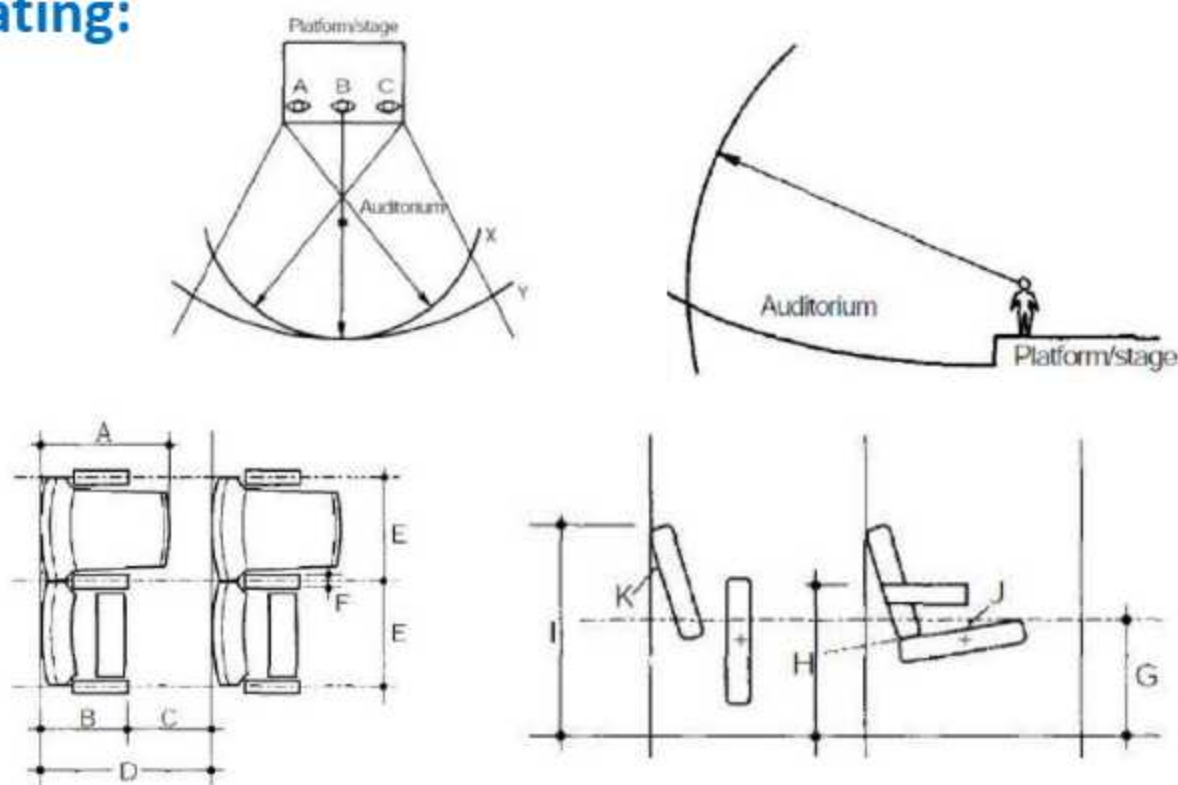
Journalist flow:

it includes press people, cameraman and diplomats. They shall have a direct access to the documentation centre and the TV studio of the convention centre.

The Auditorium:

The three-dimensional volume of an auditorium is conditioned by the need for all members of the audience to be able to see the whole of the platform or stage; and to hear the actor, singer, musician or speaker. Seating density, floor rake and seating layout are partly determined by this, partly to give the audience an appropriate level of comfort and essentially to ensure a means of escape in an emergency, such as a fire, within the time required by safety considerations and by legislation.

Seating:



Writing surface

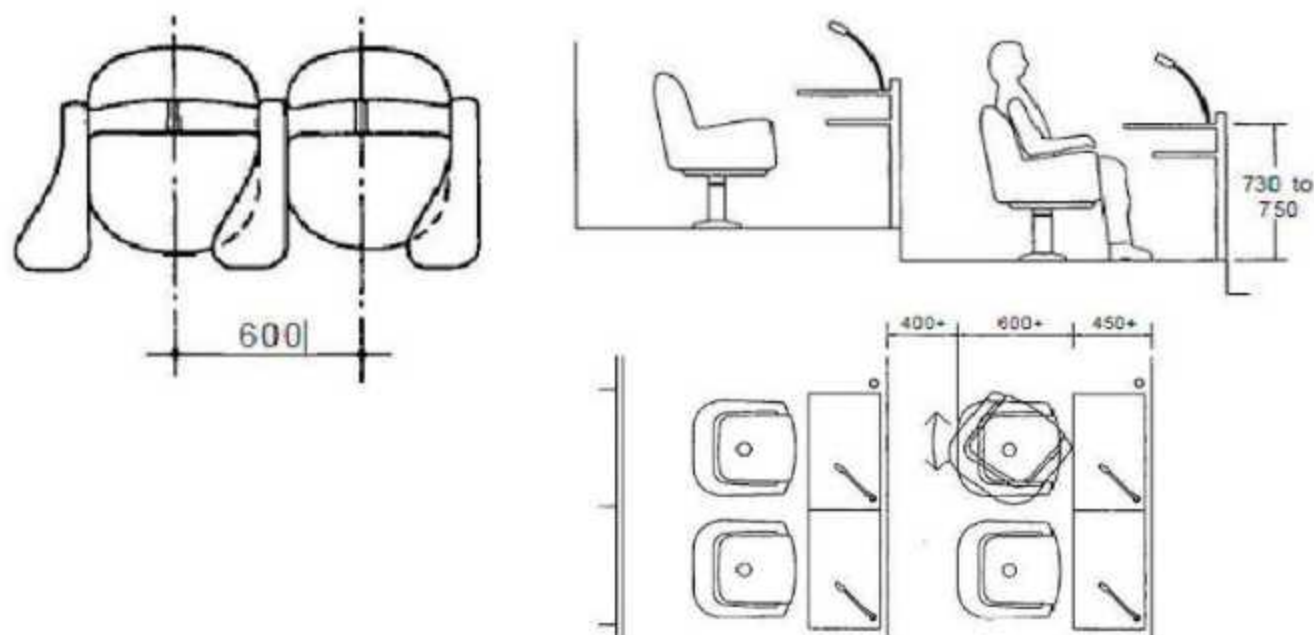
Conference use may require a writing surface for note-taking. The writing surface may be:

A tablet fixed to each seat, 20.10

A fixed table with fixed pivoting or sliding seat

Dimension	Description	Minimum(mm)	Maximum(mm)	Drawn as
A	Overall seat depth	600	720	650
B	Tipped seat depth	425	500	450
C	Seatway	305	-	400
D	Back to back seat spacing	760	-	850
E	Seat width for seat with arms	500	750	525
F	Armrest height	50	-	50
G	Seat height	430	450	440
H	Armrest height	600		600
I	Seatback height	800	850	800
J	Seat inclination	17	9	7
K	Back inclination	15	20	15

Dimension of auditorium seats



Auditorium Design:

Audience requirements:

Every member of the audience should be able to see and hear clearly whatever is happening on every part of the stage or platform. The greater the encirclement of the audience of platform or stage, more people can be accommodated within the aural and visual limitations up to 180° encirclement. With a full encirclement, the distance from platform or stage is restricted to six rows.

Number of seats in a row:

With traditional seating the maximum number is 22 if there are gangways at both ends of the row, and 11 for gangway at one end. Rows with more than 22 seats are permitted if the audience is not there by imperiled.

• Row to row spacing:

Spacing is controlled by the clearway between the leading edge of the seat and the rear of the seat in front. For traditional seating the minimum clearway for people to pass along the row is 300 mm and this dimension increases with the number of seats in a row. For continental seating the clearway is not less than 400 mm and not more than 500 mm.

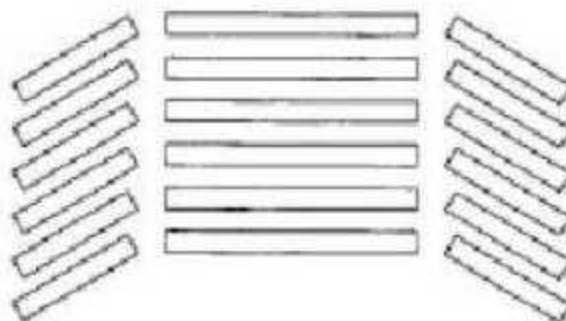
• Gangways:

As gangways are essential escape routes, their widths are determined.

by the number of seats served. The minimum is 1100 mm. They can be ramped up to 10%. If the seating rake is steeper, gangways must have steps extending the full width and these must have consistent treads and risers in each run.



Straight rows on flat or sloping floor

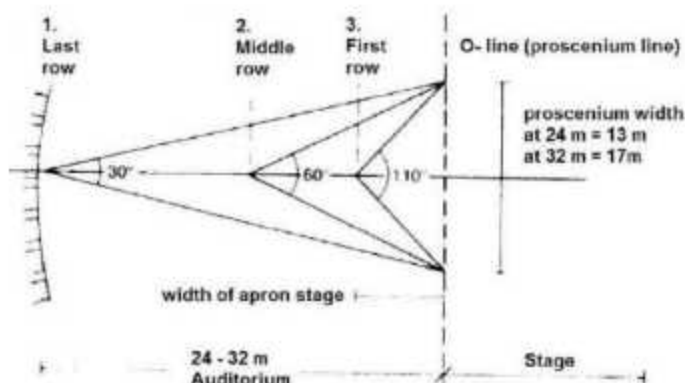
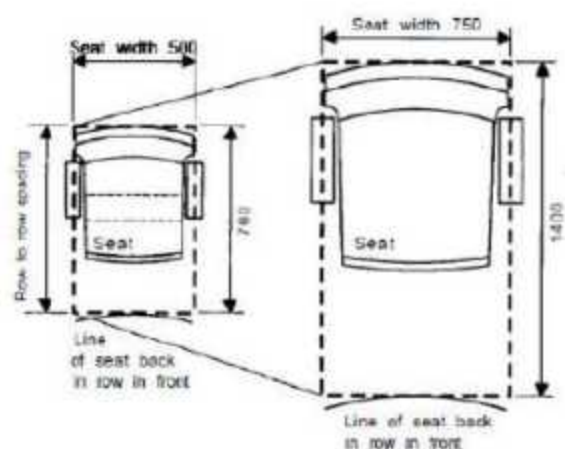


Straight rows with separate angled side blocks on flat or sloping floor

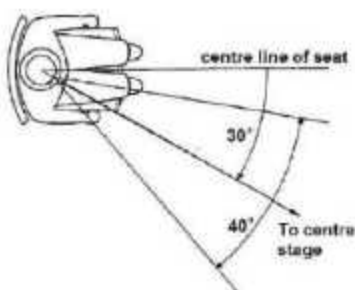
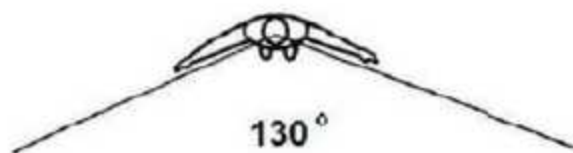
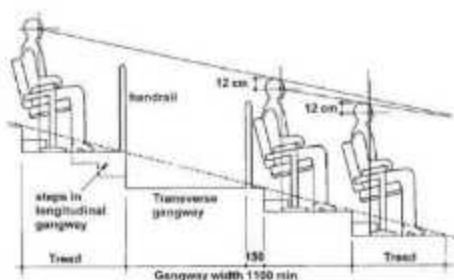


Curved rows on flat or sloping floor

Seating density: Seats with arms and tippable seat can occupy a space as small as 500 mm wide with a row-to-row dimension of 760 mm; but can be as large as 750 mm wide by 1400 mm. The area per seat therefore varies between 0.38 m² and 3.05 m².



Graphic representation of vertical sightlines at a transversal gangway



(a.) The maximum comfortable amount the head can be turned from the seat centreline is 30°.

(b.) Horizontal sightlines of the performer

Number of people	Minimum total exit widths (m)
upto 200	2.2
201-300	2.4
301-400	2.8
401-500	3.2
751-1000	6.4
1001-2000	14.4

Means of escape

• Travel distance:

The maximum travel distance from seat to exit within the auditorium is determined by the need to evacuate from each level of the auditorium within 2½ minutes. For traditional seating the maximum travel distance is 18 m measured from the gangway, for continental seating 15 m from any seat.

Exits:

From each level of the auditorium two separate exits must be provided for the first 500 seats with an additional exit for each further 250 seats.

● Stairs:

Staircase flights should have at least two risers and not more than 16. All treads should be 275 mm and risers 180 mm.

● Ramps:

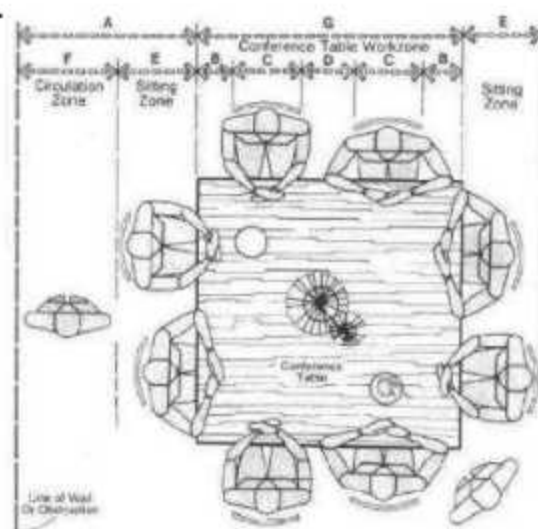
Wheelchair users should be provided with flat or ramped escape routes which may be separate from other routes. Ramps should not be longer than 4.5 m or steeper than 8.5%.

Conference Rooms

A conference hall or conference room is a room provided for singular events such as business conferences and meetings. Sometimes other rooms are modified for large conferences such as arenas or concert halls. Conference rooms can be windowless for security purposes.

Types of seating

Type	Description	Layout
1. U shaped.	<ul style="list-style-type: none">Seating around three sides of the room.It is good for presentations from front.Presentation space in the middle of the room.Can be used for up to 50 persons.Per seat area is 3.25m².	
2. Boardroom style	<ul style="list-style-type: none">Centrally located table.Classic layout ideal for debate and discussion.Seating capacity 5-30 persons.Per seat area is 3.71m².	
3. Cabaret style	<ul style="list-style-type: none">All delegates facing front-center on round tables.Large space in the middle of the room.Ideal for small-group work.Per seat area is 1.57m².	
4. Theater style	<ul style="list-style-type: none">Used for product launches, presentations, displays.Used to present to large numbers of delegates.Can be used for 100-250 persons.Per seat area is 0.83 m².	



Type	Dimension
A	1210-1520
B	100-150
C	510-610
D	150-255
E	460-610
F	790-910

Space standards

Consideration must be given to clearances and circulation around the larger conference table, as indicated in the adjoining figure.

Exhibition Galleries:

An Exhibition is an organized presentation and display of a selection of items in practice, exhibitions usually occur within museums, galleries and exhibition halls, and World's Fairs. . Exhibitions can include many things such as art in both major museums and smaller galleries, interpretive exhibitions, natural history museums and history museums, and also varieties such as more commercially focused exhibitions and trade fairs.

General Planning

The relationships between functions are common to all museums and art galleries. Figure 23 shows collection item movements in the operation of collection services, but note that not every operation necessarily requires a separate space, and some services may be provided by outside agencies. As far as possible, collection movement and public circulation should be kept separate. Figure 24 shows one approach to zoning and expansion based on this principle.

Flow diagram of collection item movements in the operation of collection services: exhibitions, conservation and collections management.

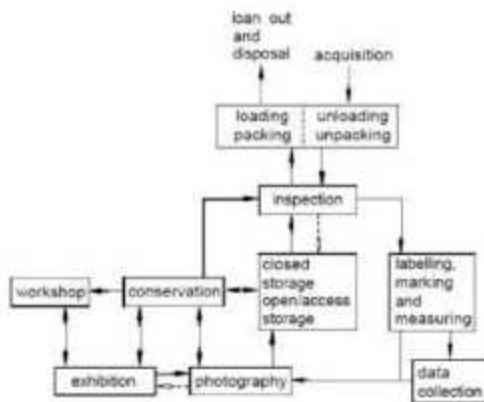
Space Standards

a. Aisles:

- Must be a minimum width of 3 meters.
- Must equal total width of existing exits.
- Must have 2 exits.
- Must have no dead ends.

b. Fire exits / Clearways:

Designated fire exits and clearways cannot be encroached upon under any circumstance. Storage of materials or equipment in these areas is not permitted. It is the responsibility of the event organizer to ensure that stand holders comply with this requirement.



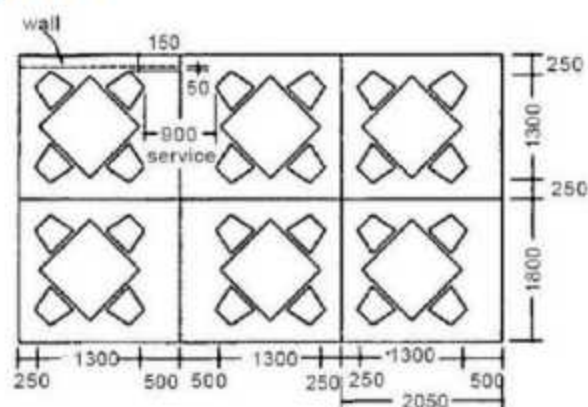
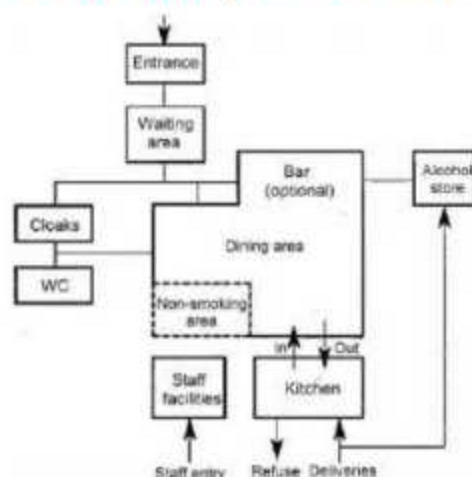
Restaurants

A place where people pay to sit and eat meals that are cooked and served on the premises. Various types of restaurants are classified based upon menu style, preparation methods and pricing.

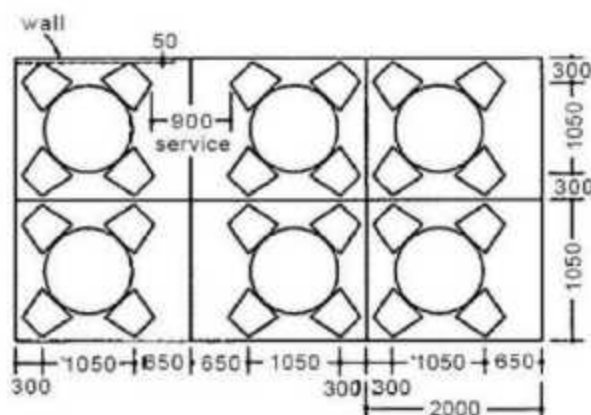
Types of restaurants

	Type	Description
1.	Fine dining restaurants with bar	<ul style="list-style-type: none"> • These are full service restaurants with specific dedicated meal courses. • Décor of such restaurants features higher-quality materials, with an eye towards the "atmosphere".
2.	Casual dining restaurants	<ul style="list-style-type: none"> • A casual dining restaurant is a restaurant that serves moderately-priced food in a casual atmosphere. • Except for buffet-style restaurants, casual dining restaurants typically provide table service.

Relationship between major spaces



Circular tables with diagonal layout

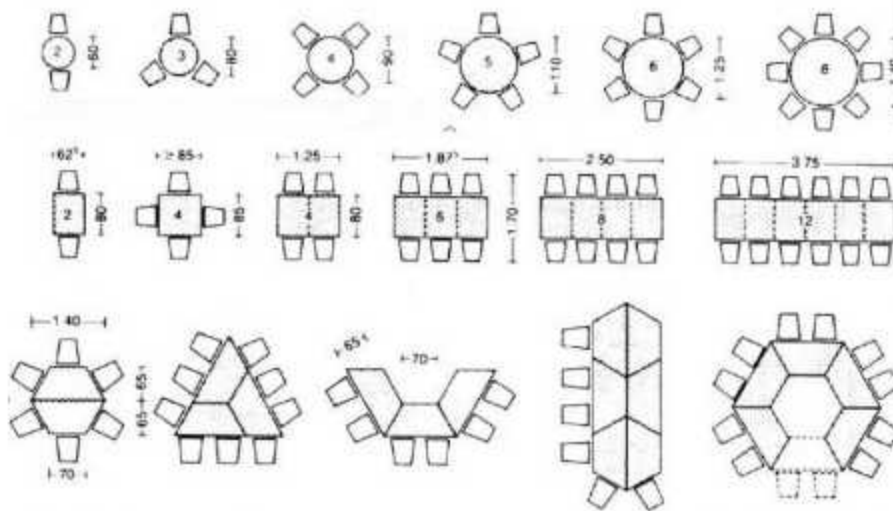


Square tables with diagonal layout

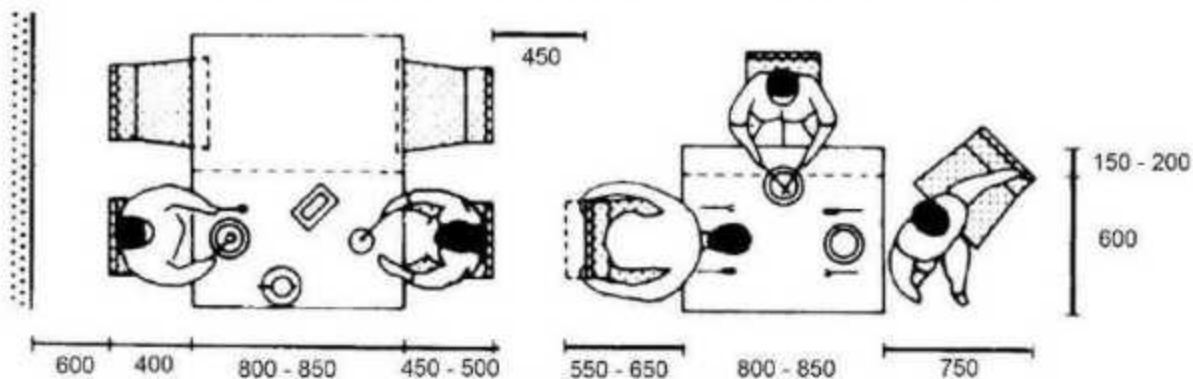
Space standards:

Restaurants should be planned so that a variety of seating arrangements is possible (e.g. tables for two and four).

To eat comfortably, one person requires a 600mm wide and 400mm deep table.



Circulation space requirement



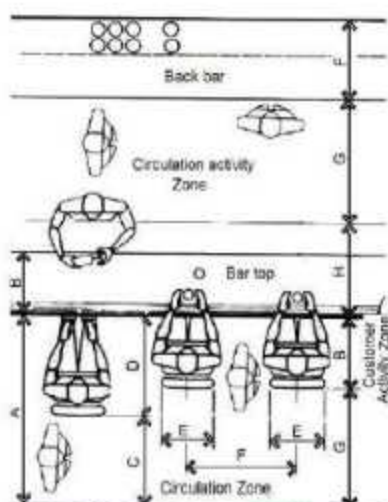
Bar Service

To encourage business from non-diners the main bar may have an external entrance.

. A fairly long bar counter supported by bar store and place for seating should be provided.

Cocktail lounge (comfortable) 1.8-2.0m² per person.

General bar (some standing and on stools) 1.3-1.7m² per person.



Toilet Facility

Type	Dimension
A	1370
B	450-610
C	610
D	760
E	400-450
F	610-760
G	760-910
H	710-960

Bar Circulation Dimensions

Fire safety norms by the National Building Code of India

Every building shall be so constructed, equipped, maintained and operated as to avoid undue danger to the life **General Exit Requirements**

- An exit may be a doorway: to an internal staircase, or external staircase, or terrace(s), which have access to the street, or to the roof of a building or a refuge area.

All exits shall provide continuous means of egress to the exterior of a building or to an exterior open space leading to a street.

Exits shall be so arranged that they may be reached without passing through another occupied unit.

Capacity of exits

The unit of exit width, used to measure the capacity of any exit, shall be 500 mm. A clear width of 250 mm shall be counted as an additional half unit. Clear widths less than 250 mm shall not be counted for exit width.

In an assembly building (convention centre), the capacity per storey per unit width of exit of stairways, ramps and doors is 40.50 and 60 respectively.

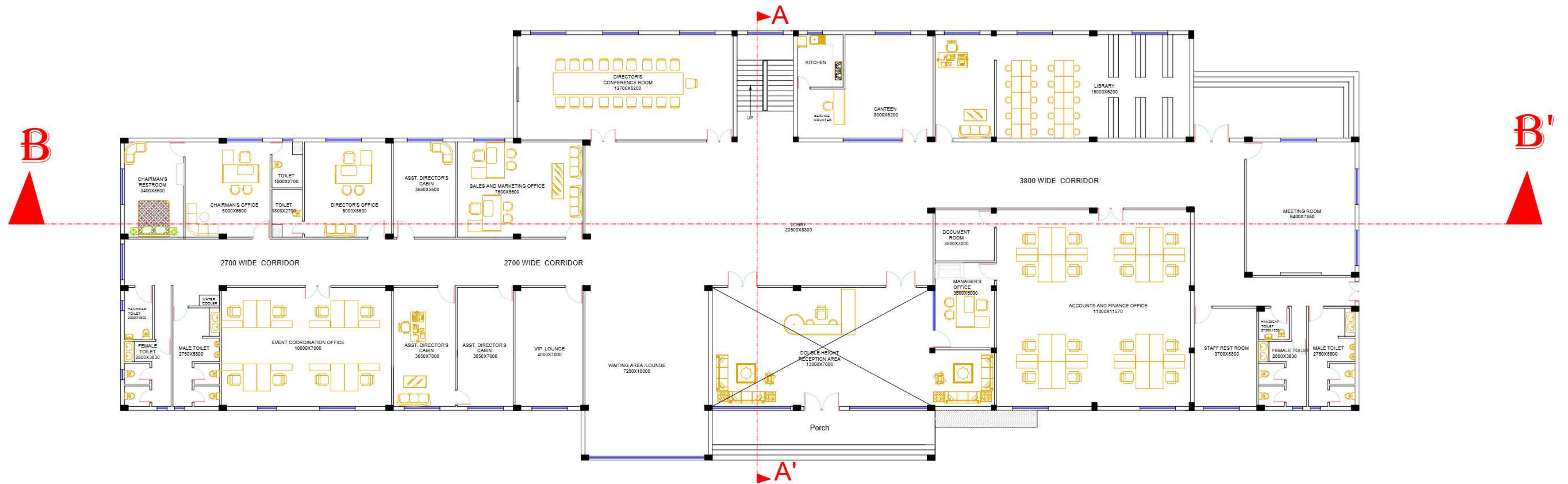
The travel distance to an exit from the dead end of a corridor shall not exceed 30m in case of assembly buildings.

Doorways

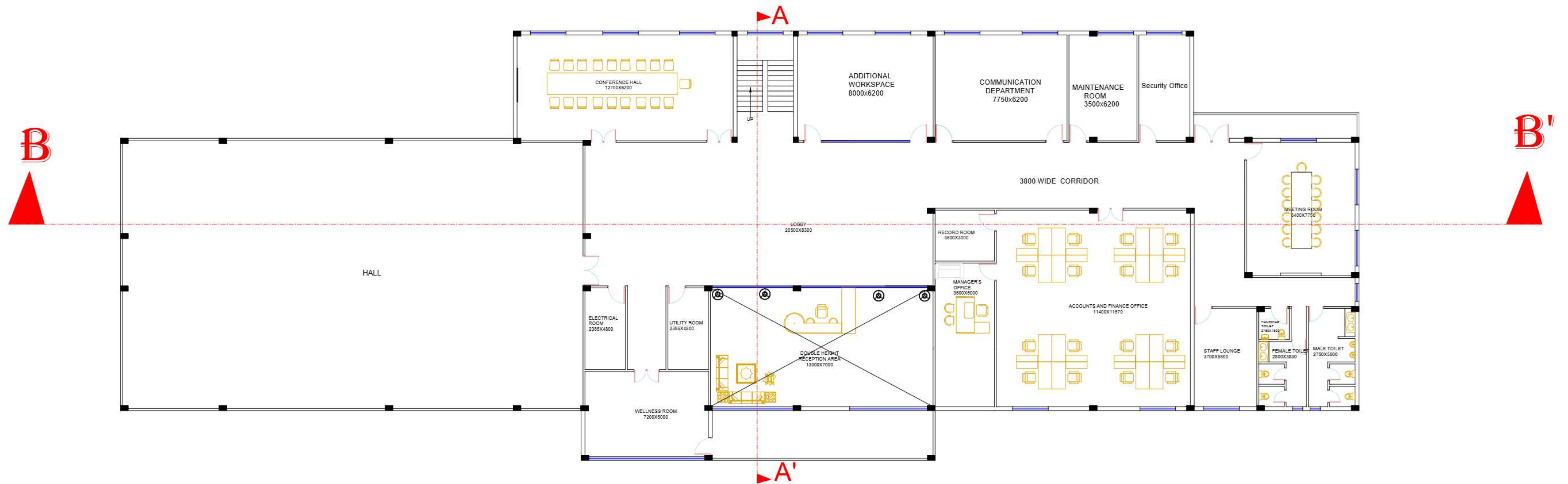
- No exit doorway shall be less than 1000 mm in width except assembly buildings where door width shall be not less than 2000 mm. Doorways shall be not less than 2000 mm in height.

Horizontal exits

For buildings more than 24 m in height, refuge area of 15 m² or an area equivalent to 0.3 m² per person to accommodate the occupants of two consecutive floors.



GROUND FLOOR PLAN



FIRST FLOOR PLAN

TOPIC

CONVENTION CENTER

ADMIN BLOCK

THESIS GUIDE

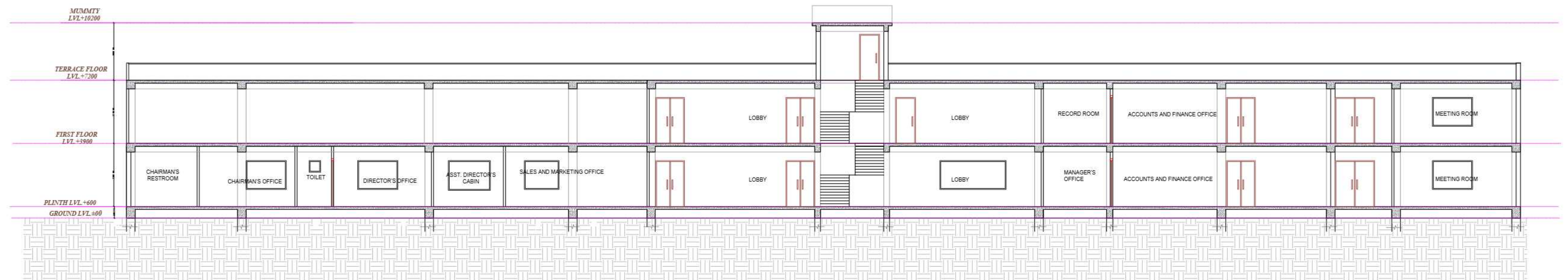
AR. SHAILESH KUMAR YADAV



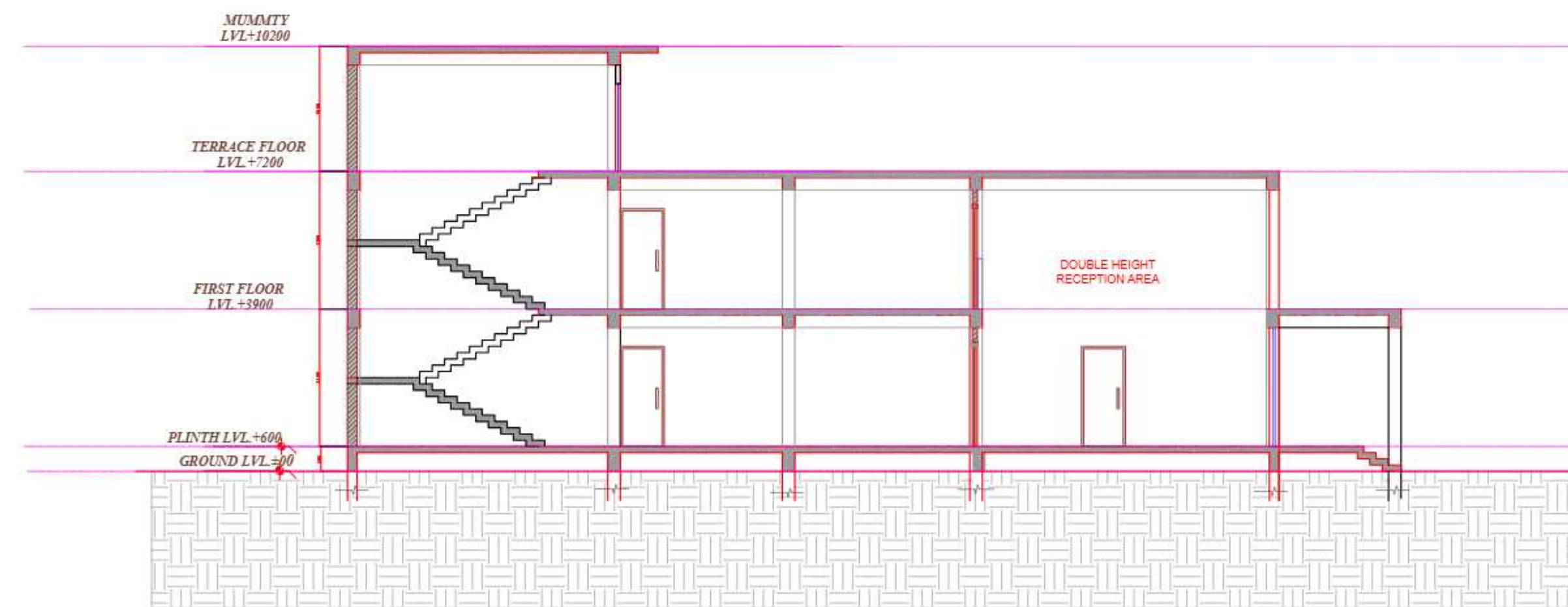
NAME - ANJALI RAWAT
COURSE - B.ARCH 5TH YEAR
ROLL NO. - 1200101005



ELEVATION



SECTION AT B-B'



SECTION AT A-A'

TOPIC

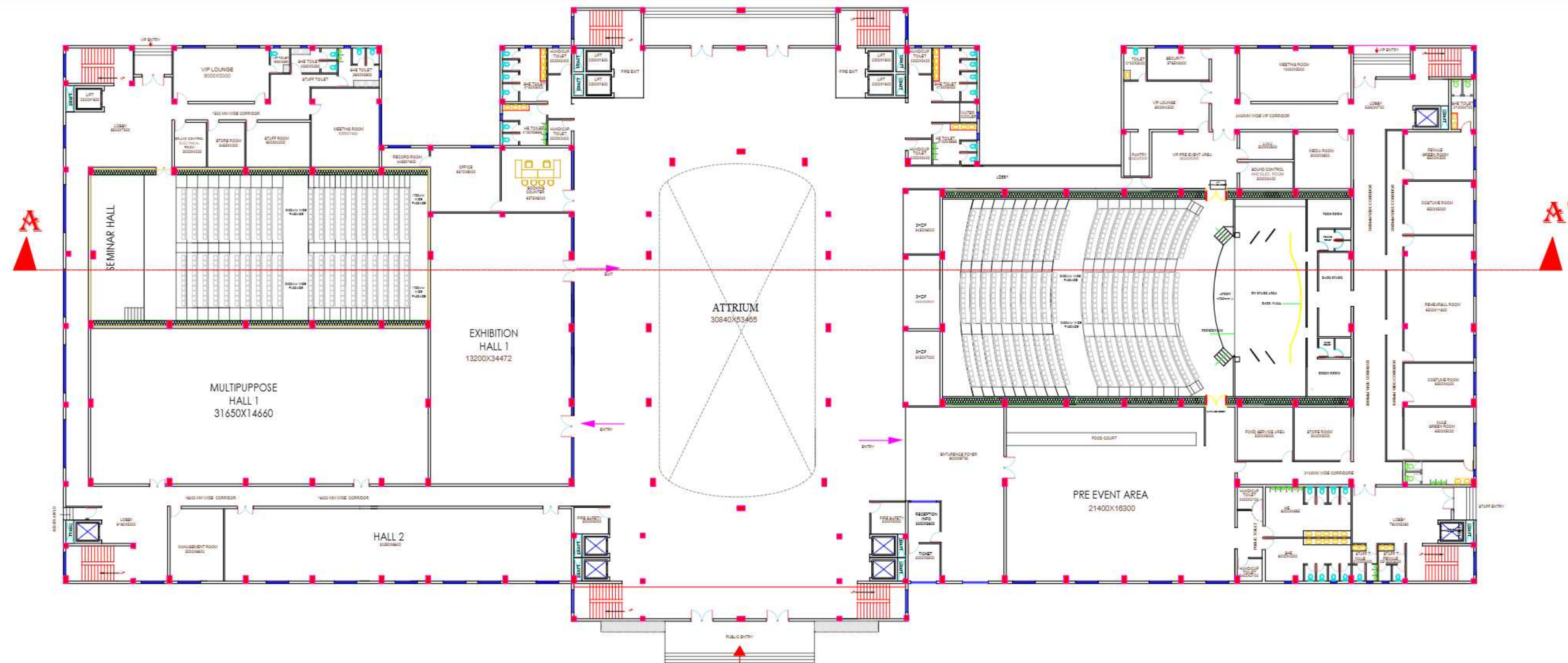
CONVENTION CENTER

ADMIN BLOCK

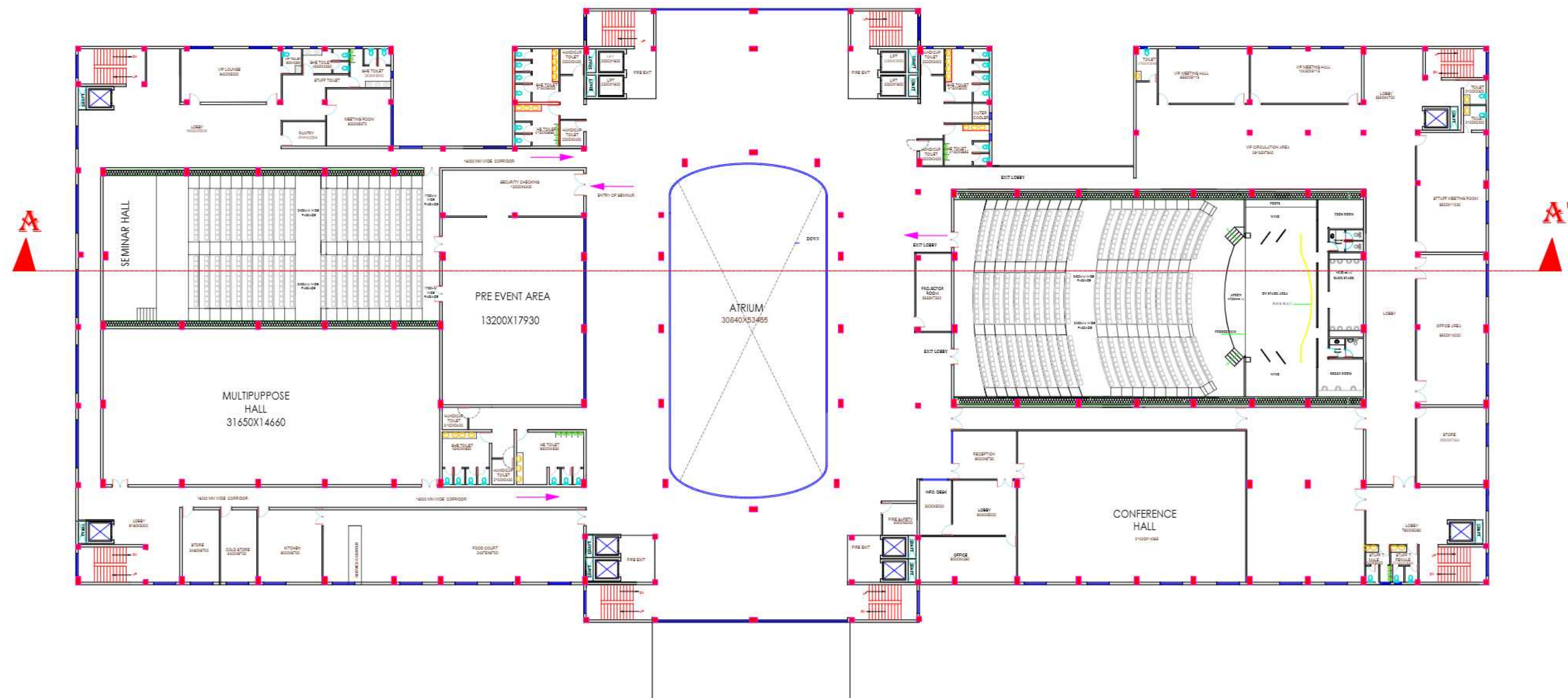
THESIS GUIDE

AR. SHAILESH KUMAR YADAV

NAME - ANJALI RAWAT
COURSE - B.ARCH 5TH YEAR
ROLL NO. - 1200101005



GROUND FLOOR PLAN



FIRST FLOOR PLAN

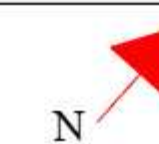
TOPIC

CONVENTION CENTER

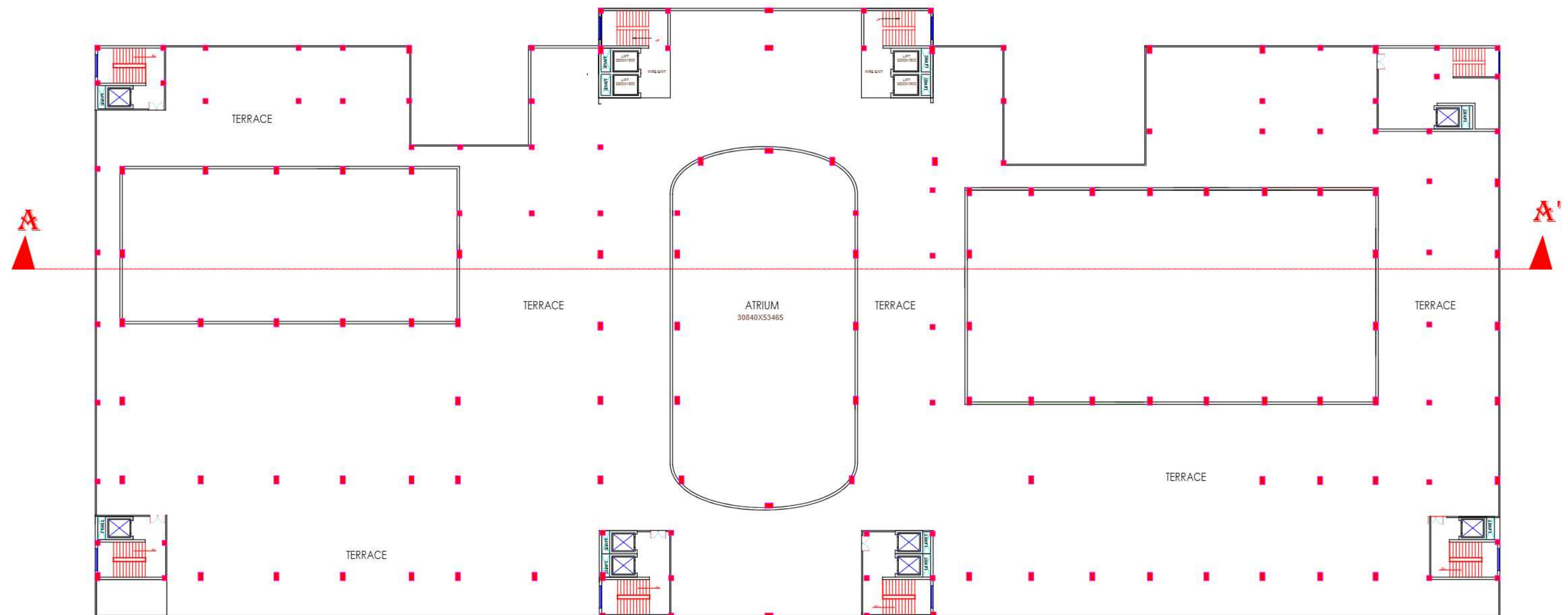
CONVENTION BLOCK

THESIS GUIDE

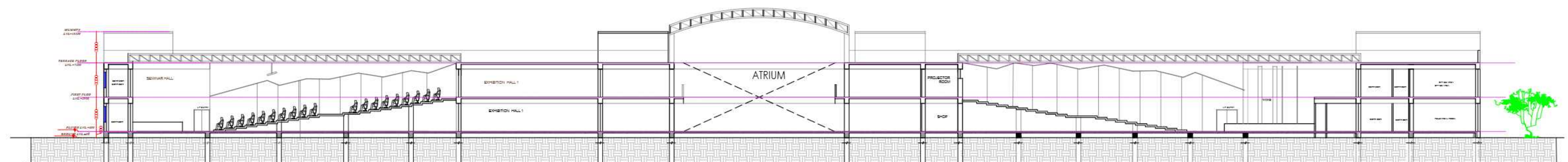
AR. SHAILESH KUMAR YADAV



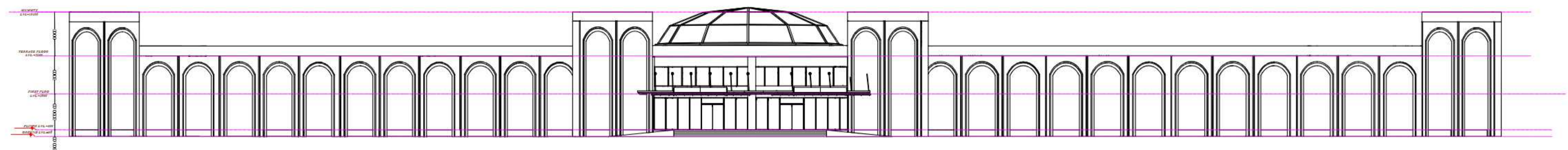
NAME - ANJALI RAWAT
COURSE - B.ARCH 5TH YEAR
ROLL NO. - 1200101005



TERRACE FLOOR PLAN



SECTION AT A-A'



ELEVATION

TOPIC

CONVENTION CENTER

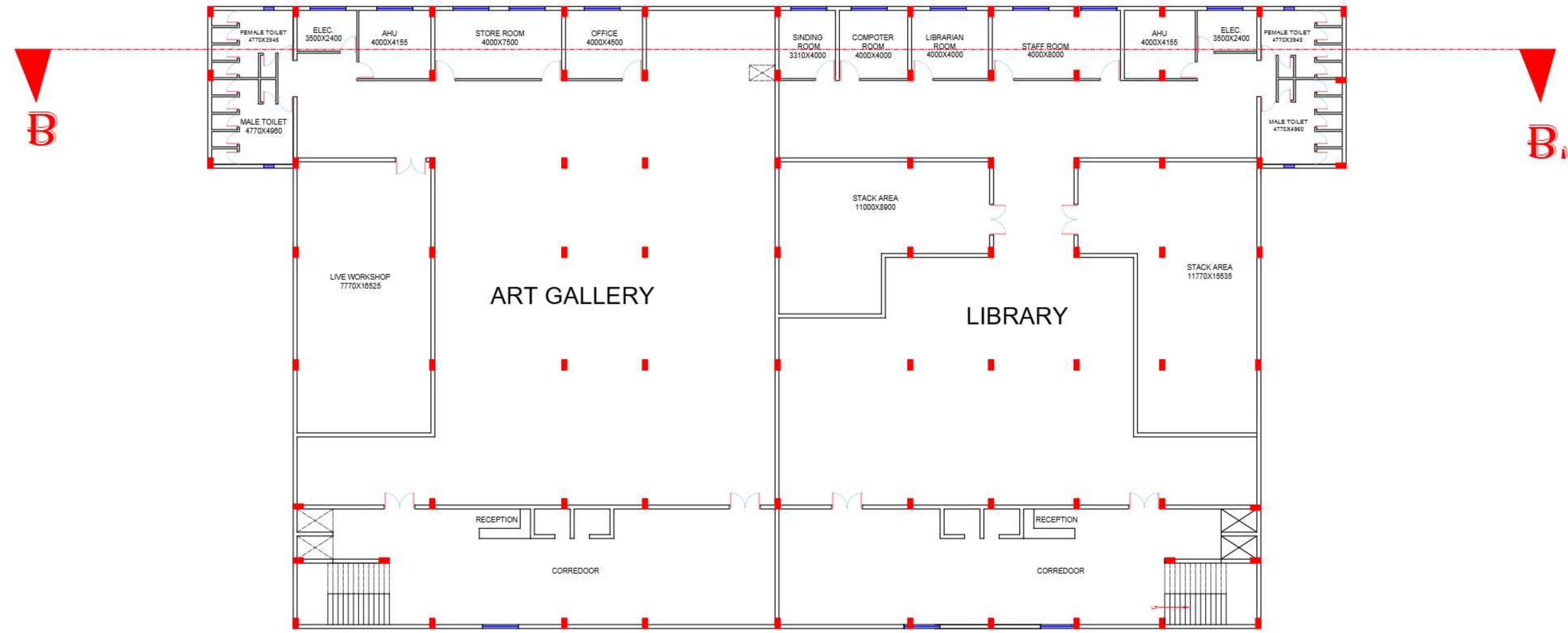
CONVENTION BLOCK

THESIS GUIDE

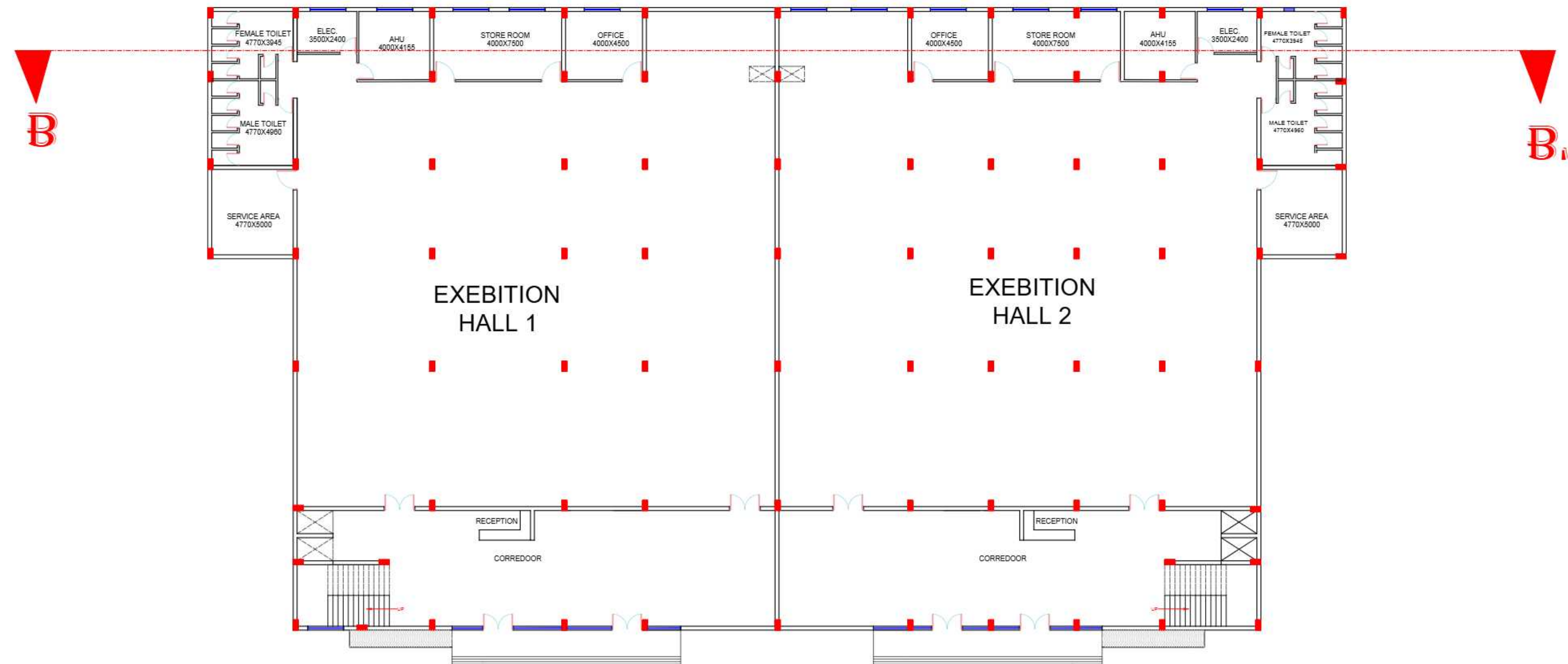
AR. SHAILESH KUMAR YADAV



NAME - ANJALI RAWAT
COURSE - B.ARCH 5TH YEAR
ROLL NO. - 1200101005



FIRST FLOOR PLAN



GROUND FLOOR PLAN

TOPIC

CONVENTION CENTER

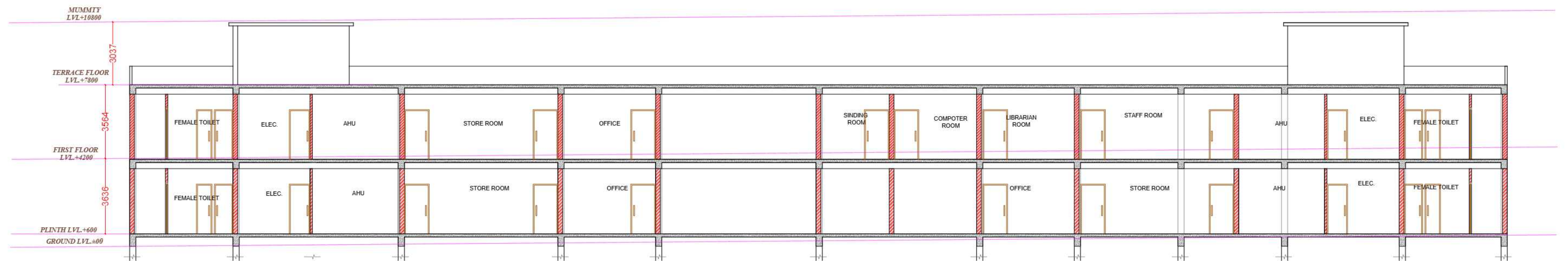
EXIBITION BLOCK

THESIS GUIDE

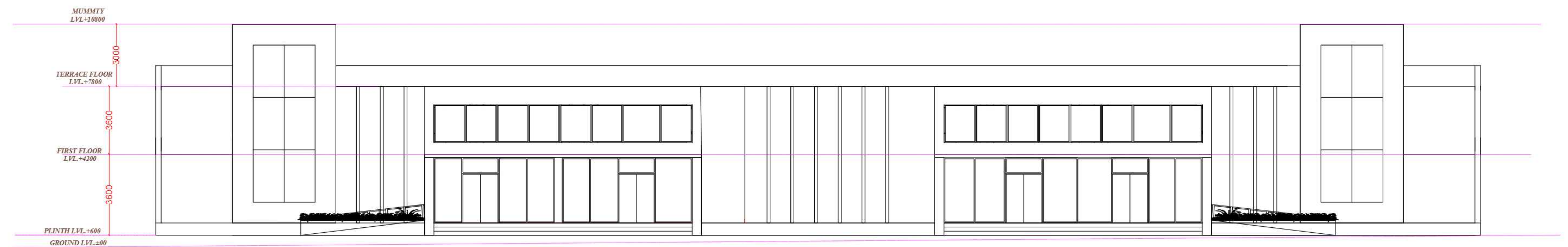
AR. SHAILESH KUMAR YADAV



NAME - ANJALI RAWAT
COURSE - B.ARCH 5TH YEAR
ROLL NO. - 1200101005



SECTION AT B-B'



ELEVATION

TOPIC

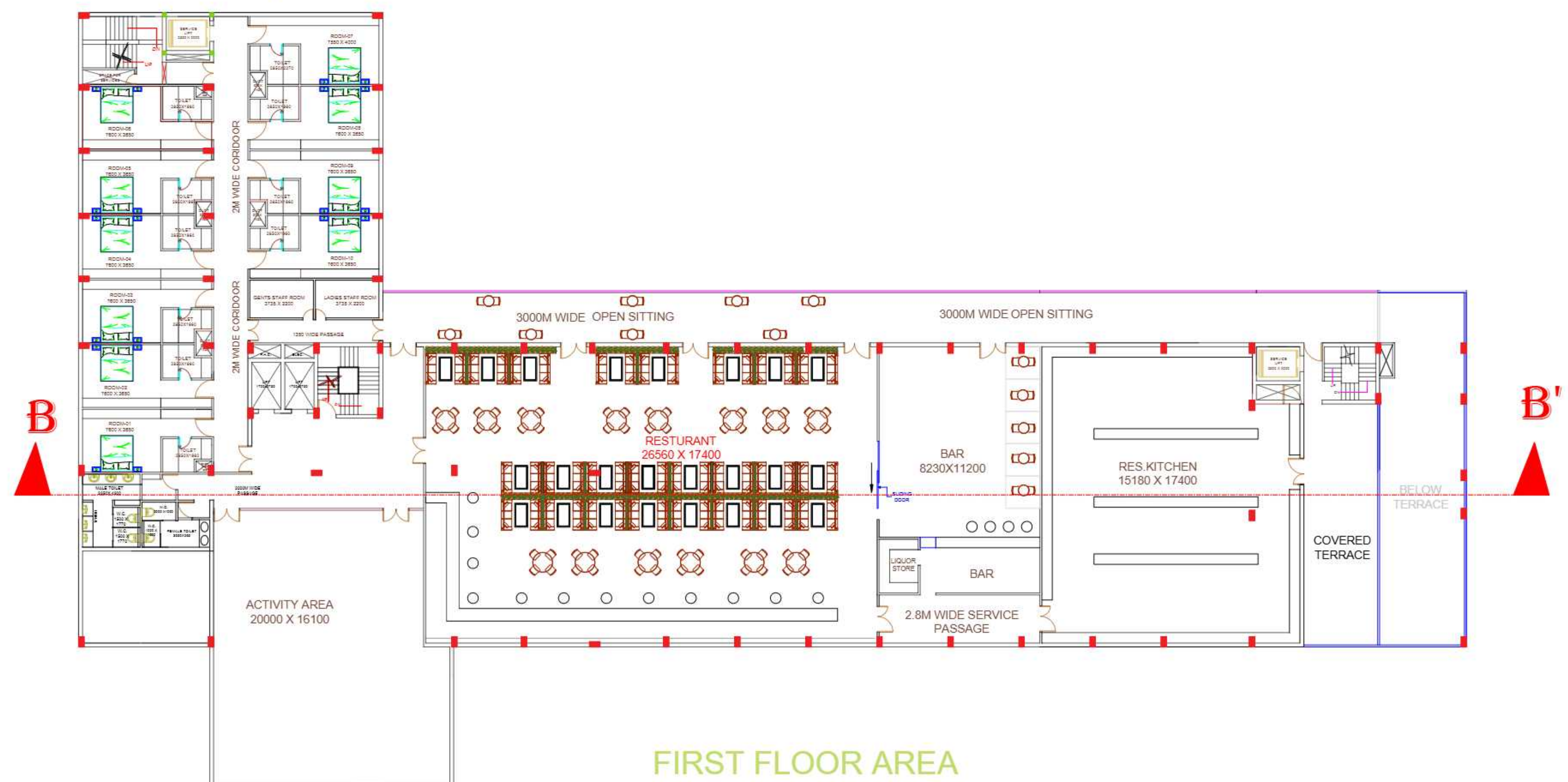
CONVENTION CENTER

EXIBITION BLOCK

THESIS GUIDE

AR. SHAILESH KUMAR YADAV

NAME - ANJALI RAWAT
COURSE - B.ARCH 5TH YEAR
ROLL NO. - 1200101005



TOPIC

CONVENTION CENTER

EXIBITION BLOCK

THESIS GUIDE

AR. SHAILESH KUMAR YADAV



NAME - ANJALI RAWAT
COURSE - B.ARCH 5TH YEAR
ROLL NO. - 1200101005



TOPIC

CONVENTION CENTER

EXIBITION BLOCK

THESIS GUIDE

AR. SHAILESH KUMAR YADAV



NAME - ANJALI RAWAT
COURSE - B.ARCH 5TH YEAR
ROLL NO. - 1200101005



TOPIC

CONVENTION CENTER

SITE PLAN

THESIS GUIDE

AR. SHAILESH KUMAR YADAV



NAME - ANJALI RAWAT
COURSE - B.ARCH 5TH YEAR
ROLL NO. - 1200101005



TOPIC

CONVENTION CENTER

SITE PLAN

THESIS GUIDE

AR. SHAILESH KUMAR YADAV



NAME - ANJALI RAWAT
COURSE - B.ARCH 5TH YEAR
ROLL NO. - 1200101005