



**DEPARTMENT OF ARCHITECTURE  
SCHOOL OF PLANNING AND ARCHITECTURE,  
VIJAYAWADA**

**REINTERPRETING URBAN SHOPPING SPACES  
Shopping mall at Hyderabad**

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This is to certify that the thesis titled “**REINTERPRETING URBAN SHOPPING SPACES: Shopping mall at Hyderabad**” has been submitted by **Saumya Srivastava (Reg No: 1120100298)** towards partial fulfilment of the requirements for the award of Bachelor of Architecture. This is a bonafide work of the student and has not been submitted to any other university for award of any Degree/Diploma to the best of my knowledge.

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# 1 Background Study

## 1.1 Origin & Evolution of Shopping Mall

Buying and selling is as old as mankind. With time, the conditions under which they take place have changed. A condition of most important consequence was the introduction of the middleman, who turned barter into commerce. He carried the work produced by others from place to place, established trade routes and trading posts, founded country stores and merchant states. Wherever he settled he became an integral, invigorating part of urban life.

### 1.1.1 Early Marketplaces

The word 'AGORA' is Greek for 'open place of assembly'. In Greece AGORA was the epicentre of the city and was popular for Civic Announcements, Political Discussions, and Muster for military campaigns and the Marketplace.

Similarly, the Roman Forum is a small rectangle surrounded by the ancient government buildings at the center of the city. Citizens referred to this at the marketplace along with the buildings used for open stalls. Stoa, protected public space, was an ideal place for social life of Mediterranean cities, business functions and staying trading posts.

The Medieval City Market square was the city's center, geographically, socially, commercially, religiously and culturally. The City Hall and Guild Halls were surrounded by The Cathedral, the merchants' and stores. The open center area became the market place, the fair ground and the entertainment center for the citizens. Also, The Grand Bazaar is one of the largest and oldest covered markets in the world, with 61 covered streets and over 4,000 shops. The Grand Bazar at Istanbul is often regarded as one of the first shopping malls of the world.

### 1.1.2 Industrial Revolution and its impact on Shopping Facilities

The Industrial Revolution, which took place from the 18th to 19th centuries, was a period which radically changed the organization and character of cities. The city grew into dense packed neighbourhood. The industrial slum became the new pattern of the city.

These communities had a central point, the railway stop, to build around. Suburbs became the new urban character. The size of residential areas was automatically controlled by the walking distance from the station.

When the automobile emerged as a means of private mass transportation, the final urban explosion took place. With the automobile came a dispersion of population that followed no pattern. Mass housing builders emerged to accommodate the people seeking escape from the city.

Modern suburbia was born, in which there were neither the values of a rural community nor those of an urban environment. As the spreading continued with increasing speed, distances between places of residence and the central city grew.

The merchant has had difficulty in finding a logical way to integrate his activities with the new character of neighbourhood.

Stores emerged on highways and as the number of highway stores increased, more people stopped their cars along the curbs. A new type of hitching post, the parking meter, had made its appearance and the cost of curb parking tended to slow down sales. Merchants arranged for off-street car storage areas, at first behind and later on in front of their stores.

As the traffic problem increased, super highways and freeways were constructed at great cost in order to promote an easy flow of traffic. Residential areas surrounding congested traffic carriers, or facing the unsightly service facilities of stores, became undesirable. Soon stores found themselves surrounded by residential areas of reduced buying power.

### 1.1.3 Advent of Shopping Mall

As customers were driven off from the roads along which merchants had settled, partly by neighbourhood deterioration, partly by the use of new freeways, search for new locations started. The need for farsighted, comprehensive planning finally became urgently apparent.

The concept of shopping centre aroused where the basic need of the suburban shopper, i.e. conveniently accessible, amply stocked shopping area with plentiful and free parking was available. This is the purely practical need for which the shopping center was originally conceived and which many centers most adequately fulfil.

These shopping centers created additional attractions for shoppers by meeting other needs which is providing opportunities for social life and recreation in a protected pedestrian environment. They also provided the desired place and opportunity for participation in modern community life that the ancient Greek Agora, the Medieval Market Place and our own Town Squares provided in the past. In such centers, pedestrian areas are filled with packed life not only during normal shopping hours, but on Sundays and holidays when people window-shop, view exhibits and support the restaurants.

Shopping centers became a place that not only provided suburbanites with their physical living requirements, but simultaneously served their civic, cultural and social community needs; they made a most significant contribution to the enrichment of peoples' lives.

## 1.2 Need for the Project

The original concept behind malls has now been lost to endless commercialisation in terms of Gross Leasable Area. The current social congregational provisions of the modern-day mall no longer bear any resemblance to the envisioned concept of shopping malls. Hence, there is a need to rediscover techniques to convert the contemporary inert mall spaces into active congregational spaces that serve a social as well as an environmental outlook.

### 1.3 Research Question?

Will Giving importance to congregation spaces and improving its quality increase the time people spend inside the mall?

Will this approach increase the retail value of the mall?

How will incorporating healthy congregation spaces assist in changing the current approach and orientation of the mall?

### 1.4 Scope of the Project

Synthesizing healthy congregation spaces in a public building like Shopping Mall will assist in rediscovering the importance of social, cultural and recreational aspects of a neighbourhood.

The project will also enumerate ways and strategies to enhance retail profit of a shopping zone architecturally.

## 2 Formulating the Thesis

### 2.1 Aim

To study urban congregation spaces and to design a shopping mall with enhanced public experience and involvement, through the integration of informal natural environment.

### 2.2 Objectives

- To study the evolution, spatial organisation and activities that occurring a shopping mall.
- To study the importance of congregation spaces and factors that affects its quality.
- To study and analyse the current (existing) scenarios.
- To select a suitable site and project for design of the mall.
- To design shopping mall integrating appropriate congregation spaces and activities.

### 2.3 Scope of Work

- Literature and articles will be inferred for identification of the required data.
- The concept that was envisioned during the advent of shopping malls will be studied.
- Studying congregation and mall spaces on a similar context of site cannot be achieved.
- Site neighbourhood and master plan will be studied and analysed for the selection of the site.

- Location of magnet stores and quality of congregation spaces will be taken into consideration for designing.
- Study on design interventions will be done that will assist in attracting more public to the mall.

## 2.4 Limitations of Work

- Existing shopping mall designs will not be analysed to understand the impact and implementation of the investigated literature at current scenario.
- Studying congregation and mall spaces on a similar context of site cannot be achieved.
- Site data like climate and dimensions will collection will be procured from secondary sources.
- In-depth structural details will not be a part of design.
- Typology of shops will not be included in the design program.

## 2.5 Methodology

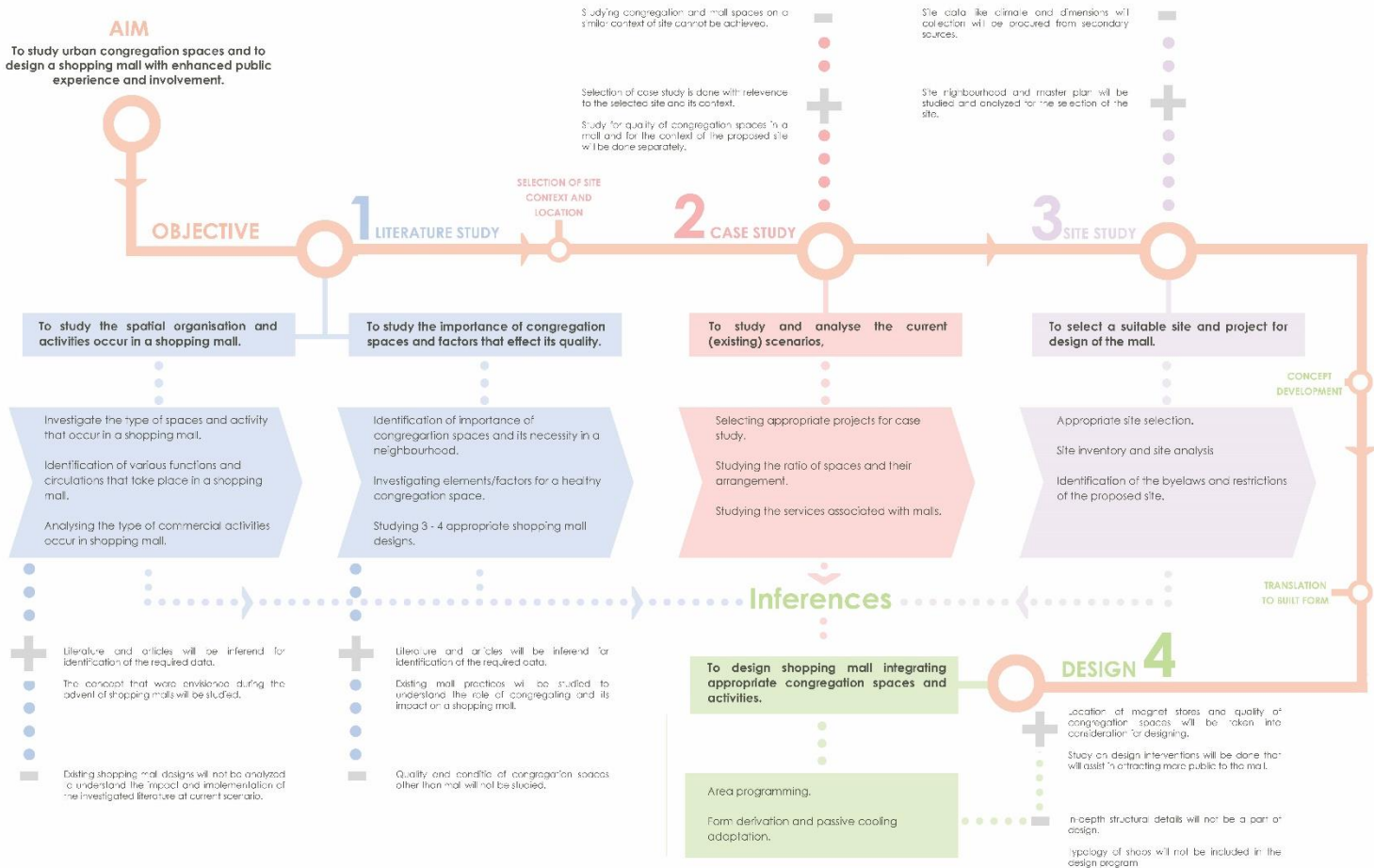


Figure 1 Methodology Chart

### 3 Literature Study

#### 3.1 Shopping mall study

##### 3.1.1 Definition of Shopping Mall

A large building or group of buildings containing many different stores.  
 {Merriam Webster}

A large retail complex containing a variety of stores and often restaurants and other business establishments housed in a series of connected or adjacent buildings or in a single large building.  
 {dictionary.com}

An urban shopping area limited to pedestrians. A shopping center with stores and businesses facing a system of enclosed walkways for pedestrians.  
 {Farlex dictionary}

##### 3.1.2 Spaces and Activities

The major spaces and activities that occur in shopping mall can be formulated as

Spaces		Activities			
		DINING	SHOPPING	LEISURE	MANAGEMENT
PUBLIC ZONES	Food court,	●		●	
	Atrium,			●	
	Amusement zones,			●	
	Gaming zones,			●	
	Kids Play area,			●	
	Bookstore		●	●	
	Theatre			●	
RETAIL	Hyper market,		●		
	Stores,		●		
	Anchor shops,		●		
	Kiosks		●		
PARKING	Basement parking,				●
	Open parking,				●
	Stilt parking				●
SERVICES	Elevators,				
	Escalators,				
	Staircase,				
	Corridors				

Table 1 Spaces and Activities in Mall

### 3.1.3 Distribution of spaces

#### 3.1.3.1 Vertical Distribution

Public zones are placed above to increase exposure through retail zones. Major distribution of spaces vertically in a mall is:

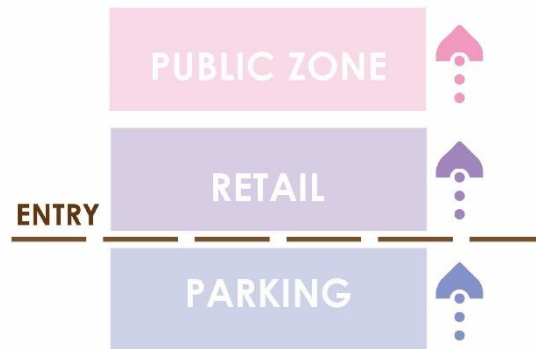


Figure 2 Vertical Distribution

#### 3.1.3.2 Horizontal Distribution



Figure 3 Horizontal Distribution

Retail spaces are intended to place around the public zone to increase shop value and its exposure to the public spaces. Major distribution of spaces horizontally in a mall is:

### 3.1.4 Circulation

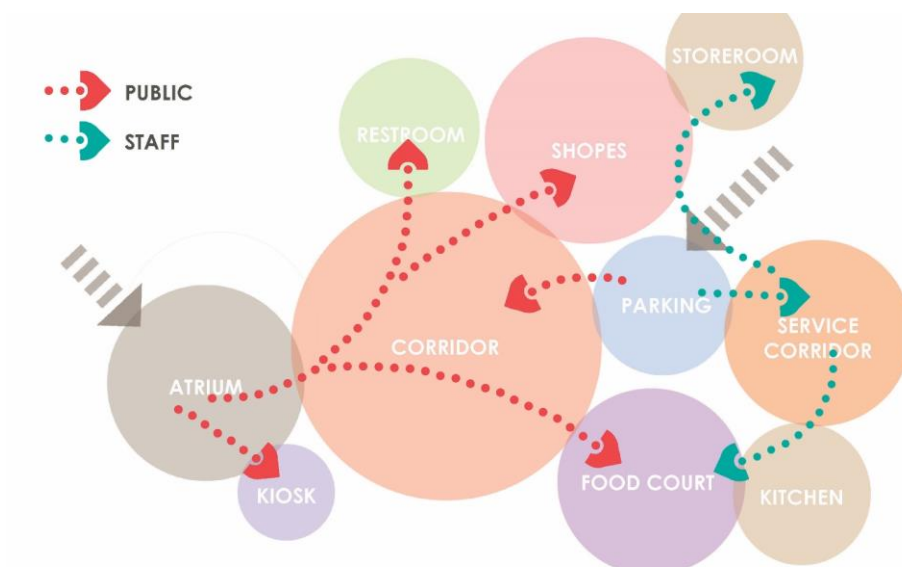


Figure 4 Circulation pattern inside mall

### 3.1.5 Commercial components of shopping mall

#### 3.1.5.1 *Food court*

One of the most popular components of a shopping mall, however, is a collection of different restaurants known as a food court. A food court offers mall visitors with a collection of diverse eateries, from local franchises to multinational chains. Venues in a typical food court operate side-by-side to each other, with a centralized common dining area to accommodate customers.

#### 3.1.5.2 *Department stores*

When the shopping mall format was developed by Victor Gruen in the mid-1950's, signing larger department stores was necessary for the financial stability of the projects, and to draw retail traffic that would result in visits to the smaller stores in the mall as well. These larger stores are termed anchor store or draw tenant. In physical configuration, anchor stores are normally located as far from each other as possible to maximize the amount of traffic from one anchor to another.

A department store is a large retail outlet that offers a large variety and deep assortment and is organized into separate departments for the purpose of selling, display and promotion, customer service and control. Each department sells unique products and has its own selling, accounts, packaging and security staff.

#### 3.1.5.3 *Stand-alone stores*

Frequently, a shopping mall or shopping center will have satellite buildings located either on the same tract of land or on one abutting it, on which will be located stand-alone stores, which may or may not be legally connected to the central facility through contract or ownership. These stores may have their own parking lots, or their lots may interconnect with those of the mall or center. The existence of the stand-alone store may have been planned by the mall's developer, or may have come about through opportunistic actions by others, but visually the central facility – the mall or shopping center – and the satellite buildings will often be perceived as being a single "unit", even in circumstances where the outlying buildings are not officially or legally connected to the mall in any way.

### 3.1.6 Location of anchor stores

Anchor stores as defined by Victor Gruen are the magnet stores that attract the public. These stores should be strategically placed such that they don't hinder the working of each other and provide maximum exposure of public to the other stand alone stores of the mall.



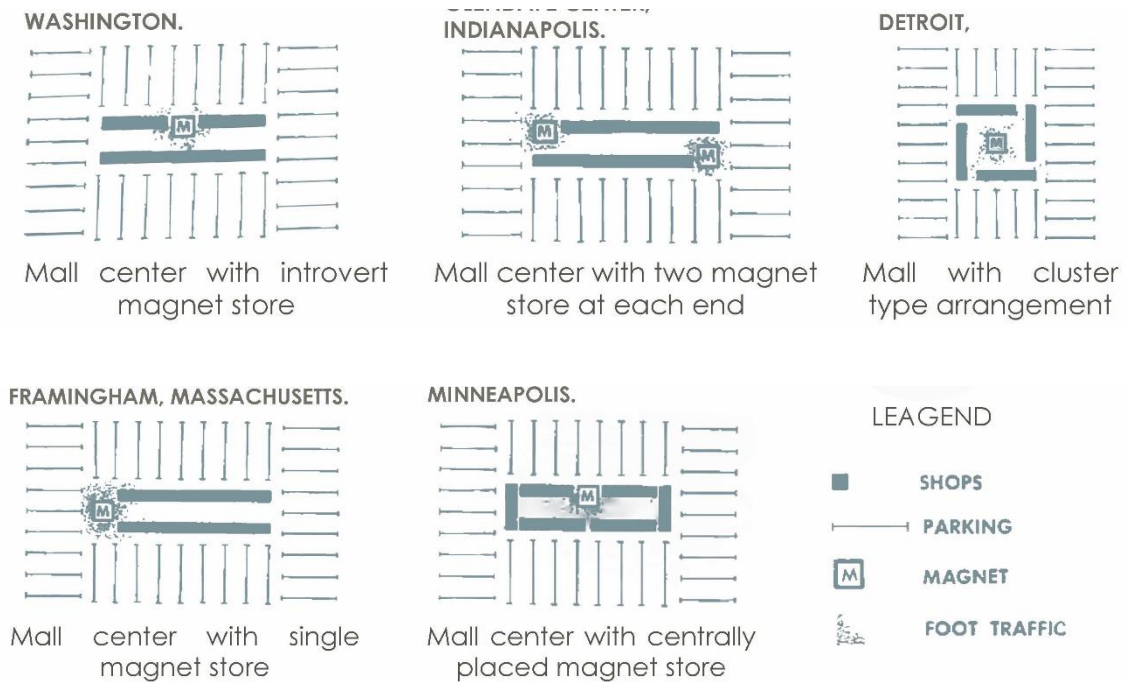


Figure 5 Position of Anchor store

### 3.1.7 Engineering the Shopping mall

Engineering services associated with mall can be divide into three segments, that is, Structural, Mechanical and Electrical Services. These services assist in smooth working of a shopping mall.

#### 3.1.7.1 Structural Engineering

- Large span spaces
- Common Sheltered Spaces
- Multi-Story Parking.
- Theatre spaces

#### 3.1.7.2 Mechanical Engineering

- Heating and Air-Conditioning
- Plumbing
- Mechanical Transportation
- Fire safety and Evacuation

#### 3.1.7.3 Electrical Engineering

- Lighting
- Communication
- Electric Service and Distribution
- Metering

## 3.2 Study of congregation spaces

### 3.2.1 Congregation Spaces and its Importance at a Neighbourhood

A body of assembled people or things, a gathering is called congregation. The term is vividly used as a synonym for gathering and implies the process of meeting, coming together, assembling or to accumulate.

Social, recreational and cultural gathering plays an important role in reforming a human mentally. A neighbourhood requires these elements to function properly and efficiently.

### 3.2.2 Elements/Factors for Healthy Congregation Spaces

In designing congregation spaces, varying human preferences should be taken into consideration. Some people like to sit in conversational groups others want to sit alone and yet others in pairs. Some like shade, some like sun. Consequently, seating arrangements of great number and variety should be provided for the functioning of the congregation spaces.

Spaces that motivates interacting and public gathering with involvement of natural means but not artificial or commercialized means are termed as healthy congregational spaces.

#### 3.2.2.1 *Pedestrian Areas*

Free pedestrian area like corridors plazas falls under public domain and the users find themselves free to access them any time. These facilities with an addition of seating spaces serve healthy congregation spaces efficiently.

#### 3.2.2.2 *Artefacts*

Artefacts like fountains, sculpture, etc. allows public to involve with the environment and encourages development of healthy congregation zones.

#### 3.2.2.3 *Public Participation*

Involvement of public into various activities enables them to experience spaces for longer period and also, assists in creating a common realm for congregation and recreational spaces.

#### 3.2.2.4 *Nature*

Nature plays a vital role in building a healthy neighbourhood. It has been realized that frequent exposure to the natural world improves mental health it offers a deep sense of inner peace.

##### 3.2.2.4.1 *Biophilia Hypothesis*

The biophilia hypothesis is a theory that suggests humans possess an innate tendency to seek connections with nature and other forms of life. In architecture,

biophilic design can be termed as a sustainable design strategy that incorporates reconnecting people with the natural environment.

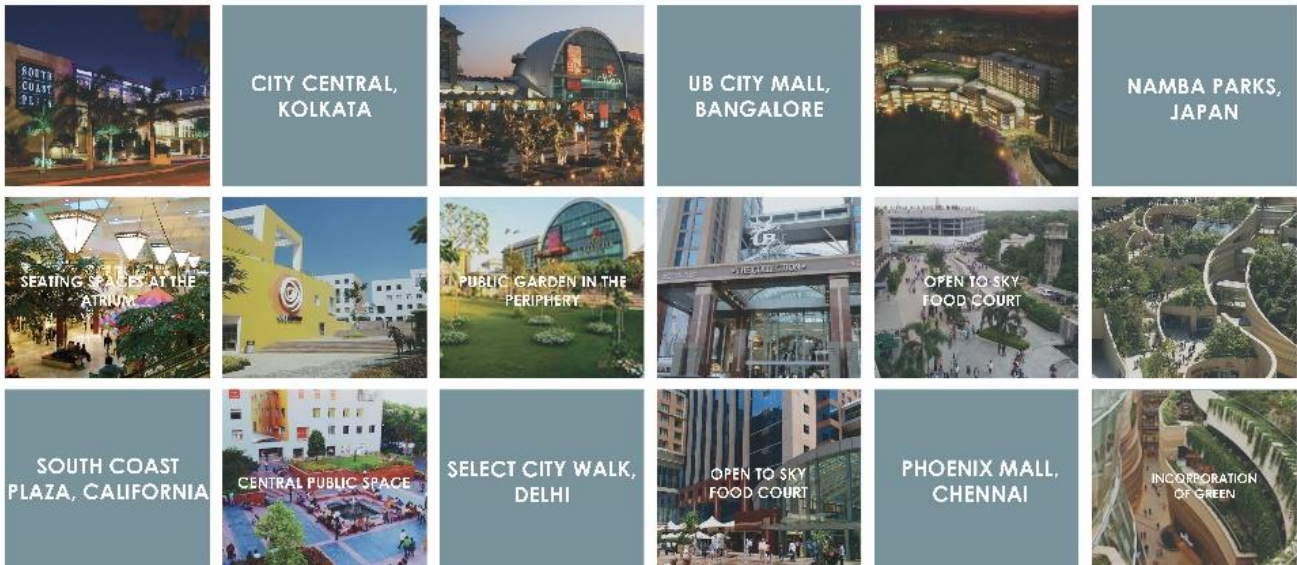


Figure 6 Mall with Healthy Congregation Spaces

### 3.3 Standards for Mall Design

#### 3.3.1 Corridors and passageways

- The height of corridors and passageways shall be not be less than 2.4 m and well ventilated.
- Minimum width for internal staircase 2.0m.
- Protected Escape Routes shall be adopted for high rise buildings and building having mixed occupancy/ multiplexes having covered area more than 500 m<sup>2</sup>.

#### 3.3.2 Arrangement of exits

- Exits shall be so located that the travel, distance on the floor shall not exceed the distance of 30m. In case of all commercial building.  
NOTE:- For fully sprinkled building, the travel distance may be increased by 50 percent of the values specified

#### 3.3.3 External stairs

- External stairs shall always be kept in sound operable conditions.
- All external stairs shall be directly connected to the ground.
- No external staircase shall be inclined at an angle greater than 45° from the horizontal.
- External stairs shall have straight flight (min) 1250 m wide with 250 mm treads and risers not more than 190 mm.

- The number of risers shall be limited to 15 per flight. Handrails shall be of a height not less than 1000 mm and not exceeding 1200 mm.

### 3.3.4 Horizontal exits

- For buildings more than 24 m in height, refuge area of 15 m<sup>2</sup> or an area equivalent to 0.3 m<sup>2</sup> per person.
- For floors above 24 m and Up to 39 m — One refuge area on the floor immediately above 24 m.

### 3.3.5 Escalators and passenger conveyors

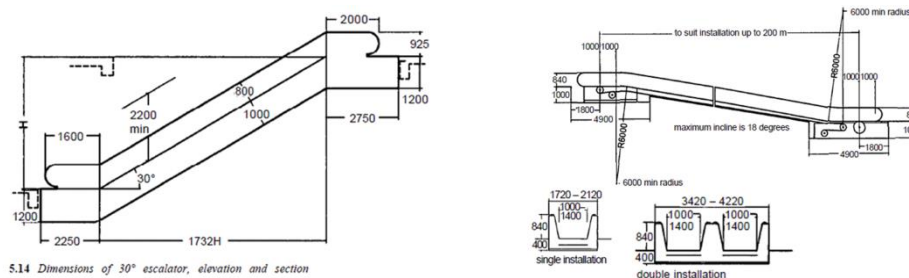


Figure 7 Escalator and Passenger Conveyors

### 3.3.6 Column spacing

- Significant dimension is along the mall as this involves the widths, i.e., frontages, of stores.
- Often used spaces are 20, 25 and 30 ft., with the last the most flexible.

### 3.3.7 Store depths

- Buildings are usually 120 to 140 ft deep, sometimes more to accommodate larger stores.
- If there are basements or mezzanines, the depth dimension usually can be reduced 20 to 25 percent

### 3.3.8 Clear heights

- These vary from 10 to 14 ft. or more, with 12 Ft. a good average. Above this clear height, there must be adequate space for air conditioning ducts, recessed lights, structural e system, etc.

### 3.3.9 Parking and traffic

- A ratio of between 5 and 6 car spaces per 1,000 sq. ft. of leasable store area is mandatory.
- In the matter of parking layout, car stalls can be set at angles (say, 70' to the lanes, which then requires one-way traffic; or stalls can be at 90' to the lanes, permitting two-way traffic.

### 3.3.10 Shop sizes & layouts

- 12 to 15 ft wide by 50 to 60 ft long in large cities; and 15 to 18 ft. wide by 60 to 80 ft long in smaller cities.
- These dimensions apply particularly to shops in 100 percent retail districts.
- Basements 8 to 9 ft high, in the clear, permit economical stock storage.
- Ground floors are preferably approximately 12 ft high. If no mezzanine is included; mezzanines at least 7 ft 6 inch above floor level will accommodate most fixture heights.
- Height from mezzanine floor to ceiling may be as low as 6 ft 6 in. if used for service space only; 7 ft is the preferred minimum for public use.

### 3.3.11 Life safety

#### 3.3.11.1 General Exit Requirements

- An exit may be a doorway; corridor passageway(s) to an internal staircase, or external staircase or horizontal landing.
- Lifts and escalators shall not be considered as exits.
- Every exit, exit access or exit discharge shall be continuously maintained free of all obstructions.
- Exits shall be clearly visible and the route to reach the exits shall be clearly marked and signs posted to guide the occupants of the floor concerned.
- Fire doors with 2 h fire resistance shall be provided at appropriate places along the escape route.
- Fire doors with 2 h fire resistance shall be provided at appropriate places along the escape route.

### 3.3.12 Sanitary installations

The ratio of fittings in male and female toilets shall be 3:5, for example, 1 WC and 2 Urinals for male: 5 WC.s for female which is in accordance to the NEA's COPEH.

<b>Appliances</b>	<b>For male customers</b>	<b>For female customers</b>
WC	1 per 100 up to 400 males. For over 400 males, add at the rate of 1 per 250 males of part thereof	2 per 50 up to 200 females. For over 200, add at the rate of 1 per 100 females or part thereof
Urinal	1 per 50 males	—
Wash basin	1 per WC and in addition 1 per 5 urinals or part thereof	1 per WC
Toilet for disabled people	1 unisex compartment should be reasonably close by but may be shared by other facilities (such as shops)	
Bucket/cleaners' sink	Adequate provision should be made for cleaning facilities including at least one cleaners' sink	

3.3.12.1 Urinals

Sales area of shop	Appliances	Male	Female
1000 m <sup>2</sup> to 2000 m <sup>2</sup>	W C	1	2
	Urinal	1	Nil
	Wash basin	1	2
	Toilet for disabled people	1 unisex	
	Baby-changing facilities	1 unisex <i>not in disabled toilet</i>	
2001 m <sup>2</sup> to 4000 m <sup>2</sup>	W C	1	4
	Urinal	2	Nil
	Wash basin	2	4
	Toilet for disabled people	1 unisex	
	Baby-changing facilities	2 unisex	
Greater than 4000 m <sup>2</sup>	In proportion to the size of the net sales area		

Table 2 Sanitary Installations

- Individually wall-hung urinal units shall be at least 300mm wide and the lip of the collection area shall project from the wall by at least 300mm.
- A urinal should not be set closer than 450mm from its centre to any side wall, partition, vanity or other obstruction, or closer than 900mm centre-to-centre between adjacent fixtures.
- There should be at least a 900mm clearance in front of the urinal to any wall, fixture or door.
- Urinals should be separated by modesty boards of not less than 300mm x 1800mm (Height) to act as a visual barrier between urinals.

3.3.12.2 Wash Basins

- Wash basins should be substantial in size. The basins should have a minimum size of 500mm in length and 400mm in width.
- Water Closets (WCs)
- A WC should not be set closer than 450mm from its centre to any side wall, partition, vanity or other obstruction.
- There should be at least a 900mm clearance in front of the WC to any wall, fixture or door.
- Supply a predetermined quantity of not more than 4.5 liters of water per flush after each use.

3.3.12.3 Mechanical Ventilation

- Where mechanical means are used for ventilation, there should be cross ventilation and the air exchange rate should have a minimum of 15 air changes per hour.

- The exhaust air should be discharged to the exterior of the building at a position at least 2 m above the pavement level and at least 5 m from any window or fresh air intake.

#### 3.3.12.4 Natural Ventilation

- For natural ventilation, suitable fresh air inlet grilles shall be provided to ensure an air exchange rate of 5 air changes per hour.
- Examples of good materials for toilets: -
  - Floor  
Non-slip ceramic tiles, natural stone, homogeneous tiles, terrazzo.
  - Wall  
Ceramic tiles, natural stone, homogeneous tiles, stainless steel, enamelled steel panels, glass block, aluminium panels, phenolic cladding.
  - Ceiling  
Mineral fibre board, fibrous plaster board, Aluminium panels or strips

#### 3.3.13 Barrier free parameters

To accommodate the persons with disabilities and elderly. Few integral components of the building design can be planned following these considerations.

##### 3.3.13.1 Kerb Ramp

- Width should not be less than 1200mm
- Useful for a smooth transition.
- Footpath flushed with roadway, at a gradient not exceeding that 1:12.
- Warning strip to be provided on the kerb side edge of the slope.

##### 3.3.13.2 Footpath

- Obstruction-free for the convenience of all users.
- Height of the footpath not to be more than 150 mm from the road level.
- Change in level on the footpath should be made clearly visible.
- Width of the footpath should 1800 mm and minimum clear unobstructed path should be 1200 mm.
- Street furniture should be placed outside the path of travel.
- Resting Places should be provided along travel routes.
- Protruding elements should be avoided.
- Bollards should be 1000 mm high, painted in contrasting colour stripes with clear minimum gap of 1200 mm.

##### 3.3.13.3 Parking

- Parking should be within 30 meters of the main entrance the building.
- Two accessible parking lots with dimension 3600mm X 5000mm.
- International symbol of accessibility painted on the ground and also on a signpost/board.
- Directional signs guiding people to the accessible parking.
- Wheel stoppers to be provided

## 4 Case Study

### 4.1 Forum Sujana Mall, Hyderabad

The Forum Sujana Mall in Hyderabad is located in Kukatpally, a major residential and commercial suburb in Hyderabad. It is a hub for shopping in the IT corridor, with major shopping malls and more coming up. The Forum Sujana Mall is a destination mall for lifestyle, fashion, food, cinema and entertainment. The Forum Sujana Mall opened in September 2014.

#### 4.1.1 Site

The mall is strategically placed at the heart of the IT and residential hub of Hyderabad.

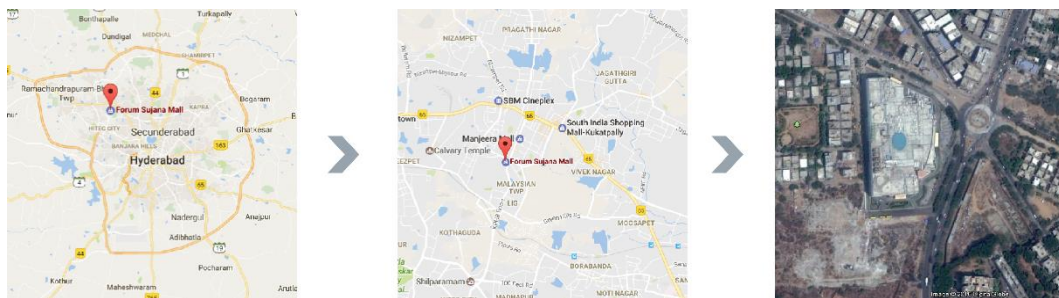


Figure 8 Mall Location - Forum Mall

#### 4.1.2 Connectivity

Sujana Forum Mall, Hyderabad is in the proximity of Hyderabad's major IT hub Hitech City and with the dense neighbourhood of Kukatpally.

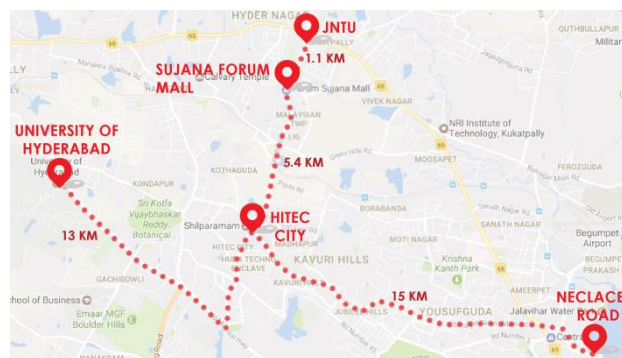


Figure 9 Mall Connectivity - Forum Mall

#### 4.1.3 Project Detail

Site Area	: 6.5 Acres
Ground Coverage	: 3.5 Acres
Build-up Area	: 22.5 Acres
Building Height	: 27-30m
Floor Height	: 4-6m
Height of Parking Floor	: 2.8-3 m



Gross Leasable Area : 10.5 Acres  
 No. of Anchor Stores : 7 (including theater and hypermarket)  
 No. of Parking (stilt & basement) : 1350  
 Approach Road Width : 20 Meters  
 Site Setback : Front-18 Meters  
 Sides-10 m, 18 m  
 Rear- 10 m  
 No. of Entrance : 3  
 Atrium Size : 24m X 18

#### 4.1.4 Floor plans

##### FLOOR PLANS

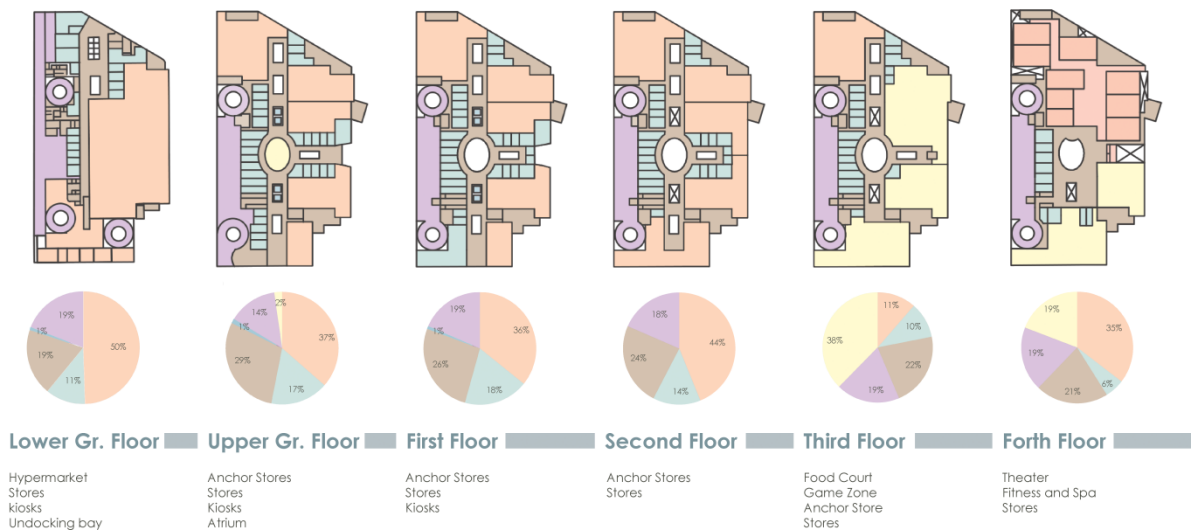


Figure 10 Floor Plan - Forum Mall

#### 4.1.5 Area Comparison

The zones in the mall are tactically placed to drive maximum public in and around the mall with Public spaces at higher floors.

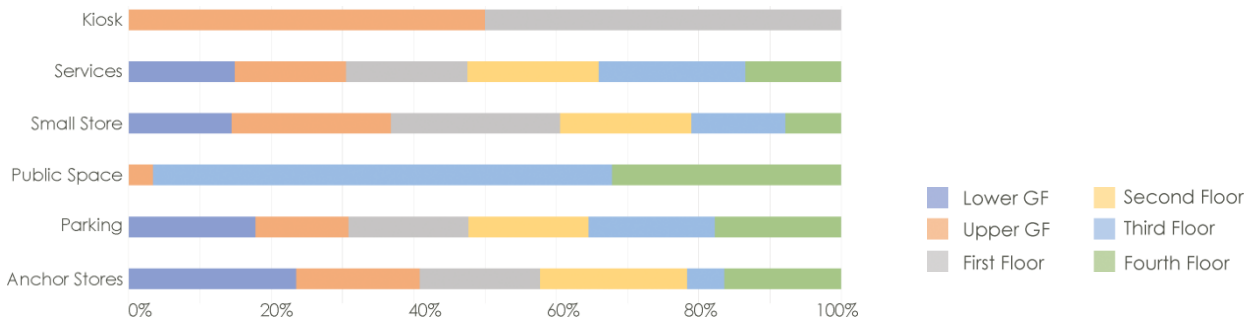


Figure 11 Area Comparison - Forum Mall

#### 4.1.6 Typology of stores



Figure 12 Typology of Store - Forum Mall

#### 4.1.7 Horizontal Distribution of spaces

Stand-alone stores and Anchor stores are strategically placed around the atrium providing maximum benefit to the developer. Here, Stand-alone store are placed near the atrium to enhance the retail value of the shop as well as to maintain controlled movement across the atrium. Anchor stores are placed far from each other to maximize the amount of traffic from one anchor to another.

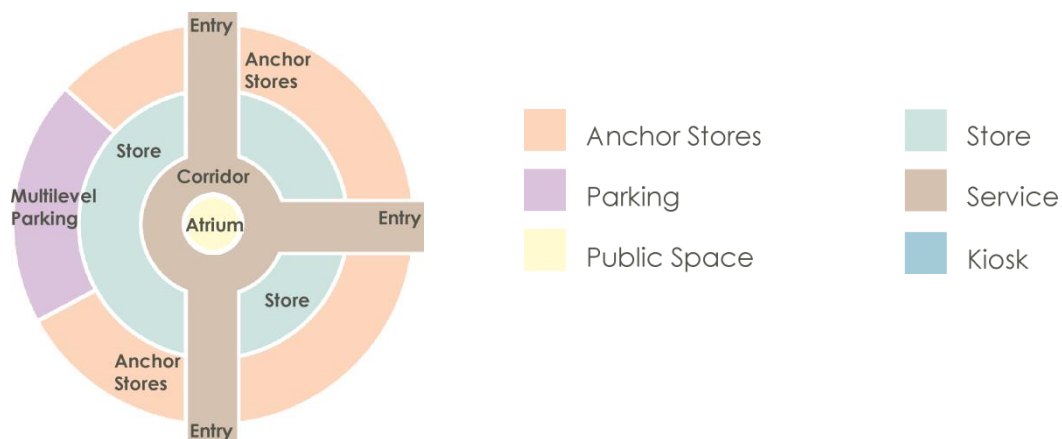


Figure 13 Horizontal Distribution of Spaces - Forum Mall

#### 4.1.8 Vertical Distribution of spaces

The mall constitutes of 11 anchor stores that are strategically placed at each floor. Public spaces like food court and entertainment zones are placed at the higher floors to enhance public movement throughout the mall. Multilevel parking is evenly divided on each floor at the rear end of the shopping mall. Basement 1 is dedicated for parking only, whereas basement 3 has 10 % of floor area provided for services. Diversity in shop typology is maintained vertically to attract most number of users.

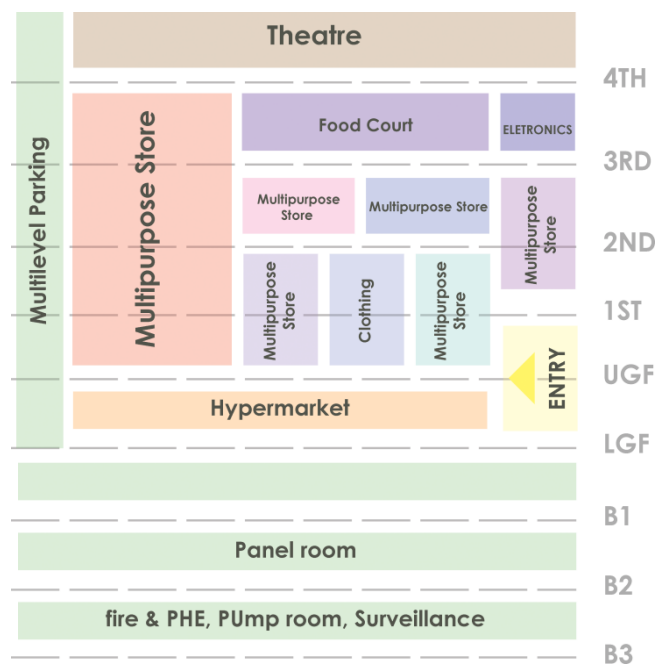


Figure 14 Vertical Distribution of Spaces – Forum Mall

#### 4.1.9 Services

The services are placed in the periphery of the mall, away from the users. Services like toilet and wash are kept in a separate corner where a corridor leads. The same corridor extends to the service area and the freight lift. The fire exits on the first and the subsequent floors are kept hidden which pose a threat at the times of an emergency situation. 10 % of the floor area in the basement is dedicated to the services like BMS - fire room and PHE, pump room, surveillance and panel room. Overhead tank and chiller unit are placed at the terrace of the mall.

#### 4.1.10 Quality of public space

##### 4.1.10.1 Atrium

The mall consists of multiple atrium that continues till the 3rd floor. Central atrium is located at upper ground floor and is visually accessible from all the floor above. The roof of the central atrium is translucent and allows dispersed day light to inside the mall. The central atrium acts as a common space for meeting, events, and displays. The space does not have any sitting provision in and around the atrium.

##### 4.1.10.2 Food Court & Entertainment zone

The Food court and the entertainment zone of the mall are located beside each other on the 3rd floor to assist increased public flow at these zones. The food court has a capacity of 200 - 250 ppl with various seating arrangements to accommodate all type of users. Entertainment zone includes gaming zone, kids play area amusement zone and novelty shops. This space in the mall is a major congregation zones that attempts to incorporate recreational and social spaces together. The congregation spaces achieved in the mall are highly commercialized that restricts the users to involve with these spaces.

### 4.1.11 Activities and spaces



Figure 15 Activities and Spaces - Forum Mall

## 4.2 City Center, Kolkata

City Center Salt Lake is Kolkata's first integrated and unconventional hangout and shopping option that has successfully erased the mid-market and up-market divide.

The mall has 4.5 lakh sq.ft. of commercial and entertainment spaces on five acres of land, City Centre Salt Lake attracts crowds from all over Kolkata, not just the catchment area.

### 4.2.1 Site

The mall is strategically placed at the heart of the Salt Lake town of West Bengal.

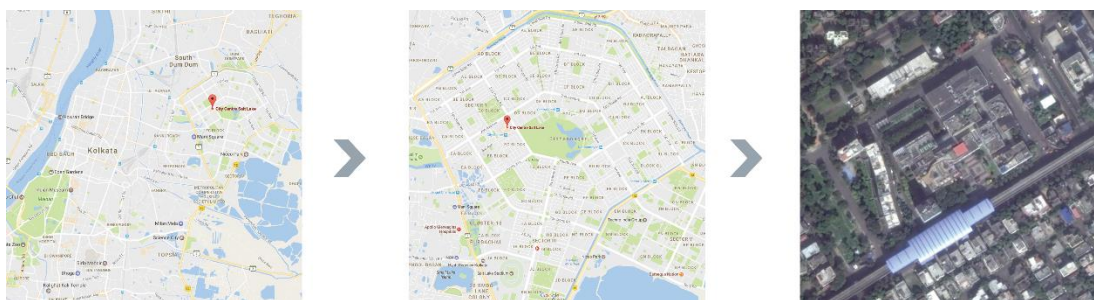


Figure 16 Mall Location - City Center Mall

### 4.2.2 Connectivity

City Centre , Salt Lake is in the proximity of Rajarhat Town, City CBD as well as with the City and with the dense neighbourhood of Kolkata.

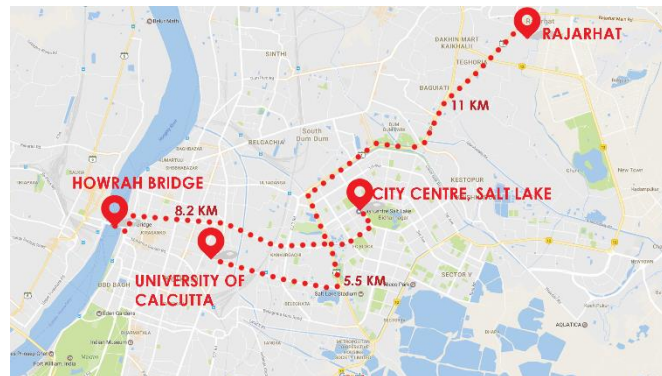


Figure 17 Site Connectivity - City Center Mall

### 4.2.3 Project Detail

Site Area	: 4.9Acres
Ground Coverage	: 2.78 Acres
Buildup Area	: 10 Acres(Approx)
Building Height	: 18-22 Meters
Floor Height	: Varying from 4-6 Meters
Height Of Parking Floor	: Allotted at leased land
Gross Leasable Area	: 10.3 Acres
No. of Anchor Stores	: Two
No. of Parking	: 4-Wheeler: 250; 2-Wheeler: 100
Approach Road Width	: 32 Meters
Public Inflow	: Average footfall : 25000-30000 Festival and events : 50000-60000
No. of Entrance	: 7

### 4.2.4 Area Comparison

The zones in the mall are tactically placed to drive maximum public in and around the mall with Public spaces at higher floors.



Figure 18 Area Comparison - City Center Mall

## 4.2.5 Floor plans



Figure 19 Floor Plans - City Center Mall

## 4.2.6 Typology of stores



Figure 20 Typology of Stores - City Center Mall

## 4.2.7 Horizontal Distribution of spaces

The open mall concept of city center mall enables the mall to interact with the surrounding. Semi-open corridors create the transition between inside and outside of the mall. The mall is divided into blocks for better cognition.

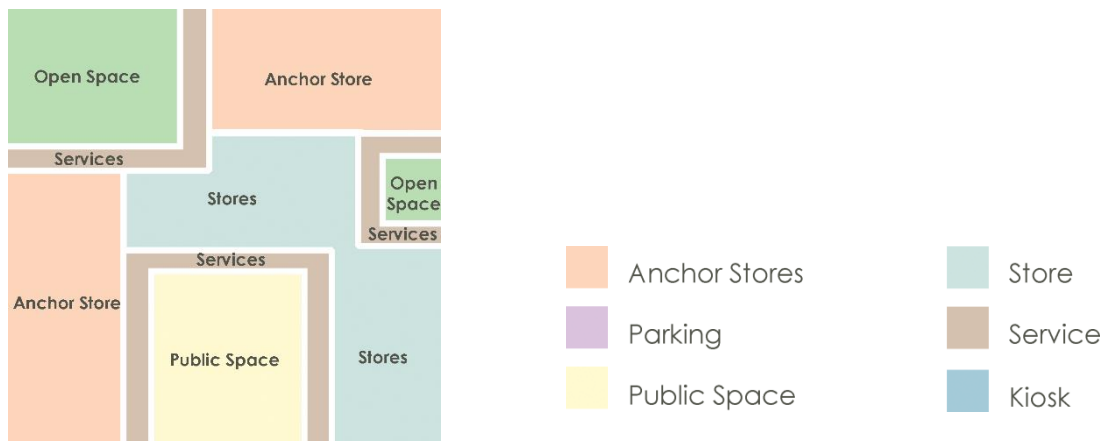


Figure 21 Horizontal Distribution of Spaces - City Center Mall

#### 4.2.8 Vertical Distribution of spaces

The mall constitutes of 2 anchor stores that are placed farther from each other. Public spaces like the Kund and entertainment zones are placed such that it drives more public. The kund and the area around it is the foci of the mall, creating a rich and healthy congregation space in the mall. Diversity in shop typology is maintained vertically to attract most number of users.

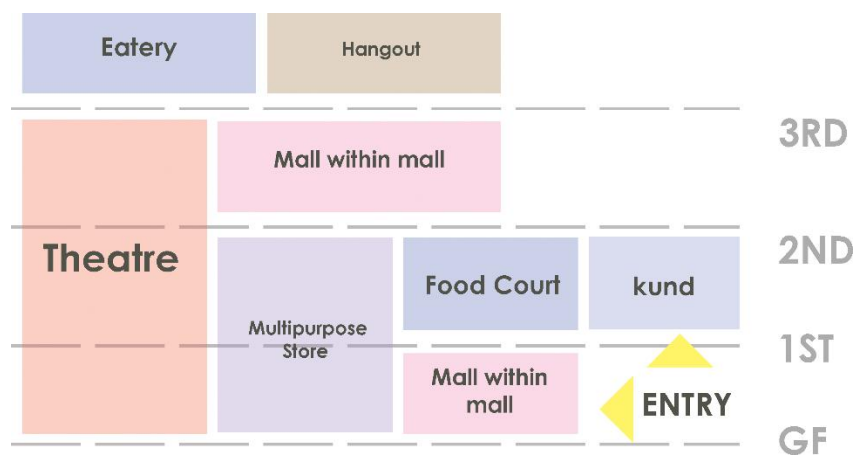


Figure 22 Vertical Distribution of Spaces - City Center Mall

#### 4.2.9 Services

##### 4.2.9.1 Electricity

Distribution boards at every block with separate metered connections is provided for each shop/ stall and also separate metered connection for common area with 33KV WBSE - 400 V Transformer - 2000KV x 3 Substations. Common spaces consumes 30% of total consumption.

#### 4.2.9.2 HVAC System

HVAC load at the mall shares 20% of total load. Screw Chiller: both water cooled and Air cooled, placed at Roof top above A block.

#### 4.2.9.3 Water supply and Sanitation

Water storage tank and capacity - Fire + General: 4.5 lakh litres. Overhead tank size and capacity - 12000 litres at each block

#### 4.2.9.4 Sewage load and management

Directly connected to corporation drain. No STP is provided for the mall. No provision of rain water harvesting system is provided in the mall.

#### 4.2.9.5 Fire Fighting and security

Water tank of size 2 lakh litres is provided for firefighting is provided, with sprinkler and hydrant assembly. Manual vigilance with CCTV support is operated for the security management in the mall

#### 4.2.10 Public Space

##### 4.2.10.1 The Kund

- Central element of the mall.
- The Kund acts as a common space for meeting, events, and displays.
- Play with levels create a unique gathering and seating zone.
- Statistically placed at the major entrance of the mall to increase public inflow.
- Eatery stores placed around the kund providing view towards the kund area.

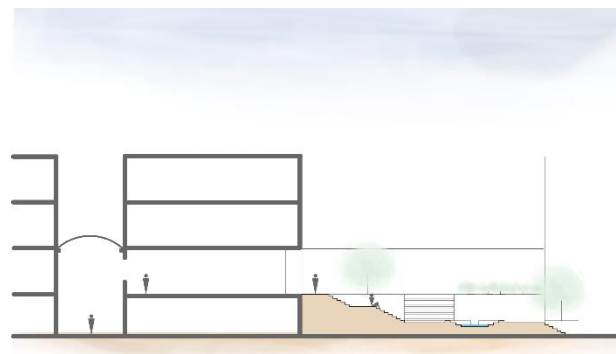


Figure 23 Section A - City Center Mall

##### 4.2.10.2 Corridor

- Grand corridor with provision for seating and gathering at ground floor.
- Plantation along to corridor to enhance the quality of space.
- Corridor at 1st floor creates a bridge over the ground floor corridor providing view to the public space.

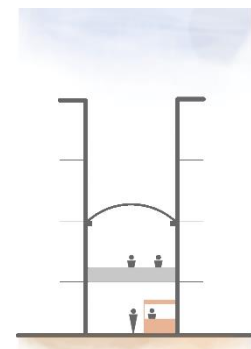


Figure 24 Section B - City Center Mall



### 4.2.11 Activities and spaces

#### ACTIVITIES AND SPACES



Figure 25 Activities and Spaces - City Center Mall

### 4.3 Comparative Study

NAME	FORUM SUJANA MALL HYDERABAD	CITY CENTER KOLKATA	TRILIUM MALL AMRITSAR	PHOENIX MALL CHENNAI	SELECT CITY WALK DELHI	TRENDSET MALL VIJAYAWADA	INFERENCES
YEAR OF COMPLETION	2014	2004	2013	2013	2007	2015	Site should be well connected with different part of the city.  Should be concentrating on various user group
SITE CONNECTIVITY							
SITE PLAN							No restriction on site area, can vary as per the context.
SITE AREA	6.5 ACRES	4.9 ACRES	9.58 ACRES	10.17 ACRES	5.86 ACRES	2.18 ACRES	
GROUND COVERAGE	3.5 ACRES	2.78 ACRES	2.1 ACRES	2.48 ACRES	3.15 ACRES	1.16 ACRES	Building bye laws shall be followed.
SITE ACCESS							Site can have more exposure to roads for better visibility.  Vehicular movement shall be well planned within the site.

HORIZONTAL DISTRIBUTION							Anchor stores shall strategically placed to manage public movement.
NO. OF ENTRIES	3	7	2	3	4	2	No. of Anchor stores depends on the developers intent and context .
NO. OF ANCHOR STORES	7	2	4	8	3	3	
VERTICAL							Food Courts are placed at higher floors to induce more circulation inside the mall.
LOCATION OF FOOD COURT	3RD FLOOR	3RD FLOOR	5TH FLOOR	4TH FLOOR	2ND FLOOR	2ND FLOOR	Theaters are placed at higher floors so as to provide large span auditorium.
NUMBER OF STORIES	5 FLOORS	4 FLOORS	7 FLOORS	4 FLOORS	3 FLOORS	4 FLOORS	
PERCENTAGE OF SPACES							Spatial distribution varies with respect to the context and developer's intent.
USP	Proximity with IT HUB of the city Scale of the project	The Kund area(Public zone) Spatial arrangement Open Mall Concept	Central Triangular open space Scale and Spatial arrangement Compliance with LEED guidelines	The scale of the project Exterior Public spaces of the mall	Form of the Mall Public space at the entrance	Location of the Mall	Design interventions can be done to attract more public inflow in the mall. Sustainable design interventions can be induced in the design.
FACILITY	Hypermarket Theater Gaming Zone Health care zone	Theater Gaming Zone Mall within mall Banquet Hall	Theater Hypermarket Gaming Zone Banquet Hall	Theater Hypermarket Entertainment Zone Children Gaming Zone	Theater Health club Entertainment Zone Children Gaming Zone	Theater White-goods outlets Entertainment Zone Children Gaming Zone	Type of facilities provided in the mall can vary as per the context and developers intent.
ARCHITECTURAL STYLE	Glass Facade infused with Alco panel	Plastered Brick wall facade	Glass Facade infused with Alco panel	Glass Facade infused with Alco panel	Glass Facade infused with Alco panel	Glass Facade infused with Alco panel	Framed structure with modern facades are generally used for mall design.

Figure 26 Comparative Study

## 5 Site

According to census 2011, Hyderabad is among the top 10 dense cities of India. Also, the city is one of the major technological hub of India, along with Bangalore, with many IT companies. Hyderabad is an epicentre of work oriented public who accomplish their demanding schedule and drive toward malls as a recreational zone.



Figure 27 Site Connectivity

Kukatpally is a neighbourhood of Hyderabad in the Indian state of Telangana. It is the mandal headquarters of Kukatpally mandal in Malkajgiri revenue division of Medchal district. It was a municipality prior to its merger into the Greater Hyderabad Municipal Corporation. New road connectivity and consequent proximity to the Information Technology hub of Hitech city has made Kukatpally area, a functional dream home.

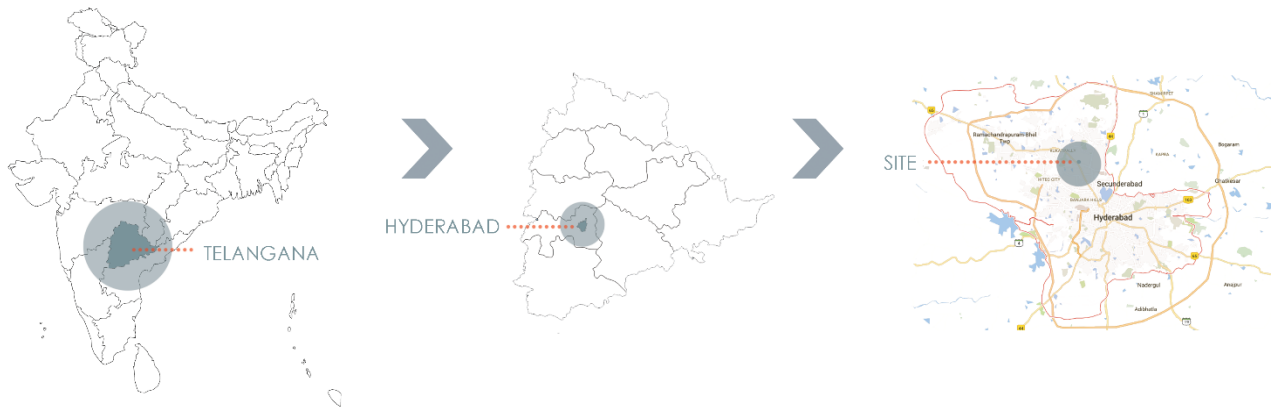


Figure 28 Site Connectivity

## 5.1 Site Details

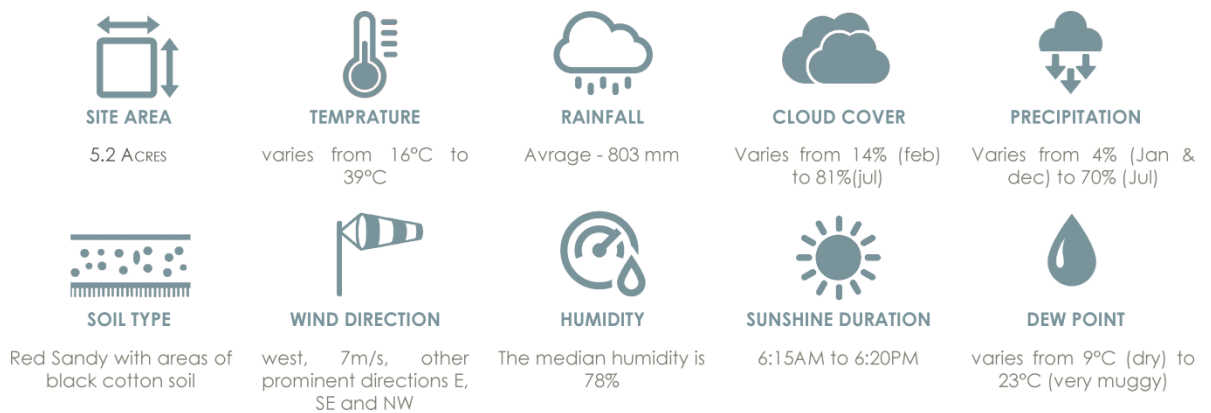


Figure 29 Site Details

## 5.2 Site Morphology

The form of the buildings around the site varies from single storey to 4 storey. Existence of vacant land around the site provides view to the site from the major nodes and landmarks.

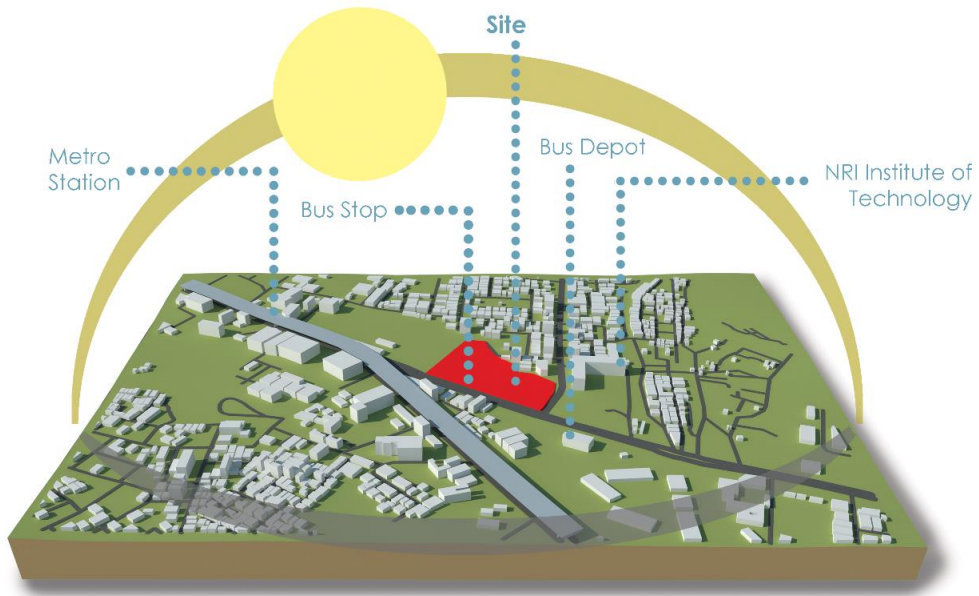


Figure 30 Site Morphology

### 5.3 Layer wise analysis

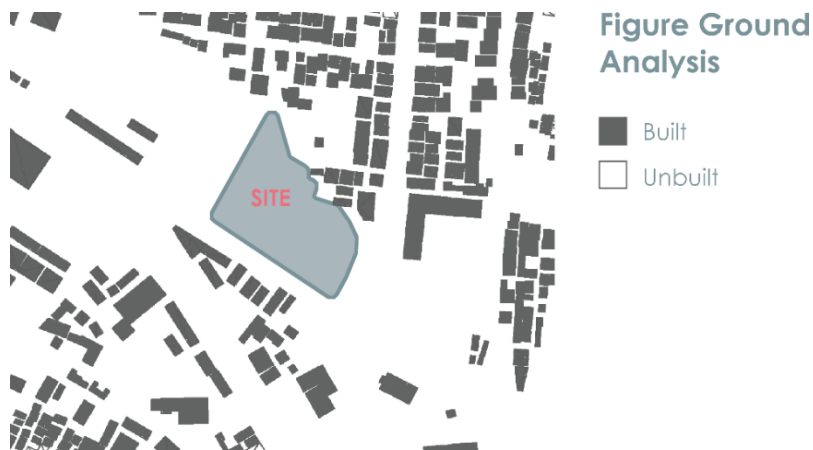


Figure 31 Figure Ground Analysis



Figure 32 Land Use Map

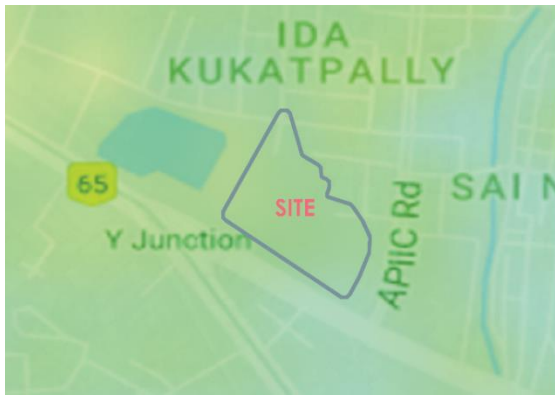


Figure 33 Topography

### Topography

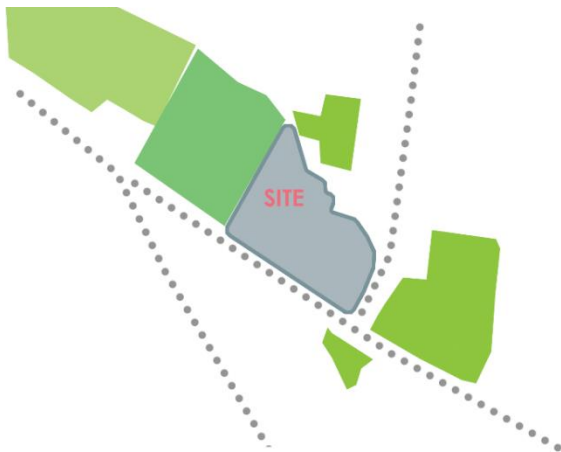
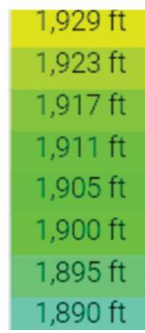


Figure 34 Open Space

### Open space

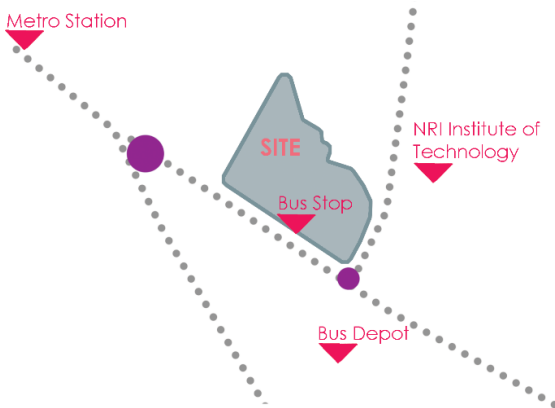


Figure 35 Landmarks

### Landmarks

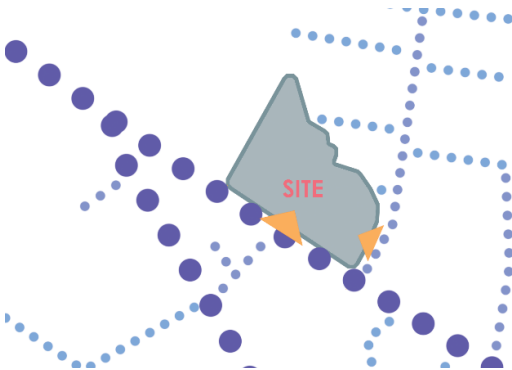
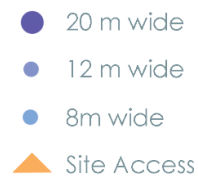


Figure 36 Access

### Access



## 5.4 Site Regulation

- Minimum abutting existing road width :18m
- Permissible building height : 30m
- Stilt Floor meant for parking is excluded from the permissible height.
- Building setback : 12 m front & 10m side
  - No balcony projections or corridor shall be permitted projecting within the mandatory open spaces.
  - The setbacks are to be left after leaving the affected area of the plot / site.
  - A strip of at least 1m greenery / lawn along the frontage of the site within the front setback shall be developed and maintained with greenery.
  - For Plots above 300sq.m, a minimum 1m wide continuous green planting strip in the periphery on remaining sides are required to be developed and maintained within the setback.
- Parking Requirements: 60% of the build-up area

## 5.5 Site Visibility



Figure 37 Site Visibility

## 5.6 Site Transect

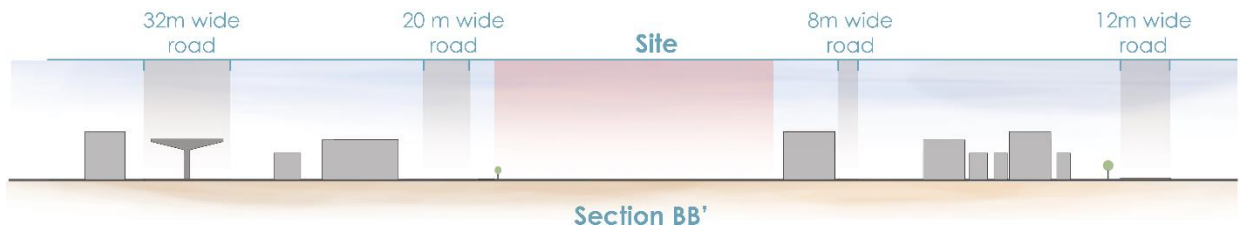


Figure 39 Transect A

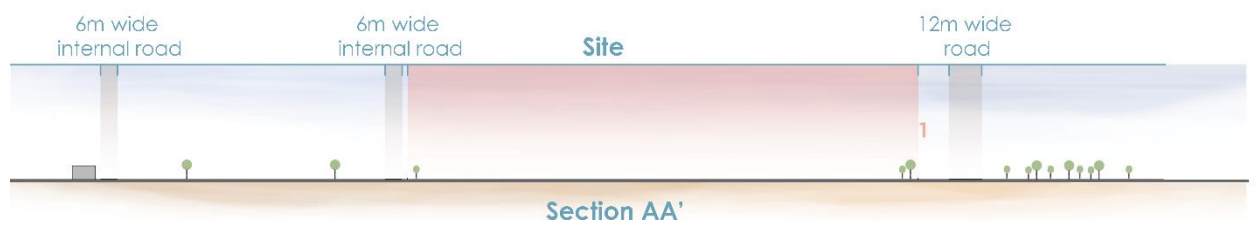


Figure 38 Transect B

## 5.7 Street Sections



Figure 40 Street Section A

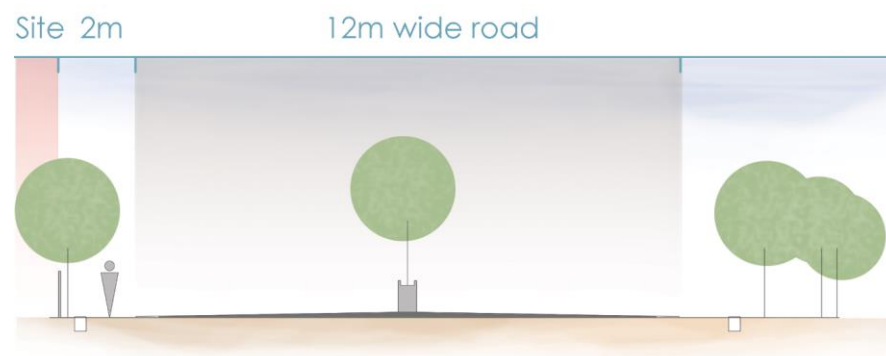


Figure 41 Street Section B

## 5.8 View Corridors (conceptual)

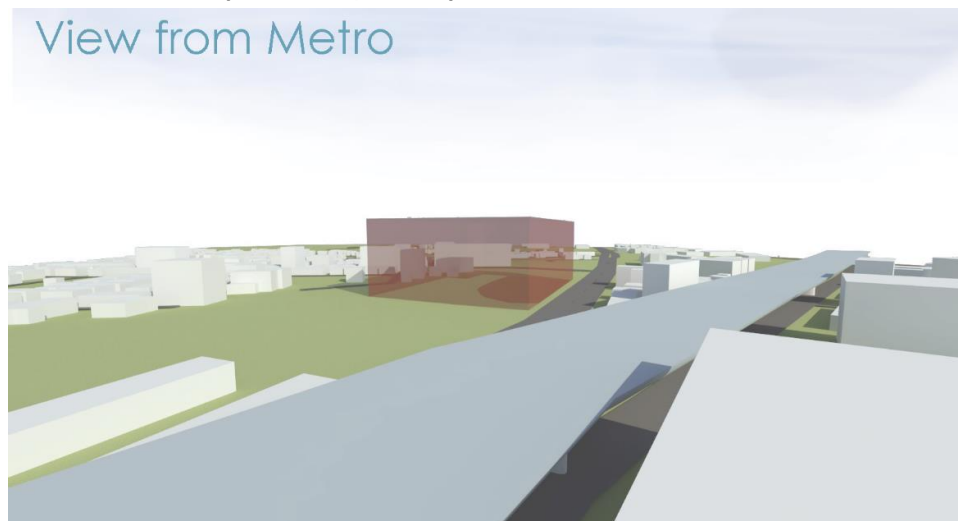


Figure 43 View from Metro Station

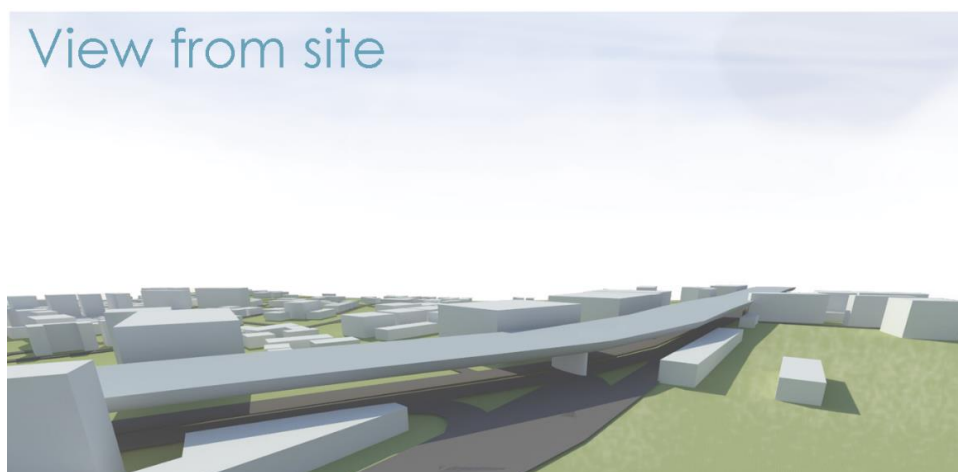


Figure 42 View from Site

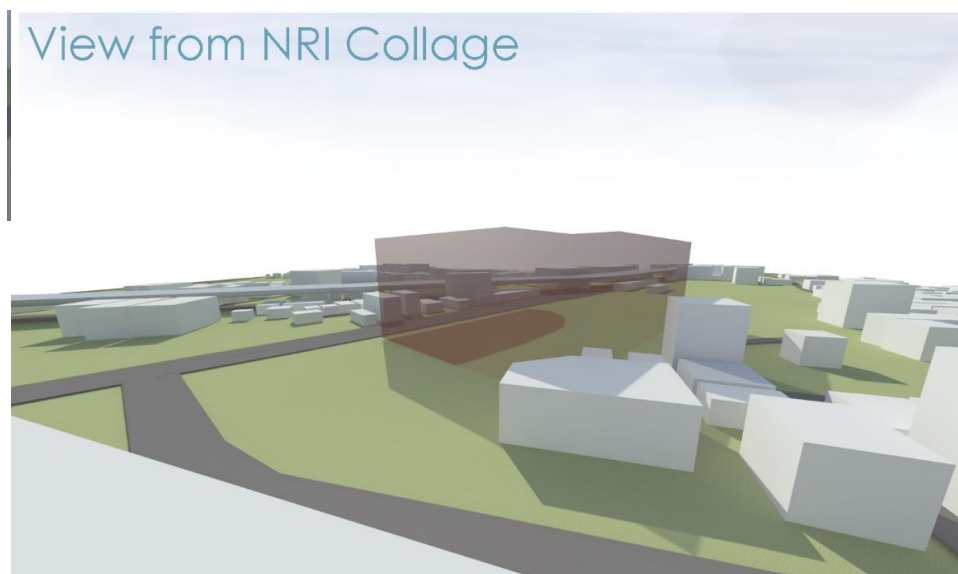


Figure 44 View from metro rail



## 5.9 Inferences

### 5.9.1 Strengths

- Site exposure to main road.
- Plain land provides flexibility in execution of the design.
- Proximity to IT hub of the City.
- Proximity to Residential Zone.
- Proximity to Old Airport and Metro station.
- Ability to attract Various user groups.
- Site visibility from existing Nodes
- No thick vegetation in the site.
- Existing road width sufficient for the proposal of mall.

### 5.9.2 Weaknesses

- Immediate view from the site.
- Lack of dedicated public gathering spaces in and around the site.
- No overshadowing of the surrounding built form at the site.
- No specific architectural style is prominent around the site to design the structure in harmony with the surroundings.

### 5.9.3 Opportunity

- Scope of alternate entries.
- No thick vegetation provides flexibility in design execution.
- Elevated view corridors can provide view to metro and open grounds around the site.
- Existing road widths need not be changed to design/propose mall at the site.
- Architectural interventions can help to form the architectural style of the place.

### 5.9.4 Threats

- Site proximity with Y - junction road may create traffic connection if not planned properly.
- Site proximity with old airport.
- Future Growth around the site will affect the visibility of the site.
- Adapting a unique architectural style for the design might adversely effect.

## 6 Design Development

### 6.1 Site zoning

#### 6.1.1 Horizontal Zoning

Necessity of spaces in a mall

- Recreational - Low Traffic, Sense of Enclosure, Low Pollution
- Social - Flexible for Different, Activities
- Commercial - Good Visibility, Easy Accessibility
- Services - Easy Accessibility for Site Surrounding
- Image – First Impression, Good Visibility

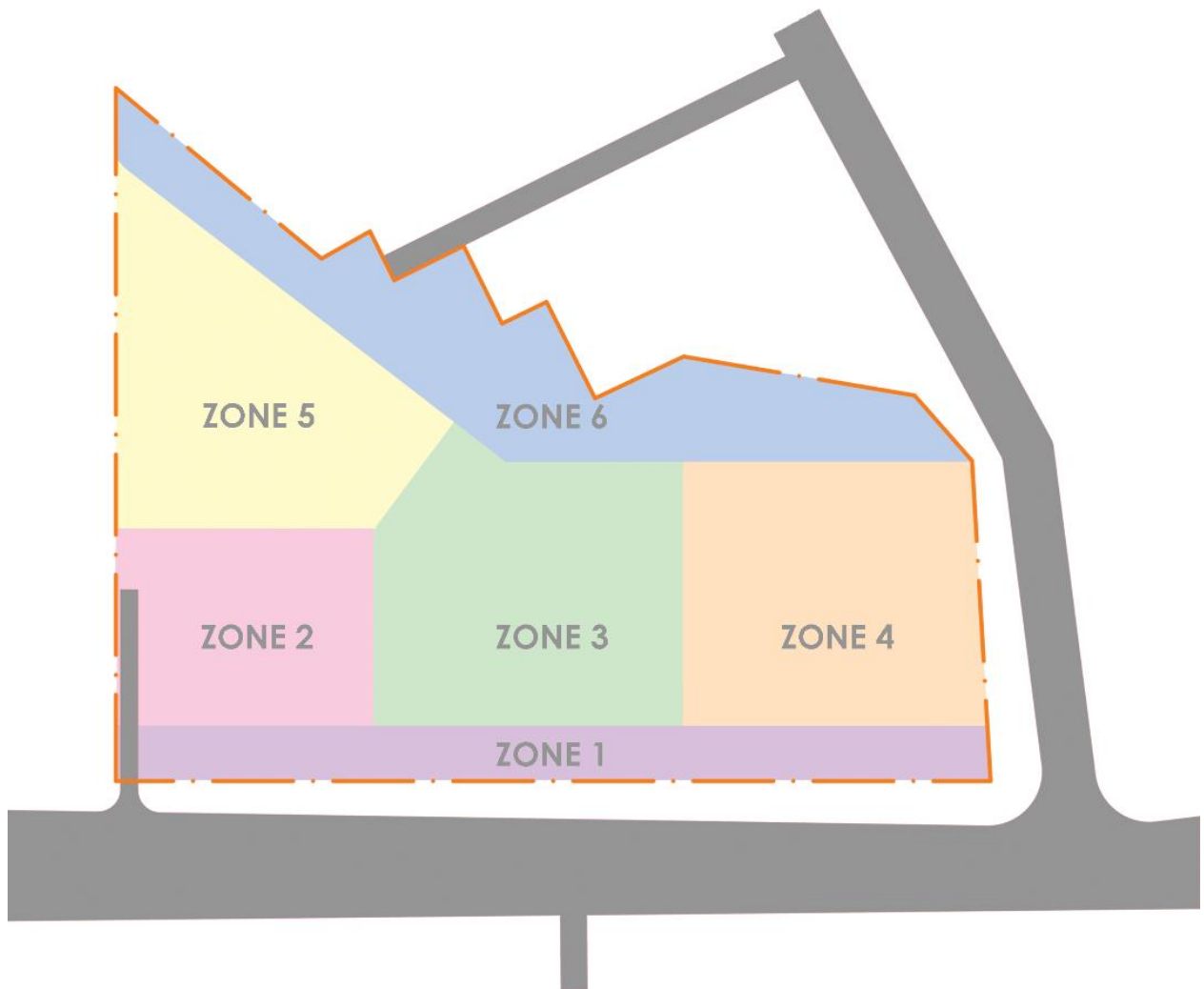


Figure 45 Site Zoning

	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
Commercial	●	●		●	●	
Social	●	●	●	●	●	
Image	●		●			
Recreational		●	●	●	●	
Services						●

Table 3 Site Zoning

### 6.1.2 Vertical Zoning

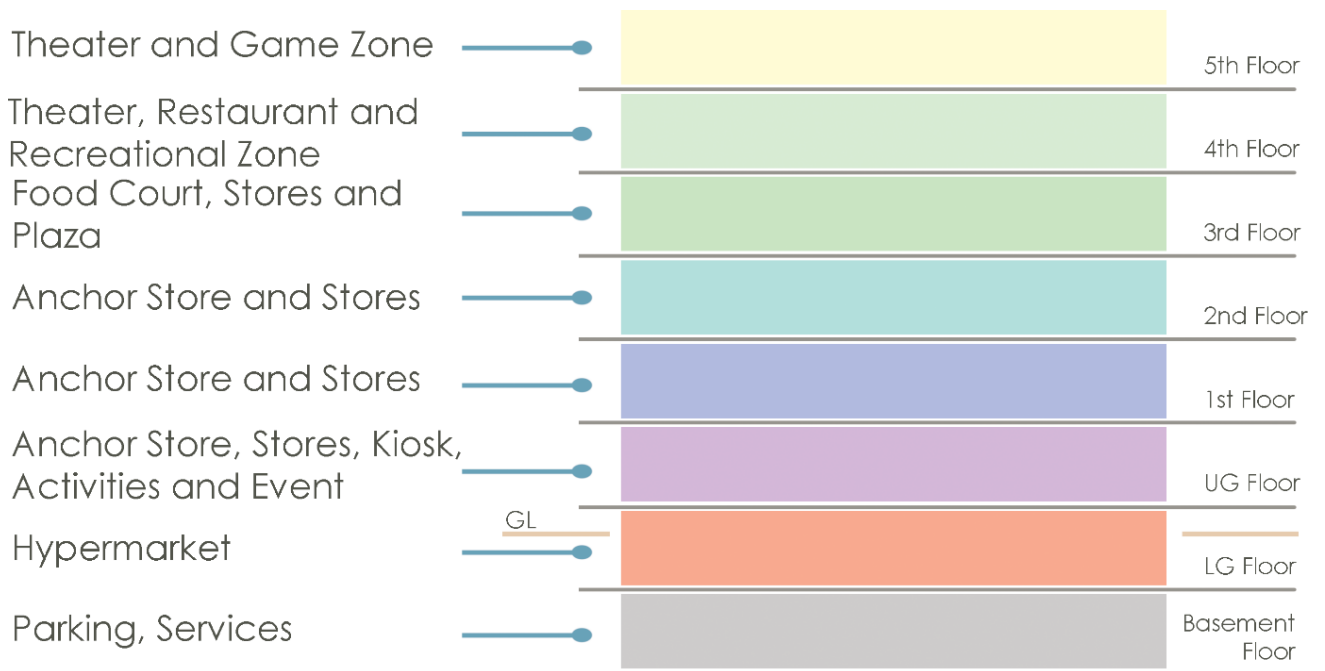


Figure 46 Vertical Zoning

## 6.2 Space Distribution

### 6.2.1 Entrance

Separate entrance to be provided at each sides for vehicular and public movement.

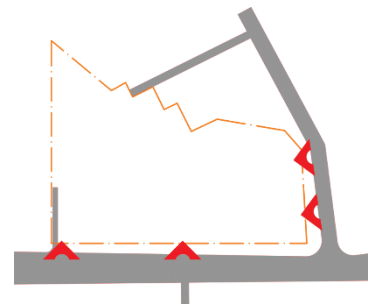


Figure 47 Entry Points

### 6.2.2 Anchor Stores

Anchor Stores to be positioned at zone 2, zone 4 and zone 1 at lower floors, so as to provide improved public circulation and better shop frontage to the anchor stores.

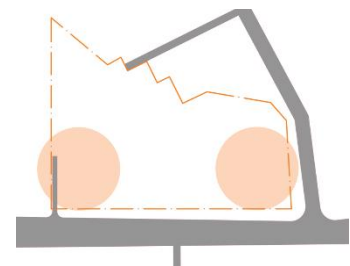


Figure 48 Position of Anchor Stores

### 6.2.3 Public Space

Public spaces to be placed at zone 3 to allow better accessibility and at zone 1 to establish image of the mall.

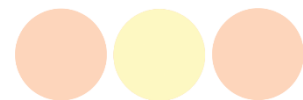


Figure 49 Public Space Location

Multiple public zones, with hierarchy, to be created for involving more activities and visibility throughout the mall.



Figure 50 Hierarchy of Public Space

#### 6.2.4 Stores

Stand -Alone Store to be placed around the public spaces for enhanced public inflow and better shop frontage.

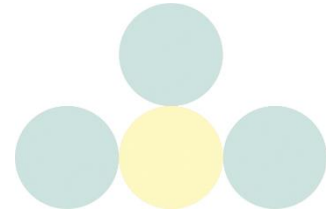


Figure 51 Location of Stores

#### 6.2.5 Kiosk

Kiosk to be placed at lower floors at the tradition spaces between public spaces and stores.



Figure 52 Location of Kiosk

#### 6.2.6 Services

Services to be placed majorly in zone 6 as it has better accessibility form the site surrounding and has least impact in creating image of the mall.

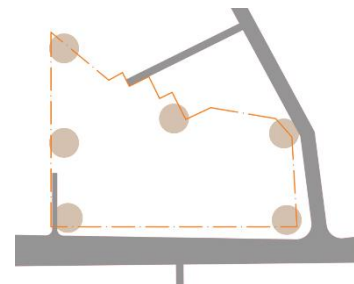


Figure 53 Location of Services

#### 6.2.7 Game zone and Plaza

Game zone, Public plaza and theatre to be placed at upper floors to stimulate public movement as well as to provide better view corridor from the site.



Figure 54 Recreational Zone

### 6.3 Layer wise Spaces Orientation

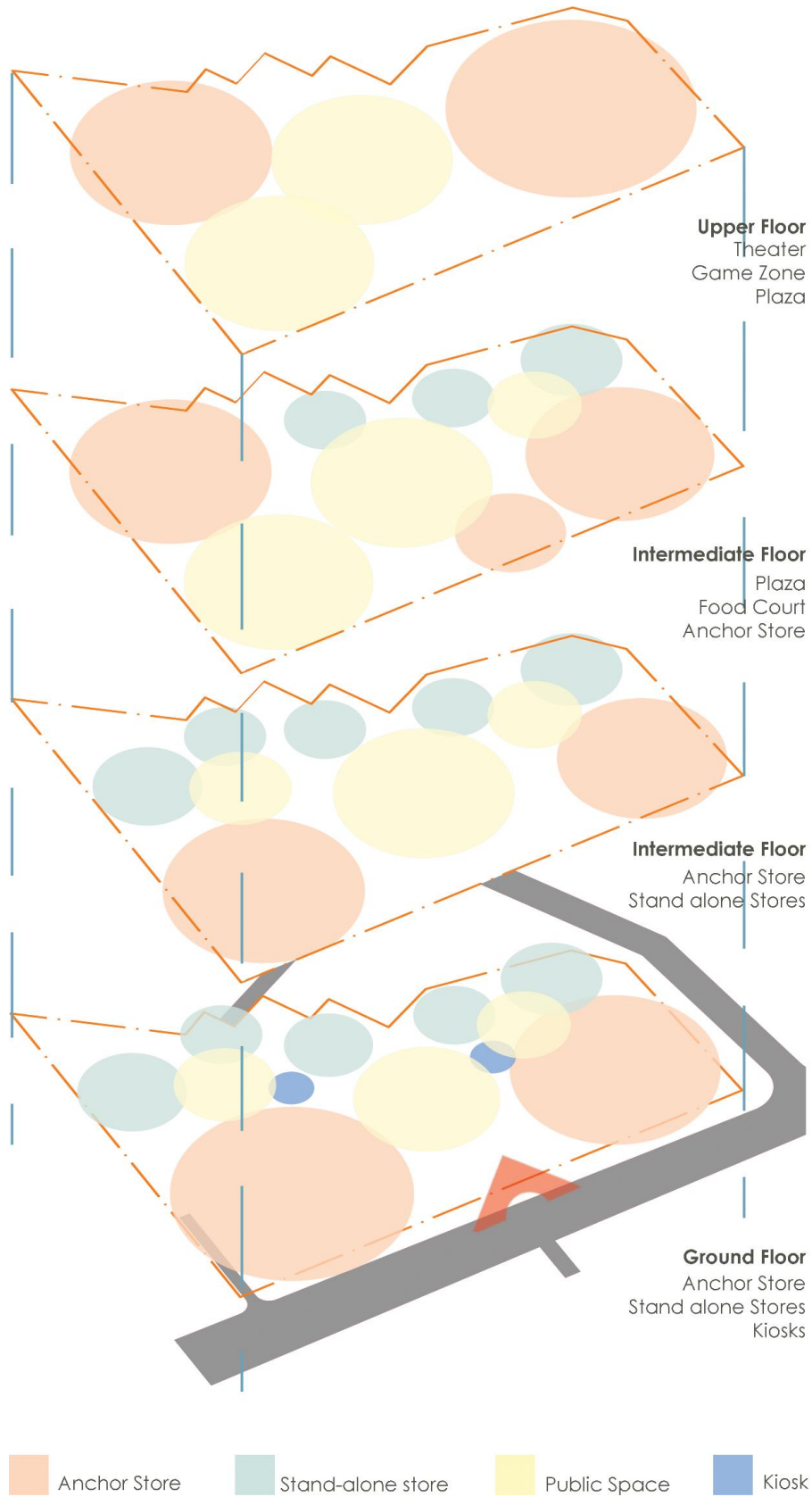


Figure 55 Layer wise Space orientation

## 6.4 Concept Development

### 6.4.1 Synthesizing garden with shopping mall



- Cultural, Recreational and Social spaces exist together in dynamic state.
- Integrating garden in shopping zones will assist in realizing the importance of greenery in a neighbourhood.
- Space like garden encourages Eco-Psychological impact on a person.

### 6.4.2 Entrance

- Entrance of the mall is designed to bridge the exterior and interior interface of the mall.
- The entrance is designed to have converging for that opens into a large space.
- A waterbody is at the entrance that connects to the central atrium and guides the user to the atrium.

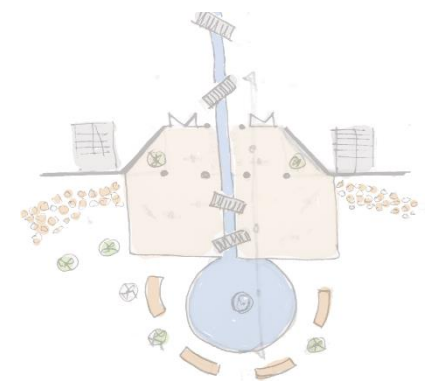


Figure 56 Entrance - Plan

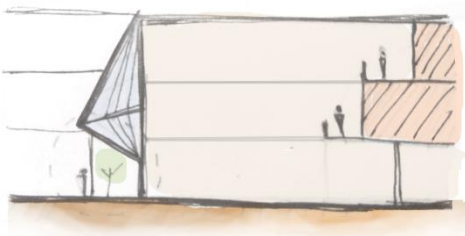


Figure 57 Entrance - Section

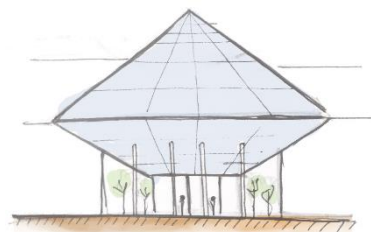


Figure 58 Entrance - Elevation

### 6.4.3 Atrium

- Atrium is designed to come up as a performance space providing enriched viewing corridors and lighting inside the mall.
- O.A.T like seating is designed at the edge of the atrium providing view to the atrium and space the relax and perceive activities.

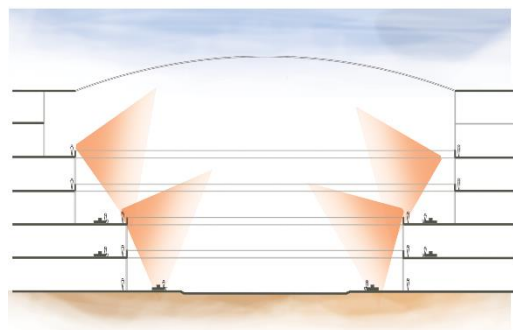
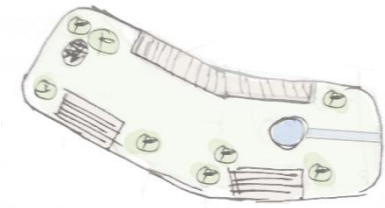
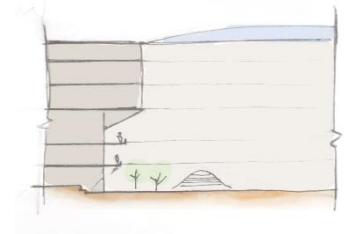
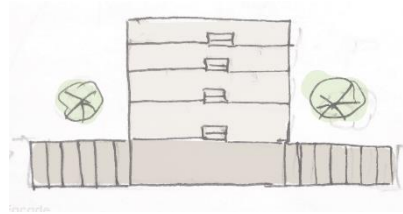
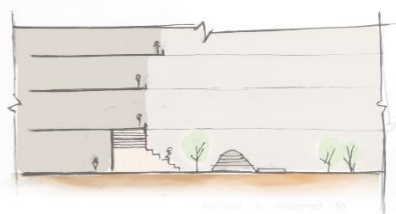


Figure 59 Atrium - Section

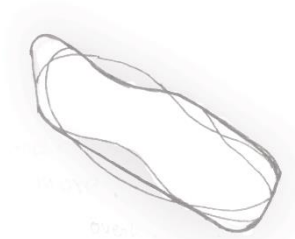
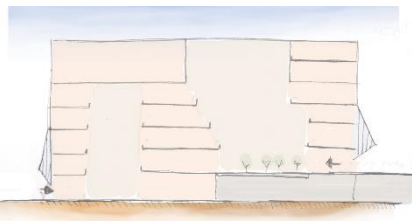


- The seating at the atrium creates a vertical transition to the above floor.
- Multiple atrium for improved circulation and way-finding.
- Projected floors are created at above floors to emphasize the view corridor.



#### 6.4.4 Floor Slabs

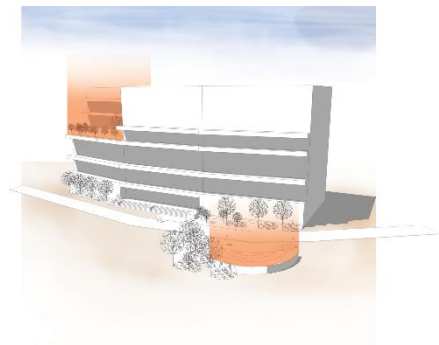
- Floor Slabs are designed such that it encourages the user to explore the mall.



- Level play and blurring transition between the floors with refuge points to perceive activities in the mall are incorporated.

#### 6.4.5 Public Plaza

- Public plazas are introduced at multiple levels to enhance public gathering at various levels of mall.
- Plazas are intended to incorporate the healthy elements of congregation to enrich the quality of experience.
- Plazas are strategically positioned inside the mall to enhance public movement inside the mall and provide retail benefit to the mall.



### 6.4.6 Pathways



Figure 60 Pathways

- Pathways contributes in experiencing the intended image of the mall.
- Pathways are designed as a transition between the surroundings and the mall structure.

### 6.4.7 Removable Shops

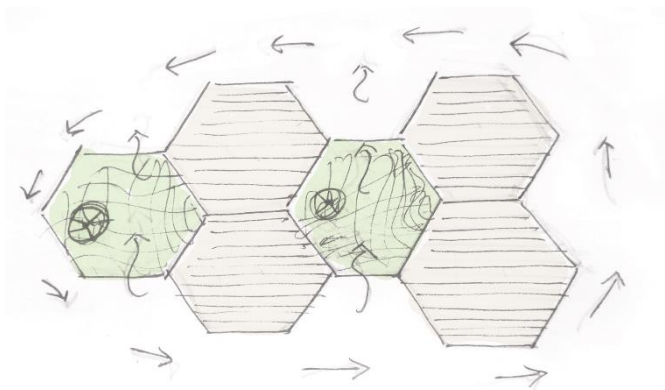


Figure 61 Removable Shops

- Removable shops are introduced at few floors that assists in optimizing the unoccupied spaces of the mall.

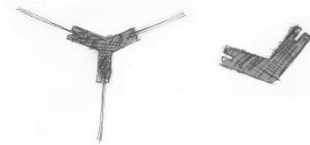


Figure 62 Joinery Detail

### 6.4.8 Bridged Corridors

- Bridged corridors are designed to create refuge points to perceive different activities of the mall.

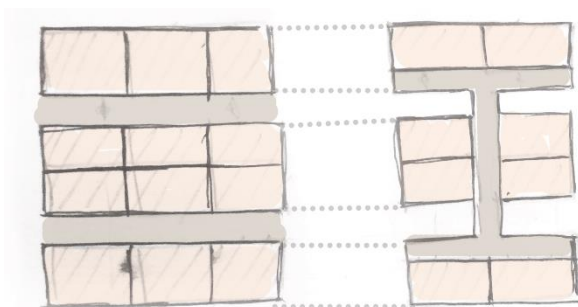


Figure 64 Bridged Corridor

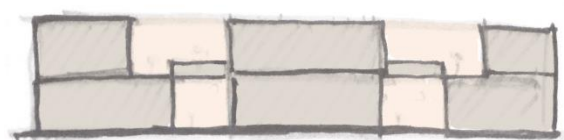


Figure 63 Bridged Corridor - Section



### 6.4.9 Façade

- Facade is designed to provide overshadowing as the major facade of the mall is experiences exposer to sun at most of the day time.
- Niches are providing on the overhang to create interesting patterns with light and shadows inside the mall.
- Projected hanging garden is created in the facade to enrich the experience and also to establish image of the mall.

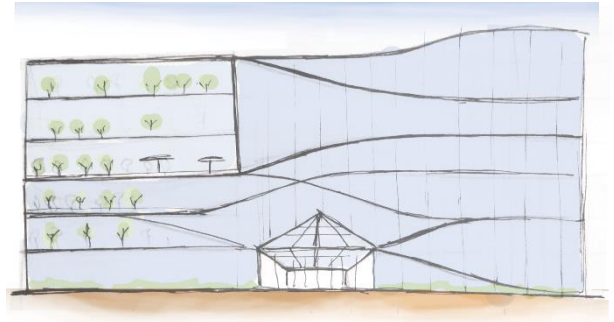


Figure 65 Facade - Elevation



Figure 67 Green Projection - Section

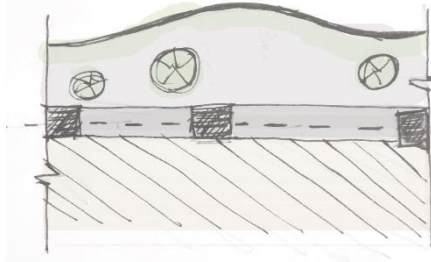


Figure 68 Green Projection - Plan

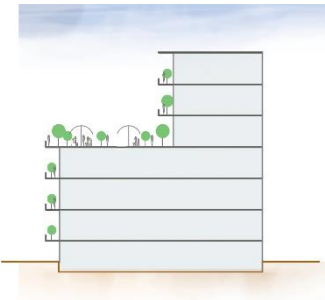


Figure 66 Building Section

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