

A METROPOLITAN WAY OF LIFE COMPLEX “CITY CENTRE”

A THESIS

Submitted in partial fulfillment of the requirements for the award of
Bachelor of Architecture degree

By

**SHRUTHI R
(37210035)**



**DEPARTMENT OF ARCHITECTURE
SCHOOL OF BUILDING AND ENVIRONMENT**

SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

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**JEPPIAAR NAGAR, RAJIV GANDHI SALAI,
CHENNAI - 600 119**

NOVEMBER 2021



DEPARTMENT OF ARCHITECTURE

BONAFIDE CERTIFICATE

This is to certify that this Thesis Report is the bonafide work of R. Shruthi (37210035) who carried out the Thesis entitled “A metropolitan way of life complex – City Centre” under our supervision from July 2021 to November 2021.

Internal Guide
Ar. Kavitha

Internal Review Member
Ar. Shankar.V

External Guide
Ar.Lavanya Shankar

A handwritten signature in blue ink, reading 'Devyani', is positioned above the title of the Dean.

Dean and Head of the Department
Dr. DEVYANI GANGOPADHYAY

Submitted for Viva voce Examination held on 09/12/2021

Internal Examiner
Ar. Sheethal Amraotkar

External Examiner
Ar. T. Vennila

DECLARATION

I, **R. Shruthi** hereby declare that the Thesis Report entitled “**A metropolitan way of life complex – City centre**” done by me under the guidance of **Ar. Kavitha** (Internal Guide), **Ar. Shankar.V** (Internal Review Member) and **Ar. Lavanya Shankar** (External Guide) Sathyabama Institute of Science and Technology is submitted in partial fulfilment of the requirements for the award of Bachelor of Architecture Degree.

DATE: 06.12.2021

PLACE: Chennai



SIGNATURE OF THE CANDIDATE

ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to Board of Management of **Sathyabama Institute of Science and Technology** for their kind encouragement in doing this Thesis and for completing it successfully. I am grateful to them.

I convey my thanks to **Dr. DevyaniGangopadhyay**, Dean and Head of the Department, School of Building and Environment, Our Design Chair **Dr. Suresh Kuppuswamy**, Thesis Coordinator**Ar.Surya Rajkumar** for providing me necessary support and details at the right time during the progressive reviews.

I would like to express my sincere and deep sense of gratitude to my Thesis Internal guide **Ar. Kavitha**, Internal Review member **Ar. Sheethal Amraotkar** and External Guide **Ar. T. Vennila** their guidance, suggestions and constant encouragement which paved the way for the successful completion of my thesis work.

I wish to express my thanks to all Teaching and Non-teaching staff members of the **Department of Architecture** who were helpful in many ways for the completion of the Thesis.

R. Shruthi

THESIS SYNOPSIS

A metropolitan way of life complex comprises of shopping centre, business hotel and an office complex followed by a street shopping. The midtown region is by and large associated with shopping or retail. They are also business and political focal point of focuses, for instance, lodgings and working environments. This proposition serves a job in engineering mediation that are agent to settlements overall and routinely contain best models plan achievement, tourist spots and public area.

A shopping center is a term wherein at least one structures shape a complex of shops addressing merchandisers with interconnecting walkways that empower clients to stroll from one unit to another.

As business explorers generally will more often than not stay at motels during the week, they grant the lodging to increase their inhabitation on non-end of the week days when the entertainment segments aren't as present. The assessment helped with tending to the necessities of fundamental design parts and the organizations in hotel, that should be done by enlarging the day lighting, orchestrating ventilation and a fair extent of points of view and vistas.

Office complex is the middle where monetary, social, social and administrative organizations of the town are concentrated. It is a complex of retail store and related workplaces organized as a united assembling that offers work and items for benefit and the introduction of various financial and office work.

The street gets transformed from the imperative designing style to contemporary structure style. The Greek commercial center, are considered as the state-of-the-art streets while the roman conversation, as the high-level metropolitan get-together spaces.

TABLE OF CONTENTS

CHAPTER No.	TITLE	PAGE No.
	THESIS SYNOPSIS	V
	LIST OF FIGURES	viii
	LIST OF TABLES	ix
1	INTRODUCTION	1
1.1	THESIS BRIEF	1
1.2	RELATION OF DISSERTATION WITH THESIS	1
1.3	ROLE	1
1.4	AIM	2
1.5	OBJECTIVES	2
1.6	CHALLENGES IN DESIGN	2
2	LITERATURE CASE STUDIES	3
2.1	ANSAL PLAZA	3
2.2	SALT LAKE CITY CENTRE	6
2.3	SELECT CITY WALK	11
2.4	AMANORA TOWN CENTRE	18
2.5	COMPARATIVE ANALYSIS	21
3	DATA COLLECTION AND STANDARDS	22

3.1	EVOLUTION OF RETAIL IN INDIA	22
3.2	SHOPPING MALL	23
3.3	BUSINESS HOTEL	23
3.4	OFFICE COMPLEX	24
3.5	STREET AND AMPHITHEATRE	24
3.6	USER AND ACTIVITY ANALYSIS	25
3.7	STANDARDS	
4	SITE STUDY AND ANALYSIS	28
4.1	SITE	28
4.2	NEIGHBOURHOOD CONTEXT	33
4.3	SITE DOCUMENTATION	35
4.4	CLIMATIC ANALYSIS	36
4.5	SWOT ANALYSIS	40
4.6	SITE FEASIBILITY AND JUSTIFICATION	40
4.7	SITE ANALYSIS	42
5	CONCEPTUAL ANALYSIS	47
5.1	ATTRACTORS	47
5.2	CONNECTION	48
5.3	TYPES	48
6	AREA STATEMENT AND DESIGN PROGRAM	48
6.1	AREA STATEMENT	48

6.2	DESIGN PROGRAM	49
7	A METROPOLITAN WAY OF LIFE COMPLEX DESIGN	50
7.1	MASTER PLAN	50
7.2	SHOPPING MALL	51
7.3	OFFICE COMPLEX	60
7.4	BUSINESS HOTEL	66

LIST OF FIGURES

FIGURE No.	TITLE	PAGE No.
2.1	Ansal plaza	3
2.2	Space incorporating public plaza	4
2.3	Amphitheatre	4
2.4	Ansal plaza interior	4
2.5	Maze game	5
2.6	A clock complex mechanism	5
2.7	Roman Colosseum resemblance	5
2.8	Ansal plaza plan	6
2.9	Salt Lake City Centre	6
2.10	Salt Lake City Centre interior	7
2.11	Ground floor plan	8
2.12	First floor plan	8
2.13	Second floor plan	8
2.14	Third floor plan	8
2.15	Bar diagram	10
2.16	Pie chart	10
2.17	Select city walk	11
2.18	Select city walk site plan	12
2.19	Select city walk key plan	12
2.20	Select city walk floor plans	12
2.21	Select city walk external facades	13
2.22	Select city walk elevations	14
2.23	Select city walk ground floor plan	15

2.24	Position of atrium and skylights	15
2.25	Select city walk first floor plan	16
2.26	Select city walk second floor plan	17
2.27	Select city walk land use	18
2.28	Amanora town Centre	18
2.29	Amanora town Centre interior and exterior	19
2.30	Site plan	20
3.1	In the 80's – Fair/Bazaar	22
3.2	In the 90's – Street/ Market	23
3.3	After 1995 – Malls	23
3.4	User groups	24
4.1	Neighborhood image of the site	29
4.2	Live site images	29
4.3	Indication of site in map	30
4.4	Selected site as a satellite image	31
4.5	Site sections	31
4.6	Schools and colleges	33
4.7	Hospitals	33
4.8	Offices and industries	34
4.9	Entertainment	34
4.10	Average temperature graph	36
4.11	Average rainfall bar graph	37
4.12	Average sunny days and sun hours as bar graph	38
4.13	Average UV index as bar graph	39
4.14	Average relative humidity as bar graph	39
4.15	CMA land use map	41
4.16	Orientations	43
4.17	Utilization of north light	43
4.18	Implementation of mutual shading	44
4.19	Perspective of views	44
4.20	Perspective of noise planning	45
4.21	Staggered planning	45

4.22	Various arrangement of vegetation	46
4.23	Arrangement of green space as buffer	47
7.1	Master plan	50
7.2	Underground basement parking plan	51
7.3	Lower underground basement parking plan	52
7.4	Mall ground floor plan	53
7.5	Mall first floor plan	54
7.6	Mall second floor plan	55
7.7	Mall third floor plan	56
7.8	Terrace floor plan	57
7.9	Mall section AA'	57
7.10	Mall section BB'	58
7.11	Mall elevation	58
7.12	Mall views	59
7.13	Stilt parking plan	60
7.14	Office ground floor plan	61
7.15	Office first floor plan	62
7.16	Office second floor plan	63
7.17	Office third floor plan	64
7.18	Office section AA'	64
7.19	Office elevation	65
7.20	Office views	65
7.21	Hotel ground floor plan	66
7.22	Hotel typical floor plan	67
7.23	Hotel elevation	67
7.24	Hotel views	68

LIST OF TABLES

TABLE No.	TITLE	PAGE No.
2.1	Comparative analysis	21
2.2	Road widths	30

LIST OF PLATES

TABLE No.	TITLE	PAGE No.
3.1	Standards	26
3.2	Standards	26
3.3	Standards	27
3.4	Standards	27
3.5	Standards	28

CHAPTER 1

INTRODUCTION

1.1 THESIS BRIEF:

It is basically a multi-purpose leisure which attempts to create a much-needed, organized commercial space for the city. This postulation venture of downtown area will be a blended use angle which comprises of business and social infrastructure which fills in as a design mediation of materials with exercises like entertainment, learning and shopping to offer a general encounter to the guests. It is situated as an interface between the municipality and the city that imagines another objective for the nearby local area and arises as a metropolitan scene in the middle of the workplaces and business parts of the ground breaking strategy. The examination from the thesis similarly evaluates how the materials can meet the essentials to raise the imaginativeness of the plan cooperation besides, its impact on future plan by researching these inventive materials. Lifestyle centers are moreover described as a "multi-reason unwinding time objective".

1.2 RELATION OF DISSERTATION WITH THESIS:

As my dissertation study was based on exploring innovative building materials which is very much new in the current scenario of how being used and implemented in the structures giving another knowledge into creative strategies and procedures that will give another motivation for building plan.

1.3 ROLE:

The downtown area is generally connected with shopping or retail. They are moreover business and political focus of centers, for example, lodgings and workplaces. This

proposal serves a role in architectural intervention that are representative to settlements in general and regularly contain best models design milestone, landmarks and public domain.

1.4 AIM:

To make a space which can shape the hub for holding and encountering business and cultural exercises. It is in a manner a half breed between a cultural hub and a commercial center at a much-diminished scope.

1.5 OBJECTIVES:

The target behind the ventures is to comprehend the significance and plan a future verification downtown area that is a business social at the core of the city. To make a city center giving a notorious picture and a milestone to the city. To foster a more noteworthy comprehension of entomb relationship of assortment of spaces, different characters like public, semipublic, private, amusement focus, business and so forth.

1.6 CHALLENGES IN DESIGN:

Investigate the bury connections of the spaces and the difficulties of differences cause by plan which limit spaces to specific portion of public. To develop a contemporary model of a traditional Indian market. The task would attempt to investigate the conceivable integration of the capacities which ordinarily exist of bigger distances. The material utilized builds up a connection between the perseverance of a construction just as the specialized and underlying parts of the plan of the assembled climate.

CHAPTER 2

LITERATURE CASE STUDIES

2.1 ANZAL PLAZA:



2.1 Ansal Plaza

Location: Delhi

Site area: 14,000sq.m.(3.45 acres)

Planning: Radial

No of floors: G+3

Foot fall: 12,000

Ansal Plaza is the primary shopping center of northern India to open in Delhi NCR locale incorporating public plaza. It is a business and social focus. Inseparable from shopping in Delhi Ansal Plaza is arranged close to the elegant market space of South

Extension in South Delhi. One of the most happening places in the city Ansal Plaza isn't simply confined to being a shopping center rather it is additionally used to hold comprehensive development, style shows and live performances. Aside from shopping the shopping center specialists additionally in an undertaking to engage their clients continually and reliably sort out music programs, craftsmanship presentations, verse meetings, style shows, and so forth, to make your shopping experience a paramount one. Ansal Plaza has an ideal mix of brands and amusement support the rating as a utility shopping center just as a decadent shopping center.



2.2 Space incorporating public plaza



2.3 Amphitheatre



2.4 Ansal Plaza interior

FEATURES:

Quintessence of social region as far as open court adds to the entire mood. Outspread structure improves on the simplicity of appropriation of offices. At first, the draftsman outwardly relates the shopping center space with "Effortlessness of Design" and related the by and large visual plan with a round molded labyrinth game. Underlying a round style around an amphitheater with a middle stage alongside a 45-foot high chamber French glass shade divider that channels out bright and other hurtful radiations this shopping center is viewed as a building quality.

Series of circles

"Simplicity of design" – maze game

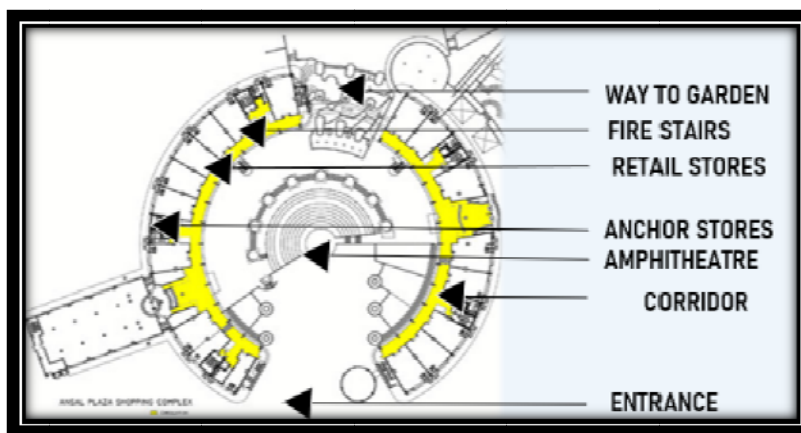
"Complexity of design" – mechanism



2.5Maze game2.6 A clock complex mechanism



2.7 Roman Colosseum resemblance



2.8 Ansal Plaza plan

AMPHITHEATRE AND CORRIDOR:

The area which had been planned with configuration controls like a typical arranged green, fringe street framework and walker walkways which mesh into metropolitan squares and courts empowering public social occasion and a feeling of region for public. The space bit by bit got exciting surfaces as raised steps, series of fit squares, and wellsprings at various levels. Bended passageway, 45m high chamber with French glass drape divider which gives sufficient light for the duration of the day, associates outwardly with outside.

2.2 SALLAKE CITY CENTRE:



2.9Salt Lake City Centre

Location: Kolkata

Site area: 26,304sq.m.(6.5 acres)

Planning: Staggered - Clustered

Foot fall: 15,000(weekdays) AND 35,000(weekends)

Salt Lake City Centre, Kolkata is a mark design of amazing Charles Correa. It is a business and social focus. Juxtaposition of road shopping and a shopping center. Patio impersonates the social experience of a commercial center.

CONCEPT AND DESIGN STRATEGIES:

It has a substance of traditional Indian market on account of its open and bunched arranging. The interrelationship of assorted exercises empowers public giving it social quality.



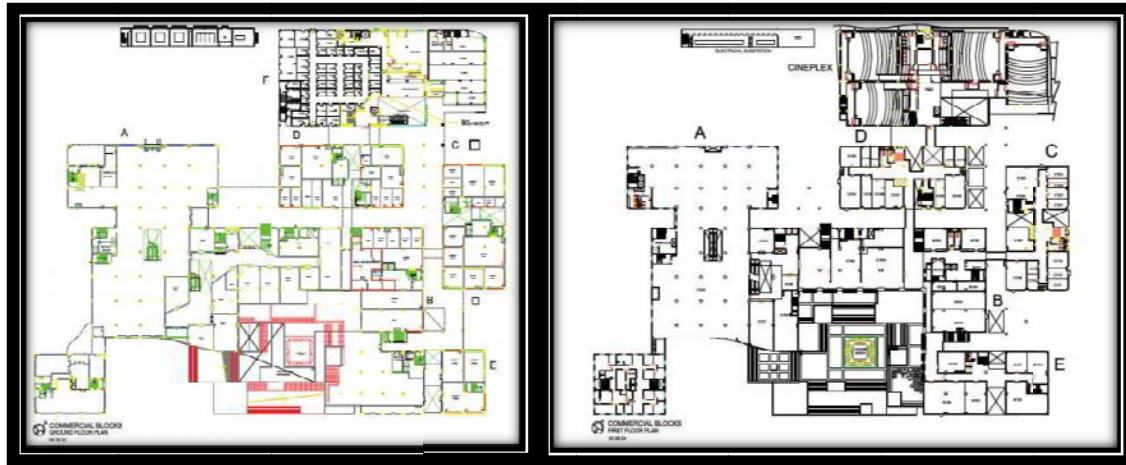
2.10 Salt Lake City center interior

POSITIVE:

The exercises connected together through connecting components, which fulfills the capacity of movement as well as gives visual network makes agreement. Idea of ordinary Indian commercial center in repeated. The space, volume and structure ought to be planned considering the kinds of nooks and the flow design. Nature of joining among fabricated and open spaces, with the general climate. Thought of Orientation of the structure, as it makes shades and shadows on the outer surfaces.

NEGATIVE:

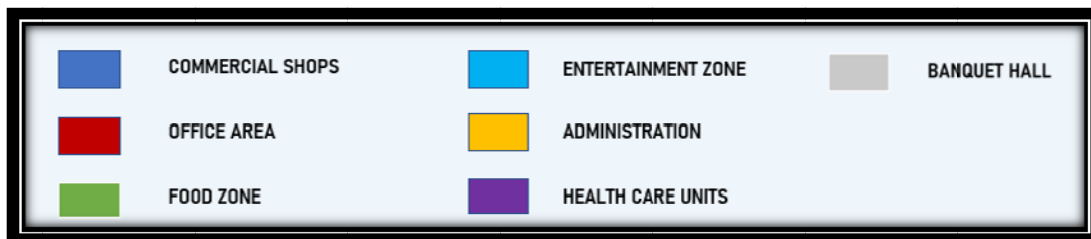
Discouraged overhauling in staggered block arranging. Very little extension for casual exercises.



2.11Ground floor plan2.12First floor plan



2.13Second floor plan2.14Third floor plan



SITE PLAN AND ITS ORGANIZATION:

Bunched association depends on actual closeness endure its spaces to each other. Regularly comprises of dull, cell spaces having comparative capacities and offer a typical visual quality like shape or direction.

SPATIAL DISTRIBUTION OF HIERARCHY:

Association between court to aside exercises. Casual hubs in the middle of passageway making interest in intersection spaces. Hallway are covered with pergola with polycarbonate sheet to give diffuse light inside.

CIRCULATION PATTERN:

Parametric vehicular development for stopping and development through. Stopping is conveyed all through the site to improve the all-utility space of site. Person on foot development at irregular normal development inside project.

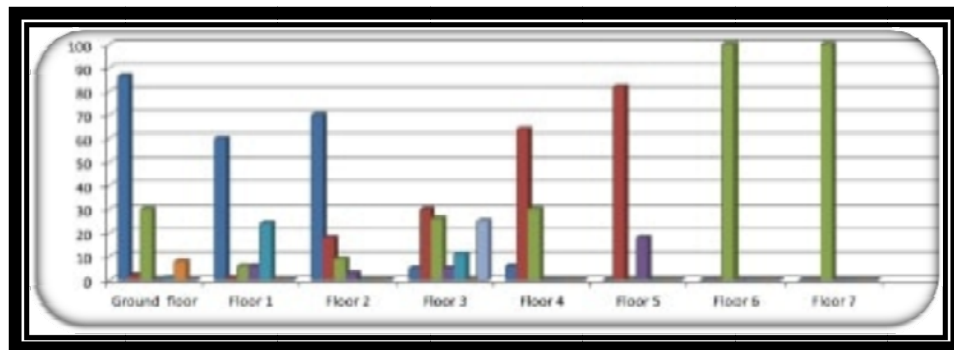
STUDY OF SHADOW PATTERN:

The play with light and shadow is engaged by individuals at various time and distinctive feeling of spaces. As square is interconnecting component the action acted here gives a lot of relaxation the shopping with diversion idea of shoppertainment.

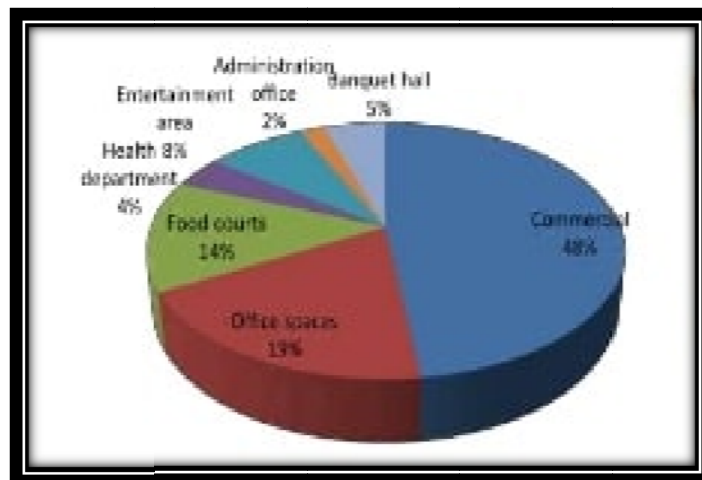
LINKAGE ELEMENTS / SPACES/ BREAKOUT AREAS:

Interfacing passageways exceptionally covered up line between external roads towards inside. Its comprehensiveness for one. Without any limits to isolate it from the road, it is available to everybody all pay and age gatherings. Material utilized for asphalt of shopping center takes after the road. Tree situation in pathways and light game plan.

INFERENCE:



2.15Bar diagram



2.16Pie chart

2.3 SELECT CITY WALK:



2.17 Select city walk

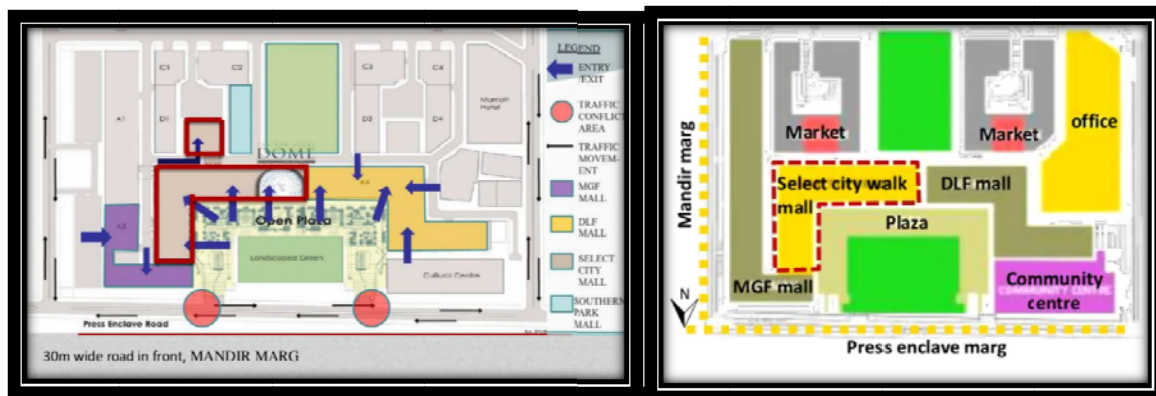
Location: Delhi

Site area: 24,000sq.m.(5.9 acres)

Planning: L – shaped linear

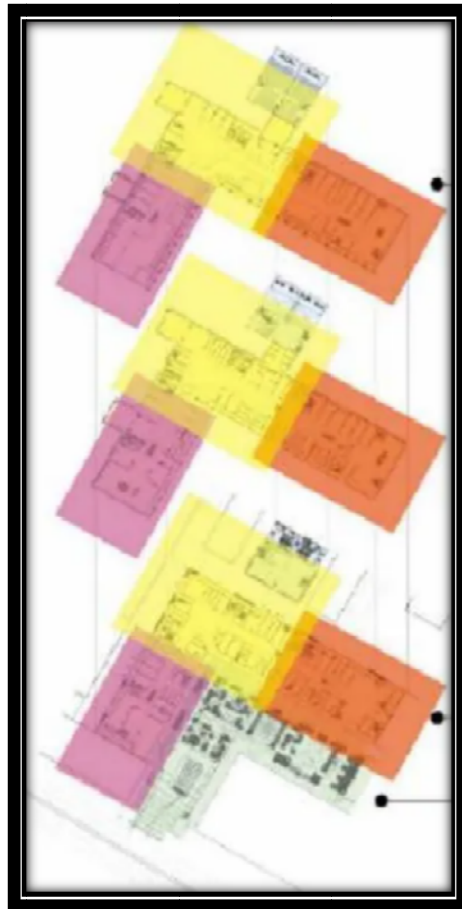
Foot fall: 32,000(weekdays) AND 65,000(weekends)

Select City Walk is one of the longest Central Business District structures situated in South West Delhi. It is a business and social focus. Noticeable quality of public court in the front adds to the entire feel. Productive serving offices.

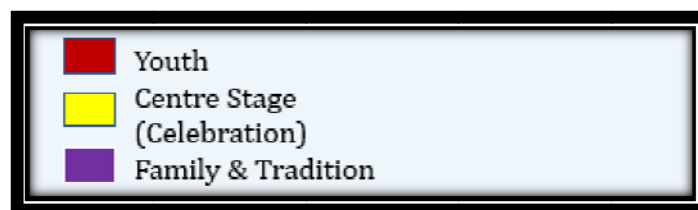


2.18Select city walks site plan 2.19Select city walk key plan

PLANNING CONCEPT:



2.20Select city walk floor plans



G+7, 3 stories of shopping region, 2 separate 5-storey blocks containing office space and adjusted lofts, open air outdoors square, water bodies and wellsprings, an amphitheater, six screen PVR films, top two stories utilized for administrations

(washrooms, evolving room), fifth floor relegated to wellness club, fourth floor relegated to buddha bar (both fourth and fifth isn't a piece of SCW shopping center), third floor- children's play region and restaurant region, tallness 33m, gallery projected at the fourth floor.

The preparation of the SCW shopping center is partitioned into 4 classifications

- Family and custom space
- Festivity (focus sage)
- High-voltage (youth)
- Open Plaza/Landscaped region (ground floor)

In any case, the real arranging is not quite the same as idea arranging.

EXTERNAL FINISH:

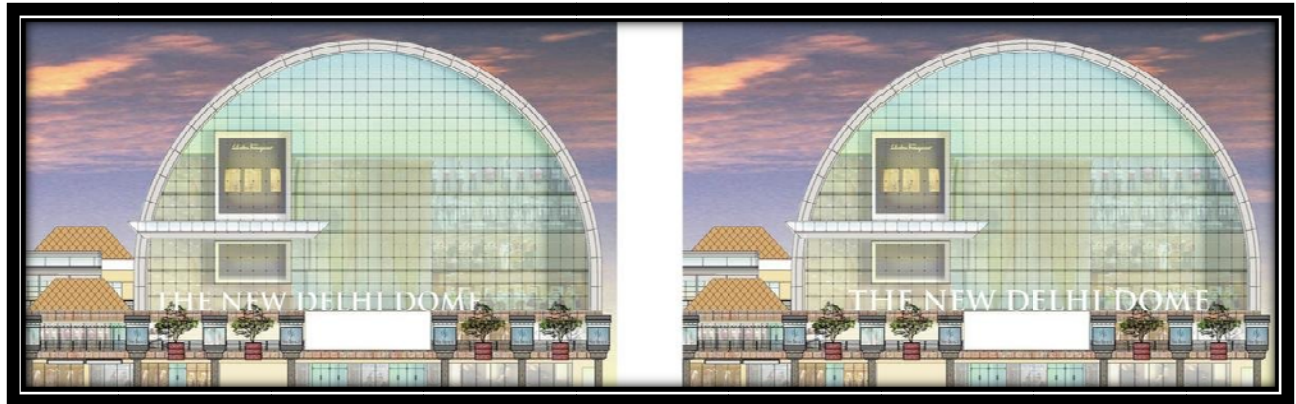


2.21 Select city walk external facades

The whole intricate is done with mix of

- Stone
- ACP cladding
- Acrylic paint
- Underlying coating

DOME:



2.22 Select city walk elevations

ATRIUM AND SKYLIGHT:



2.23 Select city walk ground floor plan

Oval molded atrium presents at the entry of mall, chamber covered with light layer sheet of polycarbonate and shops are found around the chamber, running up and down the shopping center – bay window, covered with same material as chamber, glass boards around oval molded chamber, straight skylights.



2.24 Position of atrium and skylights

STORES:

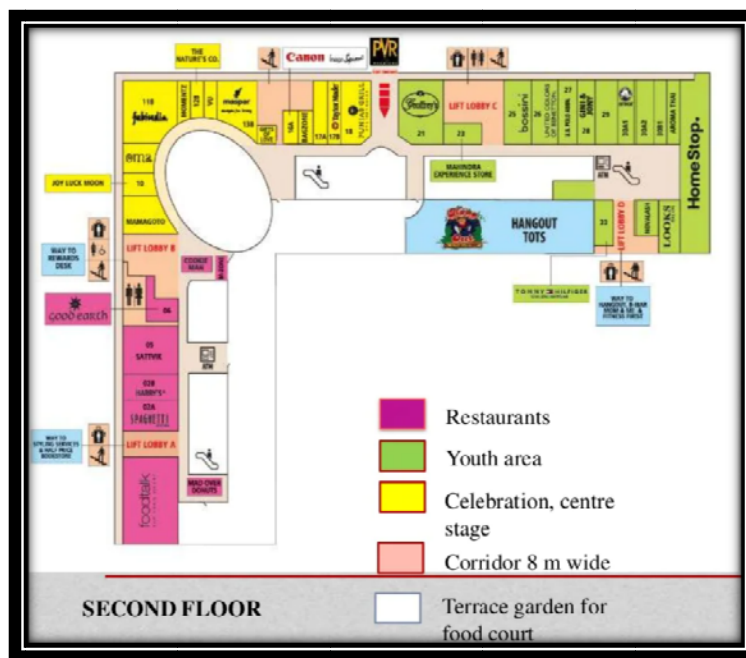
Food Court Situated on second floor. Open porch region was incorporated with the food court, in this manner using the patio. Seating limit 200 man. ATM set a good way off of 100m.

KIOSKS:

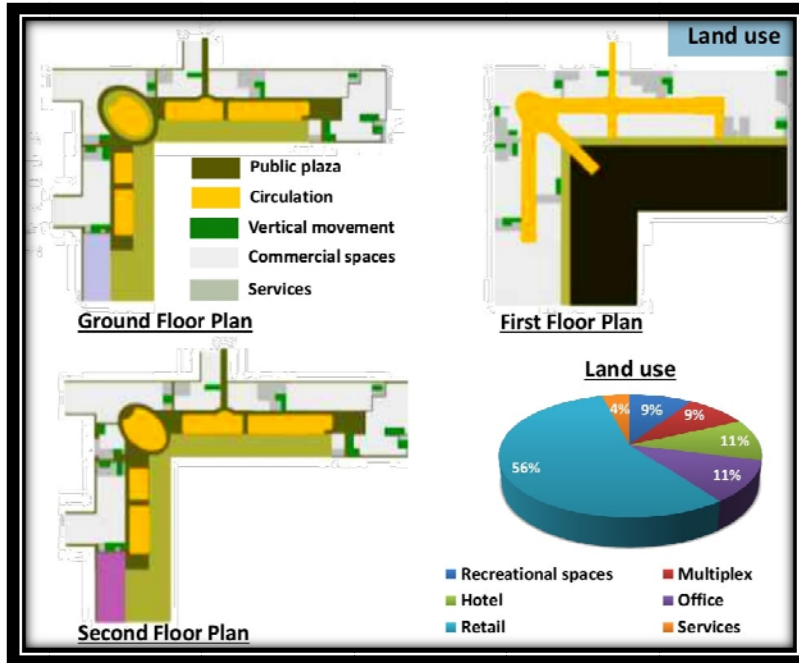
Midway positioned at the hallway. Isolating halls in two ways.

DISPLAYING AREA:

Close to stands Advertisements were likewise present in passage.



2.26 Select city walk second floor plan



2.27 Select city walk land use

2.4 AMANORA TOWN CENTRE:



2.28Amanora town center

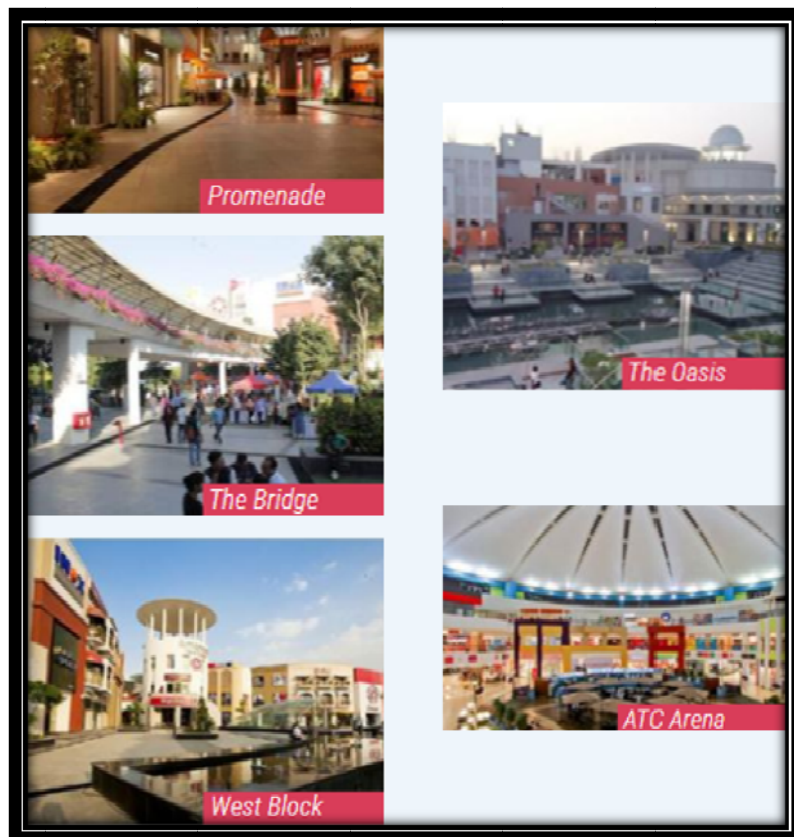
Location: Pune

Site area: 1,95,096sq.m.

Planning: Cluster

Foot fall: 30,000(weekdays) AND 75,000(weekends)

Amanora town center, blended use improvement situated in Pune, India, the site fronts onto Magarpatta Road and sits adjoining Amanora Park Town. The east and west sides are associated through an open passerby road that permits evening cool winds to pipe through in the wake of going through wellsprings at the front passage. The road goes through an enormous public. Desert spring that joins an enormous water body with ghats, in the Indian practice, playing wellsprings, cascades and broad planting. Interconnected exercises and blended nature of Indian and western ideas.



2.29 Amanora town center interior and exterior



2.30Site plan

2.5 COMPARATIVE ANALYSIS:

PARAMETERS	ANSAL PLAZA	SALT LAKE CITY CENTRE	SELECT CITY WALK	AMANORA TOWN CENTRE
LOCATION	DELHI	KOLKATA	SAKET, DELHI	PUNE
ARCHITECT	JASBEER SAWHNEY ASSO.	CHARLES CORREA	TEVATIA CHAUHAN AND SHARMA ARCHITECTS	INTEGRID DESIGN CONSULTANTS PVT.LTD. ARCHITECTS
FAR	2.5	1.5	<1	2.3
CONNECTIVITY	THROUGH LOCAL BUS ROAD NETWORKING 2KM AWAY FROM METRO DELHI	THROUGH LOCAL BUS ROAD NETWORKING 2KM AWAY FROM METRO DELHI	WELL CONNECTED BY LOCAL BUS/METRO SAKET, ROAD, BUS AUTOS	CONNECTED WITH TWO MAJOR MICRO CITIES TRANSPORTATION SYSTEM - BRTS/ROAD
ARCHITECTURAL CHARACTER	GEOMETRIC MINIMALISM	GEOMETRIC MINIMALISM - COLOUR IMPACT	GEOMETRICAL CONTEMPERARY	POST INDIAN CULTURE IMPRINTS
PUBLIC SPACES	AMPHITHEATRE, HUDCO UDHYAN, GARDEN	LIVELY PUBLIC SPACES, SHOPPING STREET	URBAN PLAZA, STREETS ON PERIPHERY, BALCONIES ADJOINING EACH OTHER	GREAT INTERCONNECTED PUBLIC SPACES, STREETS NETWORKING, OASIS CORE PUBLIC PLAZA
PEDESTRIAN MOVEMENT	ORGANIZED MOVEMENT THROUGH CORRIDOR ON SINGLE AXIS (NOT INTERCONNECTED)	RANDOM MOVEMENT STAGGERED MOVEMENT	ORGANIZED MOVEMENT THROUGH CORRIDOR CONNECTING EVERY STORES AND PUBLIC PLAZA	RANDOM MOVEMENT THROUGH STREETS CONNECTING EVERY STORES AND OASIS
VEHICULAR MOVEMENT	RESTRICTED MOVEMENT INSIDE THE SITE, MOVEMENT ALONG PERIPHERY	RESTRICTED ALONG THE PERIPHERY	RESTRICTED MOVEMENT INSIDE THE SITE	MOVEMENT OF PERIPHERY OF THE SITE
ROAD PERCENTAGE	30%	30%	18%	28%
TYPES OF PARKING	BASEMENT PARKING	ALL PERIPHERAL PARKING ALONG THE BUILDING	BASEMENT PARKING	BASEMENT AND MULI LEVEL CAR PARKING BOTH USED AS PER THE REQUIREMENTS AND SEGREGATION OF SPACES
PARKING	TWO WHEELER - 430, CAR - 630	TWO WHEELER - 490, CAR - 250	TWO WHEELER - 1500, CAR - 1300	TWO WHEELER - 3000, CAR - 2500

Table 2.1 Comparative analysis

INFERENCE:

Great method of transport supports more open cooperation and agreeable business center point. Craft of public spaces go about as interconnecting nature between spaces. Simple visionary walker development inside the site bordering interfacing spaces. Limitation in open region – compulsory assistance course away from public reach. Fringe, cellar and staggered vehicle leaving best.

CHAPTER 3

DATA COLLECTION AND STANDARDS

3.1 EVOLUTION OF RETAIL IN INDIA:



3.1 In the 80's – Fair/Bazaar



3.2 In the 90's – Street/Market



3.3 After 1995 – Malls

3.2 SHOPPING MALL:

SHOWROOMS | FOOD COURT | MULTIPLEX | FUN CITY

A mall is an assortment of autonomous retail locations, administrations, and a stopping region imagined, built, and kept up with by an administration firm as a unit. Shopping has not exclusively been to bring down levels yet has been improved by giving passerby associations through rooftop court, skywalk, span, social hallway, road shopping at various levels.

3.3 BUSINESS HOTEL:

RESTAURANT AND BAR | SUITE | SPA | GYM | SWIMMING POOL

As business voyagers for the most part tend to stay at inns during the week, they permit the hotel to increment their occupancy on non-weekend days when the recreation

portions aren't as present. The examination assisted with addressing the requirements of essential structure components and the administrations in inn, that must be finished by augmenting the day lighting, arranging ventilation and a decent scope of perspectives and vistas.

3.4 OFFICE COMPLEX:

WORK SPACES | CONFERENCE | MEETING AREA | DINING

Business focus is the center where financial, social, social and regulatory administrations of the town are concentrated. It is a complex of retail location and related offices arranged as a brought together gathering that offers labor and products for benefit and the presentation of different monetary and office work.

3.5 STREET AND AMPHITHEATRE:

SHOPPING | FOOD KIOSK | GATHERING SPACE

The road gets changed from the noteworthy engineering style to contemporary building style. The Greek marketplace, are considered as the cutting-edge roads while the roman discussion, as the advanced metropolitan social event spaces.

3.6 USER AND ACTIVITY ANALYSIS:

The user and the activity analysis help to break down the site into several segments and to cater all the need of the user visiting the city center, the user is divided basically according to the age and the level of activity.



3.4 User groups

Adults, young professionals, family are the user groups which seek for leisure as well as technically engaging respectively hence a proper place for leisure to spend time is advisable, conference and meeting halls will be helpful.

Kids and teen under 8 – 17 years users are often school goers whose activity status are quite active and always seek adventure. Spaces for interaction, play, places to conduct workshops and engage them will be workable.

Tourist visiting that place will have a very quick activity status, they are the people who comes to spend a small amount of time and they are one time visitor. Space having a strong impact must be created and also a place for relax will be a good option.

Senior citizens under 60 – 80 years users have a very love activity status hence space for relax, space to have a mild walk such as pocket parks, sitting benches, walking tracks with proper lighting can be given.

Young adults and students under 18 – 25 years users often long for space for leisure as well as something beneficial for them therefore spaces like food courts, entertainment spots will be helpful.

3.7 STANDARDS:

BUILDING NORMS AND STANDARDS...	
COLUMN SPACING:	SHOP SIZES AND LAYOUTS:
Significant dimension is along the mall as this involves the widths, i.e. frontages, of stores. Often used spaces are 8-10 M with the last the most flexible .	3.6-4.5M wide by 15M-20M 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 3.6 M high if no mezzanine is included ; mezzanines at least 7 ft6 inch above floor level will accommodate most fixture heights .Height from mezzanine floor to ceiling may be as low as 6 ft6 in . if used for service space only ; 7 ft is the preferred minimum for public
STORE DEPTHS:	aisle WIDTHS :
Buildings are usually 40-45M deep, sometimes more to accommodate larger stores .If there are basements or mezzanines, the depth dimension usually can be reduced 20 to 25 percent	Aisle Widths For clerks, min . = 400MM Desirable 600MM to 700MM For main public aisles, min . = 1.5M Avg. 1.6 inch to 2.12 Usual max., 3.5M. Secondary public aisles, 1 M -1.2 M
CLEAR HEIGHTS:	ESCALATORS AND PASSENGER CONVEYOR :
These vary from 3.3 -4.2M or more, with 3.6M a good average . Above this clear height, there must be adequate space for air conditioning ducts, recessed lights, structural e system, etc.	Quality Service or Acceptable Interval 20 to 25 seconds Excellent 30 to 35 seconds Good 34 to 40 seconds Fair 45 seconds Poor Over 45 seconds Unsatisfactory NOTE— For residential buildings longer intervals should be permissible.
PARKING AND TRAFFIC:	
A ratio of between 5 and 6 car spaces per 100M SQ 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.	

Plate 3.1 Standards

BUILDING NORMS AND STANDARDS...			
1.Structural models	Width (m)	Notes	
Small shops	5.3 to 6.0	Mostly 5.4 m	
Large-space users	7.3 to 9.2	Depending on beam depth. Single-storey buildings –larger spans	
2.Clear ceiling	Height(m)	To underside of beams	
Small shops	3.3 to 3.8	Sales area	
	3.2 to 3.6	Non-sales area	
Large-space users	3.6 min.	With floor: floor spacing 4 to 5 m	
		type	sales area
		small shops	(less than 280 m2 sales area)
		Department stores	10000-20 000 m2
		Variety stores	500 to 15 000 m
		Supermarkets	The sales areas of large-space users range from 1000 to 2500 m2
		Superstores	5000 – 10 000 m2 of selling space.
		Hypermarkets	at least 2500 m2 sales floor
		Shopping centers	25 000 and 50 000 m2 GLA
		Retail parks	at least 4500 m2
Occupancy		Area per person (m2)	
Assembly halls (closely seated)		.46 @450mm c/c movable seats .60@500mm c/c fixed seats	
Dance halls		.55 to 0.90	
Restaurants (dining areas)		.90 to 1.1	
Retail shops and showrooms		4.6 to 7.0	
Department stores, bazaars		0.9 (including counters, etc.)	
bargain sales areas		0.46 (gangway areas only)	
Offices		9.3 (excluding stairs and lavatories)	

Plate 3.2 Standards

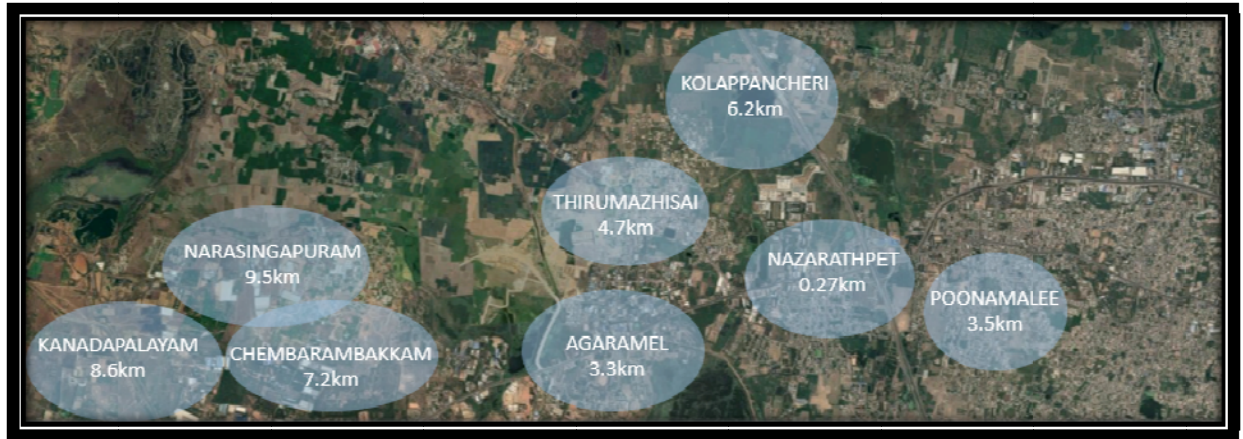
BUILDING NORMS AND STANDARDS...			
3.Car parking	<i>Car spaces per 100 m2 gross retail area</i>	4.Typical floor loading	<i>kN/m2</i>
Supermarkets, superstores	10-12	Shop sales area	5
Shopping centres	4-5	Shop storage	10
		Design load for service yard	20
Occupancy		Area per person (m2)	
Overall allowance for public areas in public-handling buildings		2.3 to 2.8	
Waiting areas, 100 per cent standing, no cross-flows (e.g. lift lobby)		0.5 to 0.65	
Circulating people in corridors, reduced to halt by Obstruction.		0.2	

Plate 3.5 Standards

CHAPTER 4

SITE STUDY AND ANALYSIS

4.1 SITE:



4.1 Neighborhood image of the site

The site situated in Nazarathpet which is a locality in the Poonamallee city and it is in Tiruvallur district. Poonamallee is an area in the west of Chennai, India. It is a town with rich cultural heritage and also a fast-growing area in the city and it acts as the gateway to the city from the western side. The site is in the midst of the residential, industrial and educational units with close proximity to basic facilities for the user such as local transport, utilities.



4.2 Live site images



4.3 Indication of site in map

SITE FEATURES:

Site covers an area of 63592 square metres (15.7 acres). The proposed land is a private site situated near Nazarathpet, Poonamallee. Site coordinates – Latitude: 13°02'52.7"N, Longitude: 80°04'40.9E". The site is located in the western corridor a suburb of Chennai Metropolitan City. Population of Poonamallee in 2020 is 6,59,922. It is basically a south facing site. The geometry of the site is quite irregular in shape. This site being located in area with larger scope of development it provides more opportunity of various investment and occupancy since many industries and educational institutions are near closer proximity as the site is present in main national highway of Chennai-Bangalore, the site as the easy connectivity to the city center as well other parts of the state.

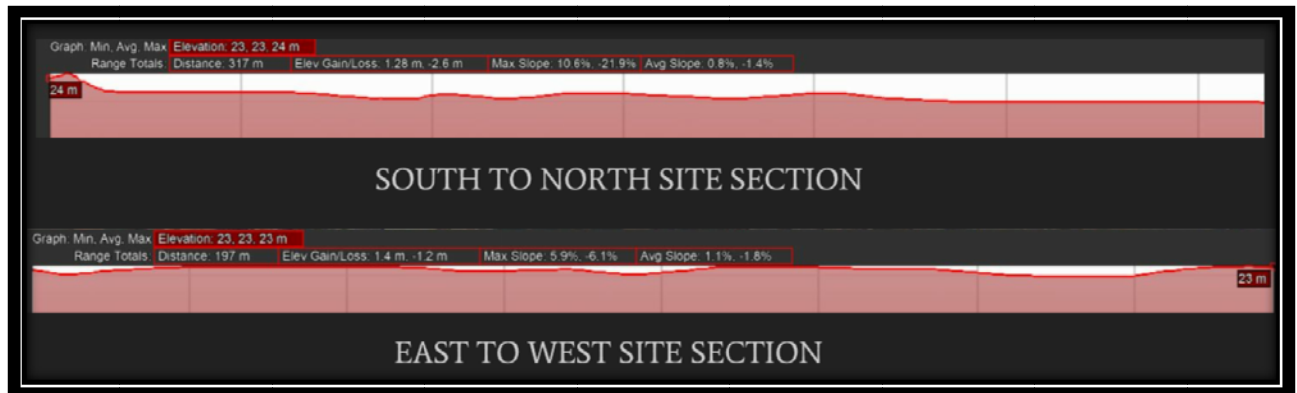
ROAD WIDTHS:

ROADS	TYPE OF ROAD	WIDTH
Chennai-Bangalore highway	Highway	22m
Outer ring road	Arterial road	15m
Site road	Collector street	35m

Table 4.1 Road widths



4.4 Selected site as a satellite image



4.5 Site sections

UPCOMING PROPOSALS NEAR THE SITE:

ROADWAYS:

A new highway is being planned in front of the site which runs over the NH-48.

BUS TERMINUS:

Kuthambakkam terminus -3.7 km

Kelambakkam bus terminus - 20.7km

AIRPORT:

Parandur - 37.4km

METRO STATION:

The metro station proposal is planned in the front of the site near SIDCO – 1.5km.

TRANSPORTATION FACILITIES TO THE SITE:

BUS:

Nazarathpet bus stop – 0.3km

Poonamallee bus depot – 1.4km

Koyambedu bus terminus – 17.6km

Chembarambakkam bus stop – 3.2km

RAILWAY:

Tambaram railway station - 19.41km

Avadi railway station - 11.7km

Central railway station - 24.1km

Nemilichery railway station - 17km

Arubakkam railway station - 10.6km

AIRPORT:

Chennai airport - 19km

4.2 NEIGHBOURHOOD CONTEXT:

The neighborhood context is documented with 1-10km radius from the site with various group of land uses and amenities around the site.

SCHOOLS AND COLLEGES:



4.6 Schools and colleges

HOSPITALS:



4.7 Hospitals

OFFICES AND INDUSTRIES:



4.8 Offices and Industries

ENTERTAINMENT:



4.9 Entertainment

4.3 SITE DOCUMENTATION

CLIMATE:

The climate of the district is moderate neither too hot nor too cold but humidity is considerable in summer heat is considerably mitigated in coastal area by sea breeze. April and June (avg temp) = 37.9 °C

Dec to Jan (avg temp) = 18.5°C

WATER SOURCE TO THE SITE:

Aside from occasional stream like kosathaliar, araniar, nandi, kallar, coovam, Buckingham trench there is no enduring waterway in the region. Since the occasional waterways are not adequate, water system through tanks, tube wells and open wells are exceptionally normal significant drinking water supplies in the locale are poondi, chembarambakkam, redhills and cholavaram.

RAINFALL:

The avg annual rainfall of Tiruvallur district is 1152.8mm and highest rain is recorded from November to January.

WIND DIRECTION:

Predominant wind direction is from south-east to north-west. Avg speed = 9.5km per/hr.

NATURAL FEATURE:

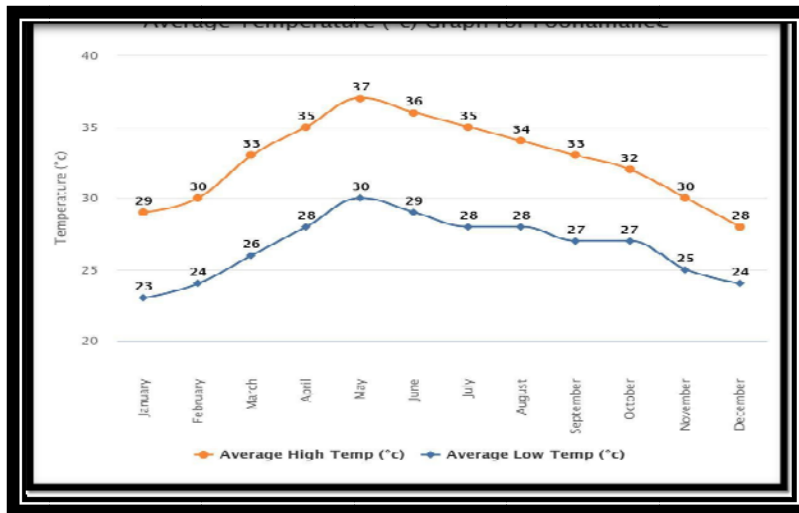
The site has a flat terrain with almost no variation in topography with wild grass vegetation.

SOIL TYPE:

The soil type here is alluvial soil. Bearing capacity 80-160 KN/m²

4.4 CLIMATIC ANALYSIS:

TEMPERATURE:



4.10 Average temperature graph

Hottest month: May

Maximum temperature: 37 °C

Average temperature: 34 °C

Minimum temperature: 29 °C

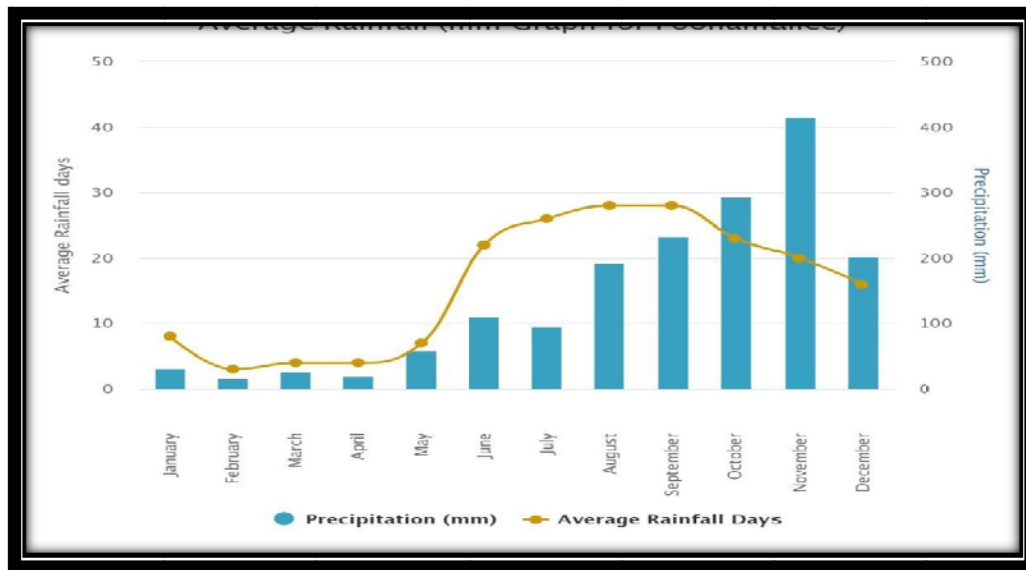
Coldest month: December

Maximum temperature: 27 °C

Average temperature: 26 °C

Minimum temperature: 23 °C

RAINFALL:



4.11 Average rainfall bar graph

The average annual rainfall is about 1,400mm (55 inches). The city gets most of its seasonal rainfall from the north – east monsoon winds.

Highest rainfall: November

Precipitation: 415.9 mm

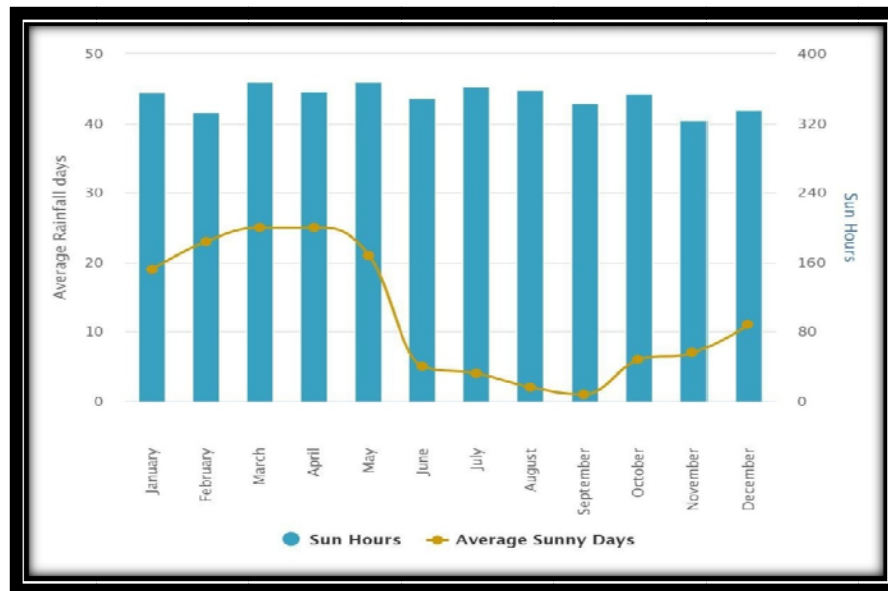
Average rainfall days: 20 days

Lowest rainfall: February

Precipitation: 16 mm

Average rainfall days: 3 days

SUN HOURS:



4.12 Average sunny days and sun hours as bar graph

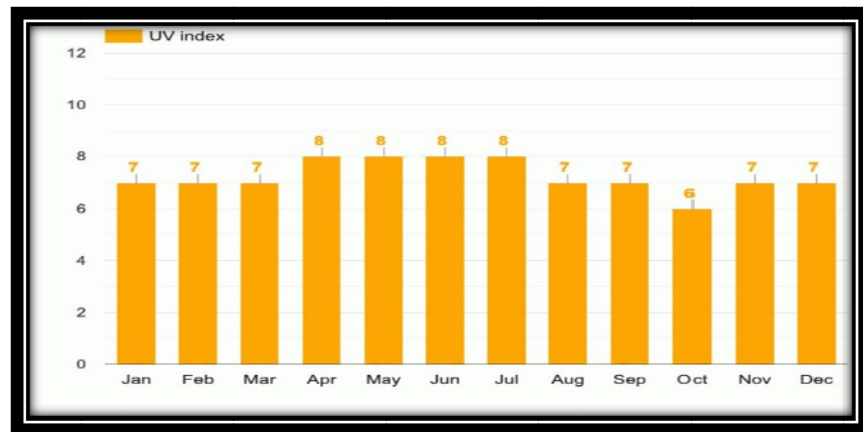
The month with the longest days is June – 12.9 hrs. (average daylight)

The month with the shortest days is December – 11.4 hrs. (average daylight)

The month which has highest sunshine is May – 11.9 hrs. (average sunshine)

The month which has least sunshine are November and December – 6.3 hrs. (average sunshine)

UV INDEX:

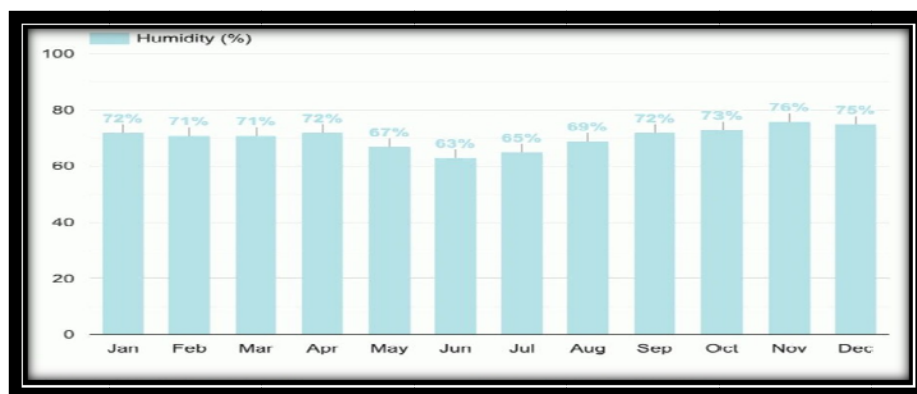


4.13 Average UV index as bar graph

Months with the highest UV index are April, May, June and July (UV INDEX 8)

Months with the lowest UV index is October (UV INDEX 6)

HUMIDITY:



4.14 Average relative humidity as bar graph

The month with the highest relative humidity is November (76%)

The month with the lowest relative humidity is June (63%)

4.5 SWOT ANALYSIS:

STRENGTHS:

The site itself act as a booming development of satellite town. Well surrounded locality with number of educational institutions, healthcare, industries, corporate companies and entertainment zone. Good connectivity – Chennai Bangalore highways, outer ring road, TNHB proposed 100 feet road. The site will also be proposed with a metro rail connectivity.

WEAKNESSES:

Site has a high proximity to chembarambakkam lake; hence it is prone to flood. Basic amenities like hospitals are little far that can be reached only by para transport mode or private transport. Lacks rail connectivity.

OPPURTUNITIES:

The location of the site is next to the satellite township adds the opportunity for future development.

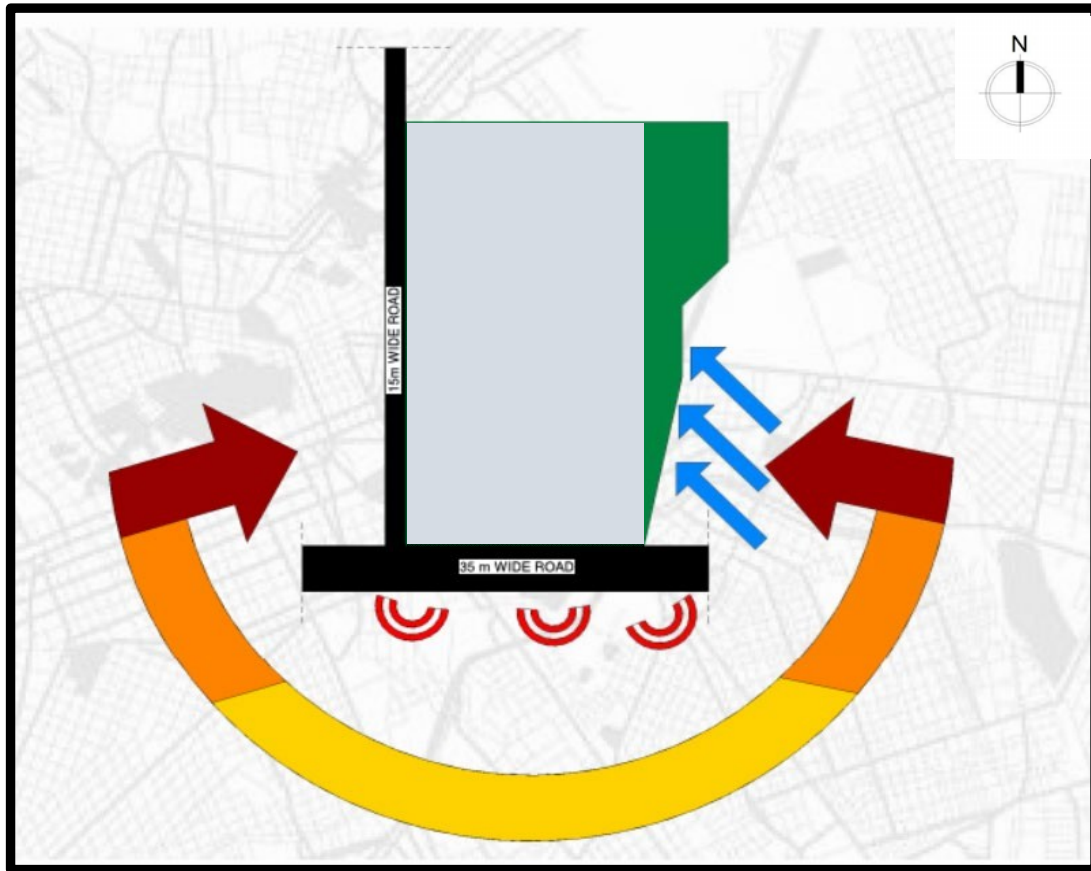
THREATS:

NH 48 is a constant vehicle movement and it leads to noise disturbances in the site. Lake is nearby which provides high humidity.

4.6 SITE FEASIBILITY AND JUSTIFICATION

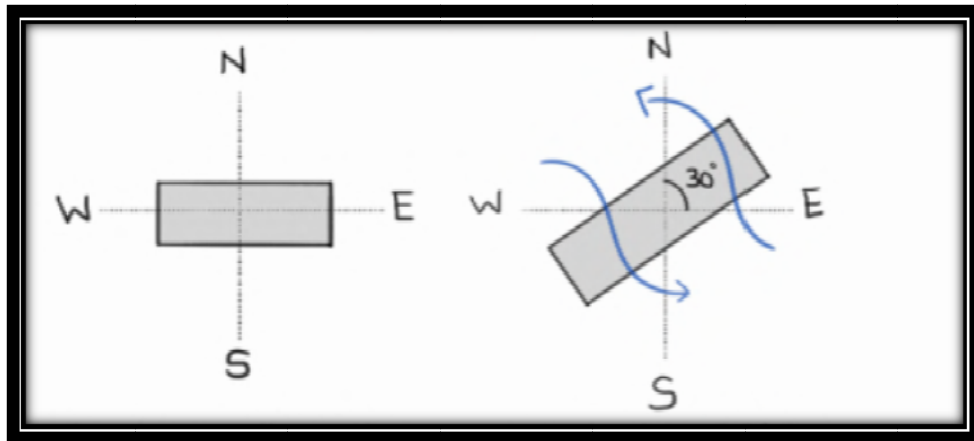
Poonamallee acts as the gateway to the city from its western side. The town was also the center of action for the East India Company of the Madras region. Total area of Poonamallee is 151 km² including 49.01 km² rural area and 102.27 km² urban area such that there is a mixed income group around the site that sets a mark for the project with mixed typologies. Water is one of the needed resource, that too in the current world's scenario where Chembarambakkam lake is just 5kms away. Good road connectivity connecting 1 national highway and 1 outer ring road. Well developed infrastructural site to explore innovativeness of the design medium. Scenic beauty, in and around the area,

4.7 SITE ANALYSIS:



Based on the factors like sun path and wind direction, analysis can be made as follows:

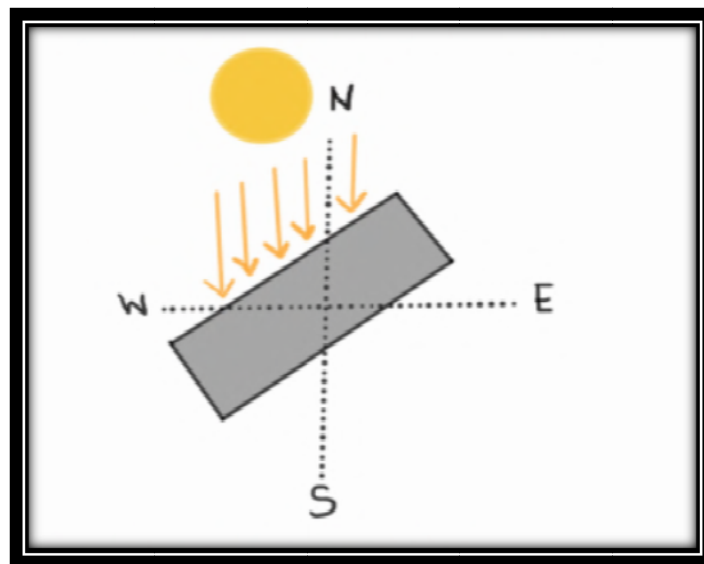
ORIENTATION OF THE BUILDING:



4.16 Orientations

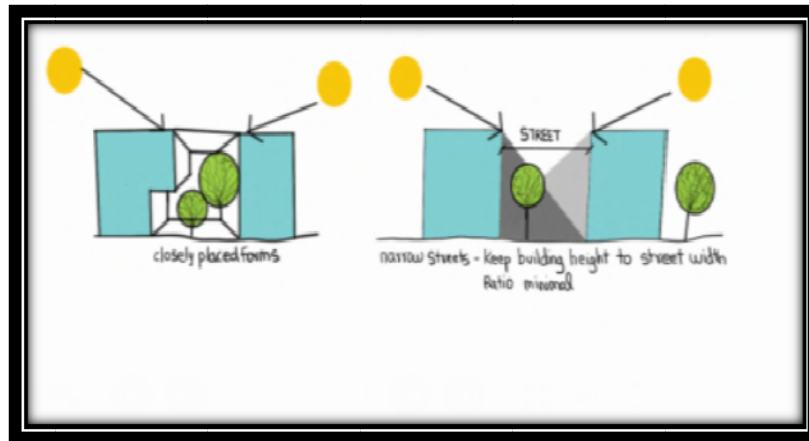
Shorter wall on the east and west side. Angled to 30° to enhance and utilize the wind.

UTILIZATION OF NORTH LIGHT:



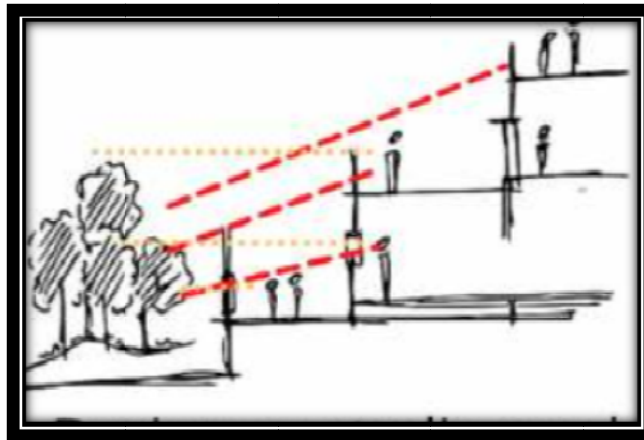
4.17 Utilization of north light

IMPLEMENTATION OF MUTUAL SHADING:



4.18 Implementation of mutual shading

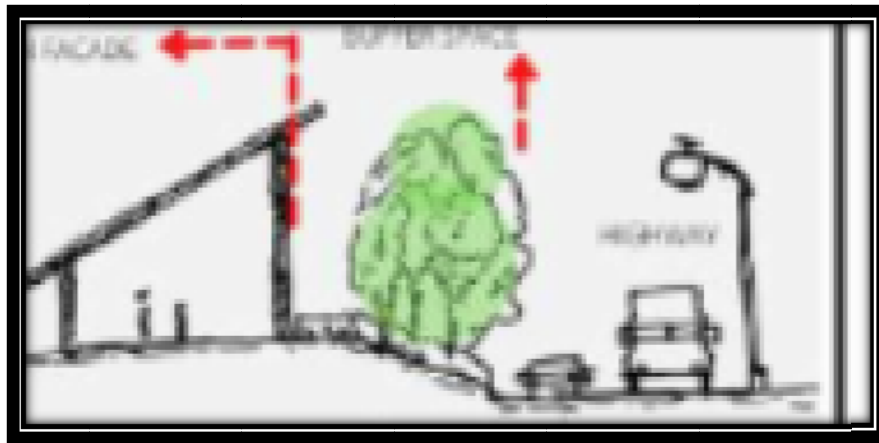
VIEWS:



4.19 Perspective of views

There is a beautiful view of green field in the north and east side. South side has the view of road and vehicular passing by. East and west side has the view of building structure. The design response will be provided levels to admire the views and huge openings solely on the necessity area.

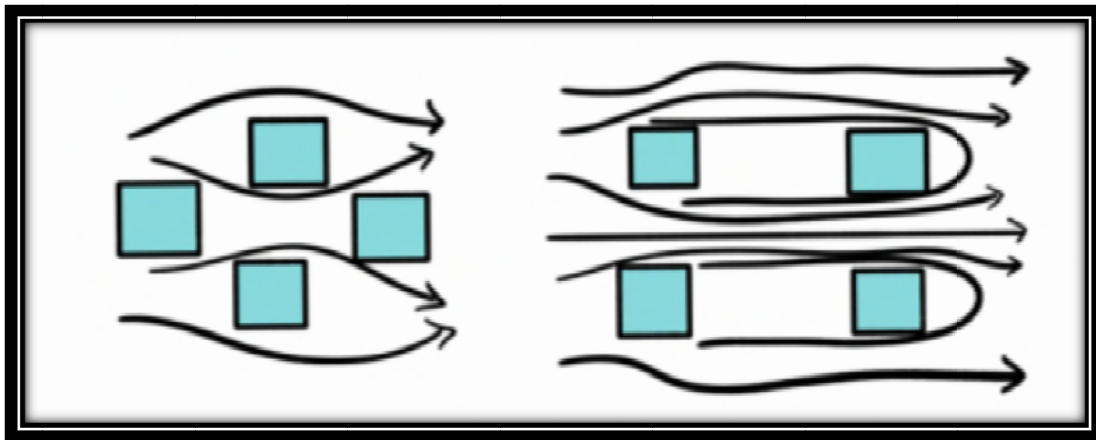
NOISE:



4.20 Perspective of noise in planning

The site is located on a highway, there is a lot of vehicular noise on the southern side. Create a buffer section such as trees and parking in the southern part. To minimize noise levels, utilize solid absorption material like double skin façade.

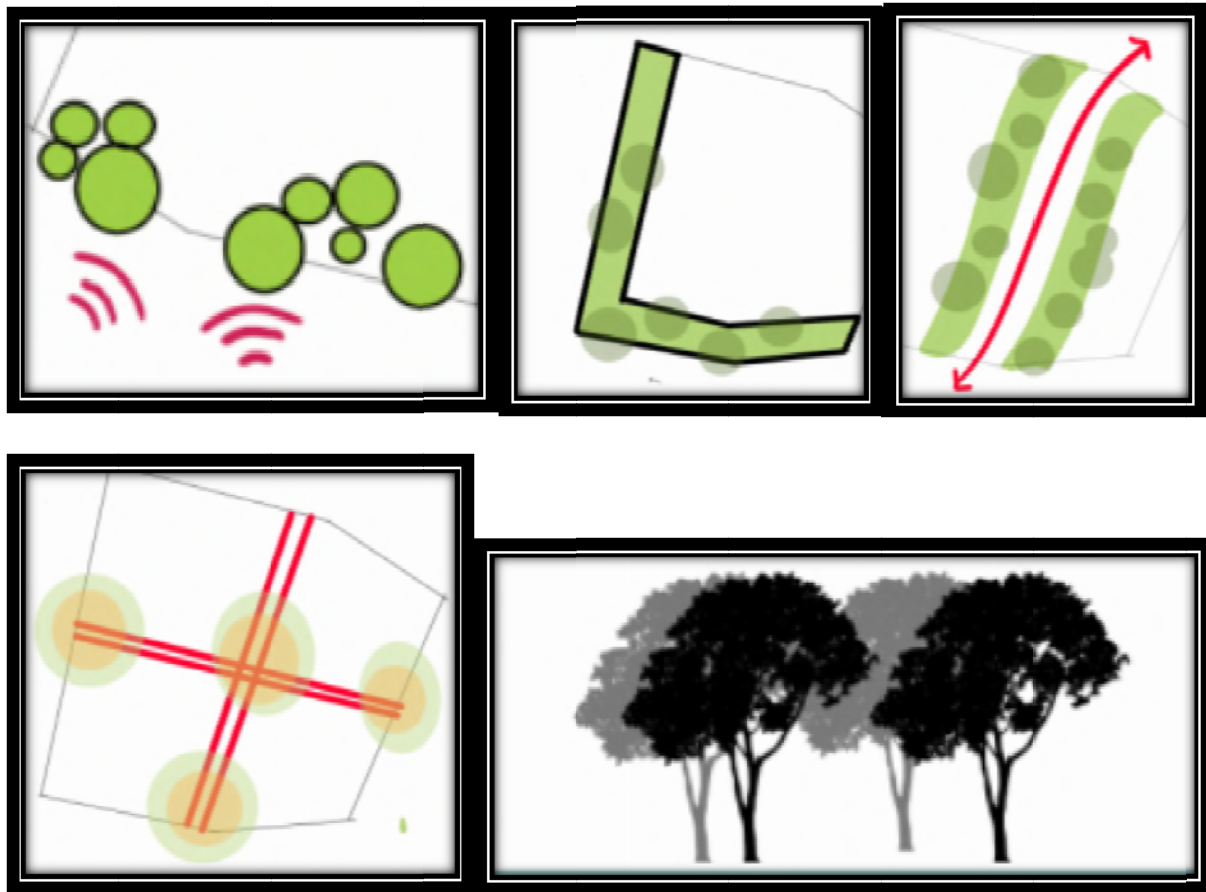
PLANNING:



4.21 Staggered planning

Staggered planning for the accentuating the wind movement.

VEGETATION:



4.22 Various arrangement of vegetation

Vegetation acting as a noise buffer. Vegetation on the south and west side reduces the heat gain. These places can also be used as a public green space. Vegetation along the central spine acts as a buffer as well as an interaction space. Creating the vegetation around the nodes acts as a shade as well as a place for interaction. Vegetation should be spaced on the north side to let in light and wind and should be closely placed on the west and south to block and shade light.

BUFFER:



4.23 Arrangement of green space as buffer

Creating ecological buffer in between the blocks for the livability of the place and it is the process of creating urban living room.

CHAPTER 5

CONCEPTUAL ANALYSIS

5.1 ATTRACTORS:

FUNDAMENTAL NODE | GATHERING PROGRAMS | LANDMARK |

With respect to marking of Poonamallee as a multicultural/clean city, along these lines underscoring the various societies will stay the fundamental fascination for individuals outside and with in Poonamallee.

5.2 CONNECTION:

LANDSCAPE | STREETS | WATER SCAPE | DISSOLVING EDGES |

Downtown area is proposed on the quite possibly the most developing zone of the city, associations into the site are to be improved by new constructions of road pathways, scene, waterscape to breakdown external edges.

5.3 TYPOLOGIES:

MIXED DENSITY | BLENDED TYPOLOGY | TYPOLOGY REFLECT FUNCTION |

To influence the city picture, individuals should be grant of the change in this manner new advancement should vary from the current by new blended typologies which likewise mirror the social variety of the city.

CHAPTER 6

AREA STATEMENT AND DESIGN PROGRAM

6.1 AREA STATEMENT:

PLOT AREA = 15.7 ACRES
 = 63,592sq.m.
 FLOOR SPACE INDEX(F.S.I) = 2
 TOTAL BUILT UP AREA = 63,592 X 2 = 1,27,184sq.m.
 GROUND COVERAGE = 55%
 = $\frac{63,592 \times 55}{100} = 34,975.6\text{sq.m.}$

LAND USE DISTRIBUTION 63,592sq.m.

- PLOT COVERAGE = 55% = 34,975.6sq.m.
- OSR = 10% = 6359.2sq.m.
- CIRCULATION = 15% = 9538.8sq.m.
- OPEN SPACES = 20% = 12,718sq.m.

DISTRIBUTION AT PLOT COVERAGE 34,975.6sq.m.

- SHOPPING MALL = 24 % = 8394sq.m.
- OFFICE COMPLEX = 14% = 4896.5sq.m.
- BUSINESS HOTEL = 17% = 5945.8sq.m.
- STREET SHOPPING = 10% = 3497.5sq.m.
- FUTURE EXPANSION = 30% = 10,492.6sq.m.
- PARKING = 5% = 1748.7sq.m.

PLOT DISTRIBUTION WITH TOTAL BUILT UP AREA 1,27,,184sq.m.

- SHOPPING COMPLEX = 24% = 30,524.16sq.m.
- COMMERCIAL COMPLEX = 14% = 17805.76sq.m.
- BUSINESS HOTEL = 17% = 21,621.28sq.m.
- STREET AND AMPHITHEATRE = 10% = 12,718.4sq.m.
- CIRCULATION = 15% = 19077.6sq.m.

6.2 DESIGN PROGRAM:

SHOPPING MALL

- ANCHOR SHOPS 2 NOS = 600sq.m.(EACH)
- RETAIL SHOPS(SMALL) 20 NOS = 30 to 70sq.m.
- RETAIL SHOPS(MEDIUM) 20 NOS = 80 to 120sq.m.
- RETAIL SHOPS(BIG) 10 NOS = 130 to 230sq.m
- FUN CITY = 555sq.m..
- FOOD COUNTERS = 22 NOS
- AHU = 67sq.m.
- STORAGE UNIT = 100sq.m.
- ELECTRIC ROOM = 45sq.m.
- GENERAL MANAGER ROOM = 34sq.m.
- MANAGING DIRECTOR ROOM = 37sq.m.
- MAINTENANCE ROOM = 20sq.m.
- ADMIN AREA = 20sq.m.
- SALES,MARKETING AND BOX OFFICE DEPARTMENT = 42sq.m.
- FINANCE AND MANAGEMENT DEPARTMENT = 42sq.m.
- WORK SPACE = 54sq.m.
- STAFF DINING = 143sq.m.
- TOILET FEMALE = 18 WC
- TOILET MALE = 16URINAL, 8WC
- SECURITY/BMS ROOM
- MULTIPLEX 2 NOS = 700sq.m.(EACH)
- MALL MANAGEMENT AREA
- STAFF DINING AREA

OFFICE COMPLEX

- RECEPTION
- WAITING AREA
- WORK SPACE AREA
- RESTAURANT
- TOILETS
- MAINTENANCE ROOM
- CONTROL ROOM
- MEETING ROOM
- CONFERENCE AREA
- STORAGE AREA
- DIRECTORS ROOM
- HR ROOM
- MANAGER ROOM
- SECURITY CABIN
- RECORD ROOM

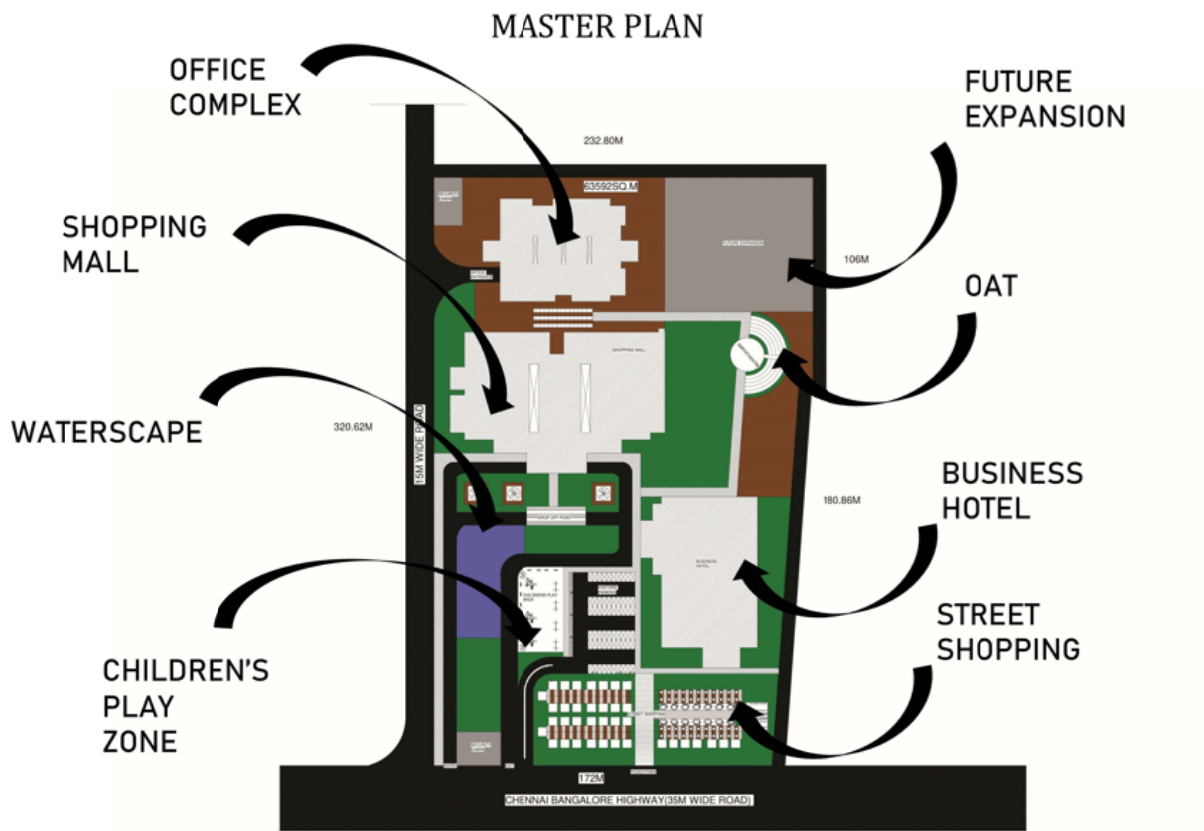
BUSINESS HOTEL

- RECEPTION
- WAITING AREA
- GYM
- RESTAURANT1 WITH KITCHEN
- RESTAURANT 2 WITH KITCHEN
- LOUNGE AREA
- TOILETS
- ELECTRICAL ROOM
- AHU UNIT
- DELUXE SUITE
- EXECUTIVE SUITE
- ROYAL SUITE
- PRESIDENT SUITE
- BAR AREA
- SPA AREA
- STORAGE
- SWIMMING POOL
- LAUNDRY AREA
- STAFF LOCKER AREA

CHAPTER 7

A METROPOLITAN WAY OF LIFE COMPLEX DESIGN

7.1 MASTER PLAN:

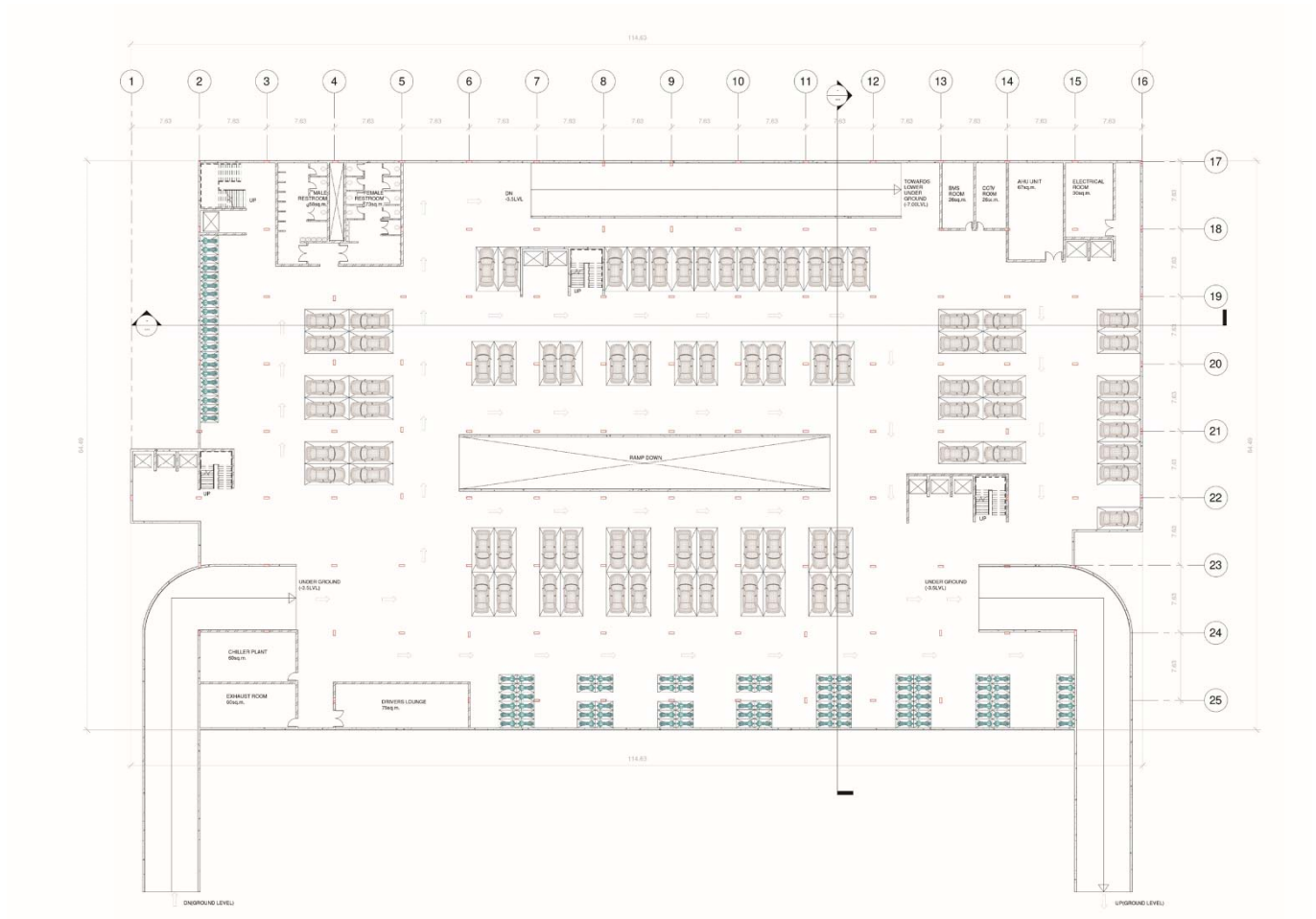


SCALE - 1:750

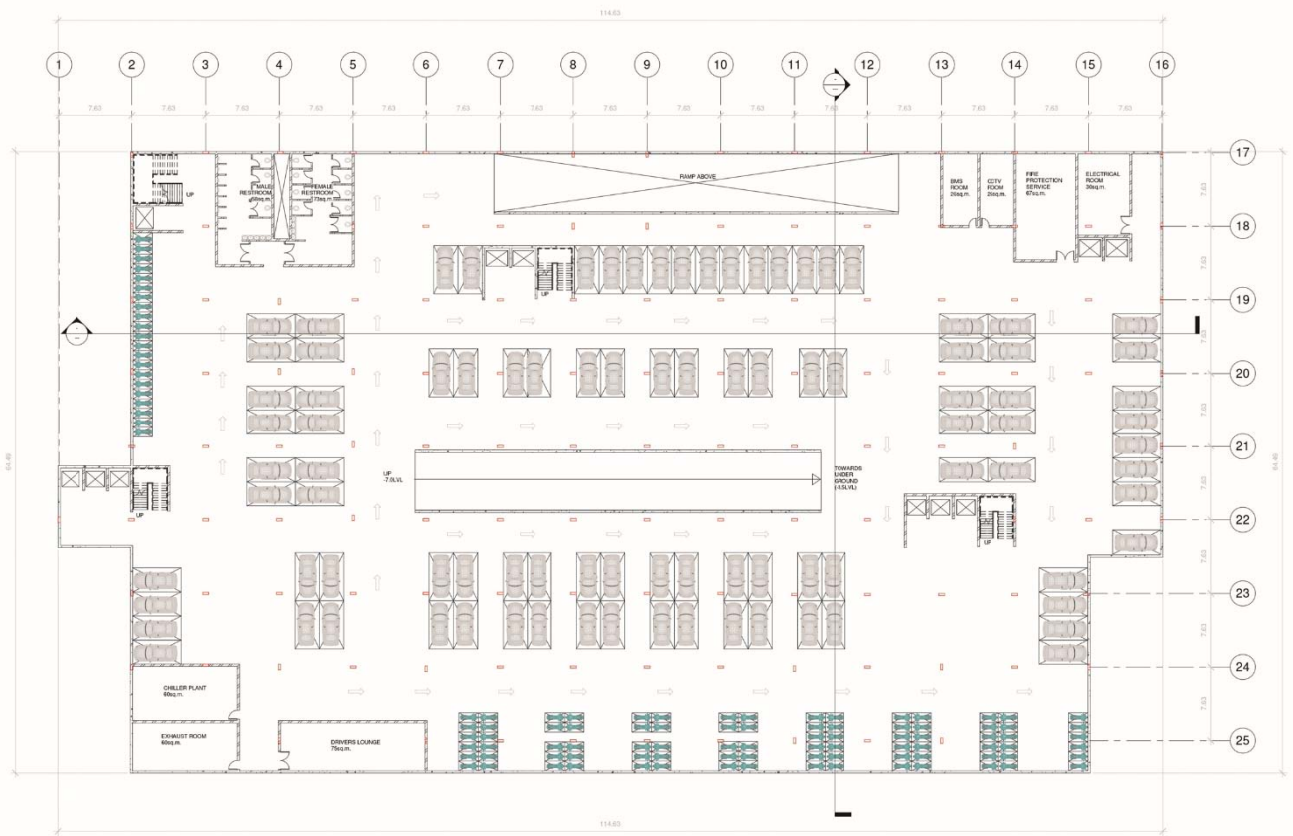
7.1 Master plan

7.2 SHOPPING MALL:

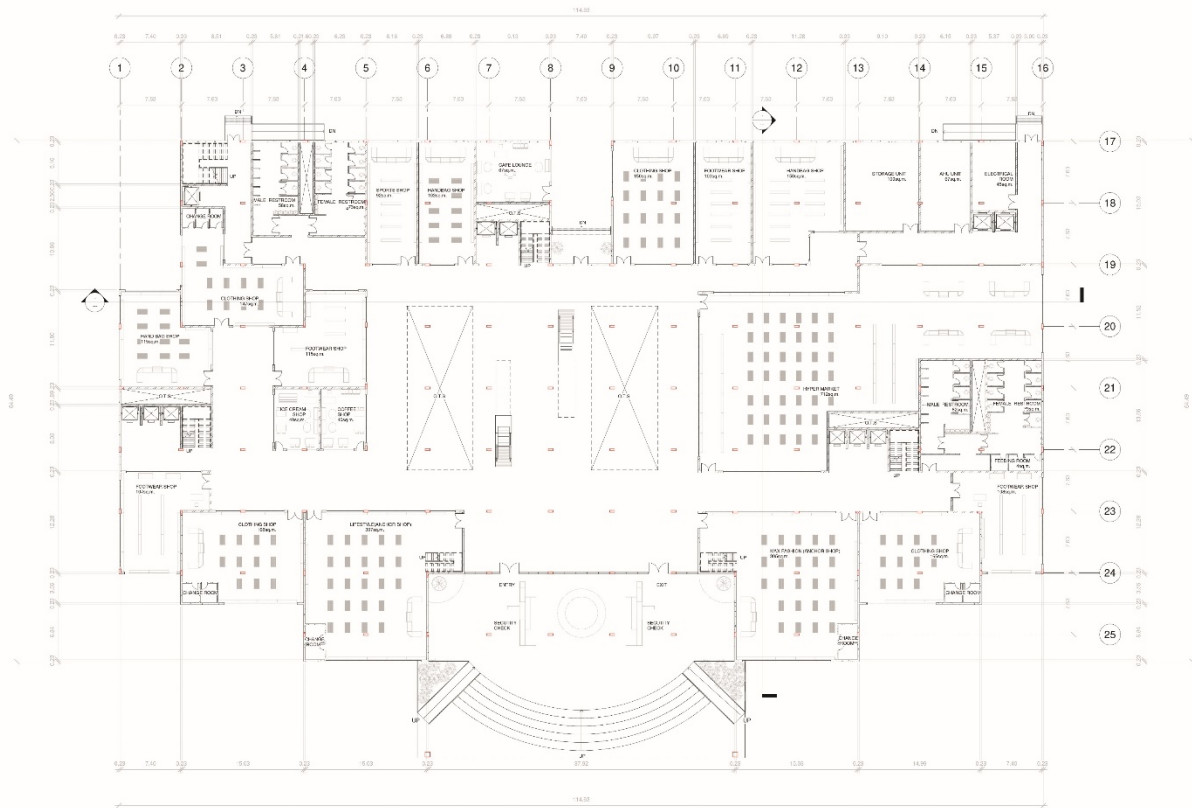
FLOOR PLANS:



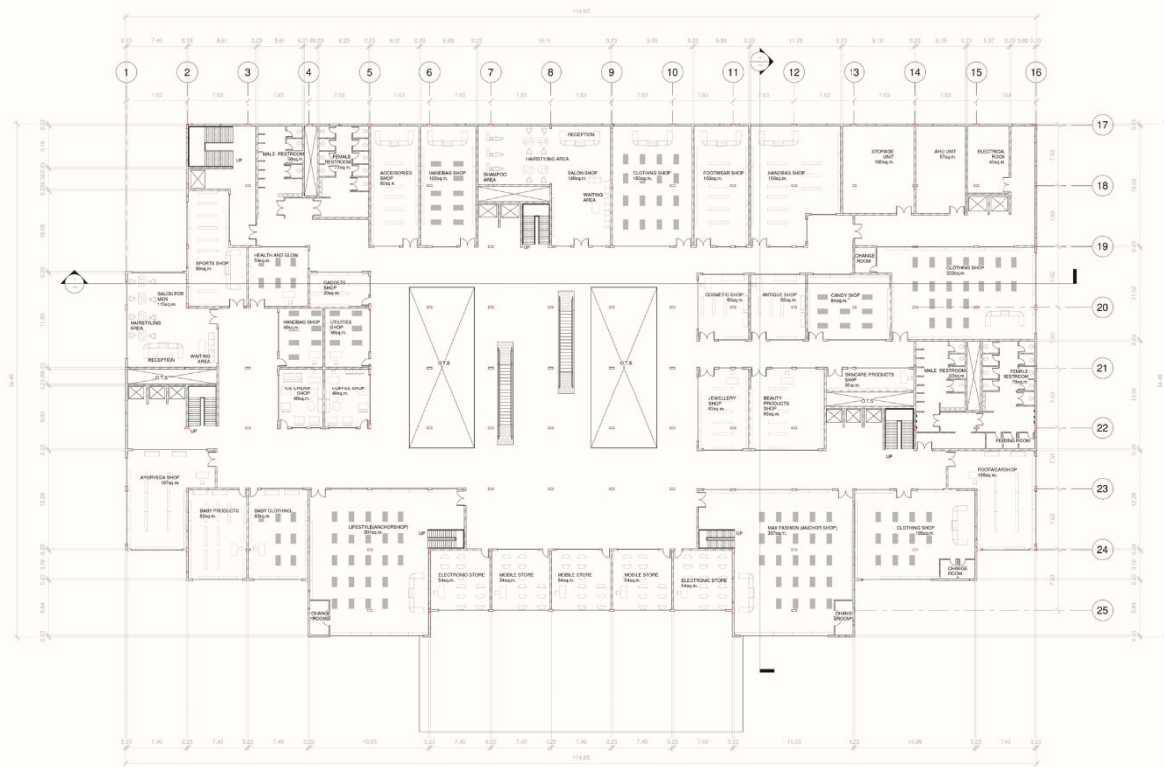
7.2 Underground basement parking plan

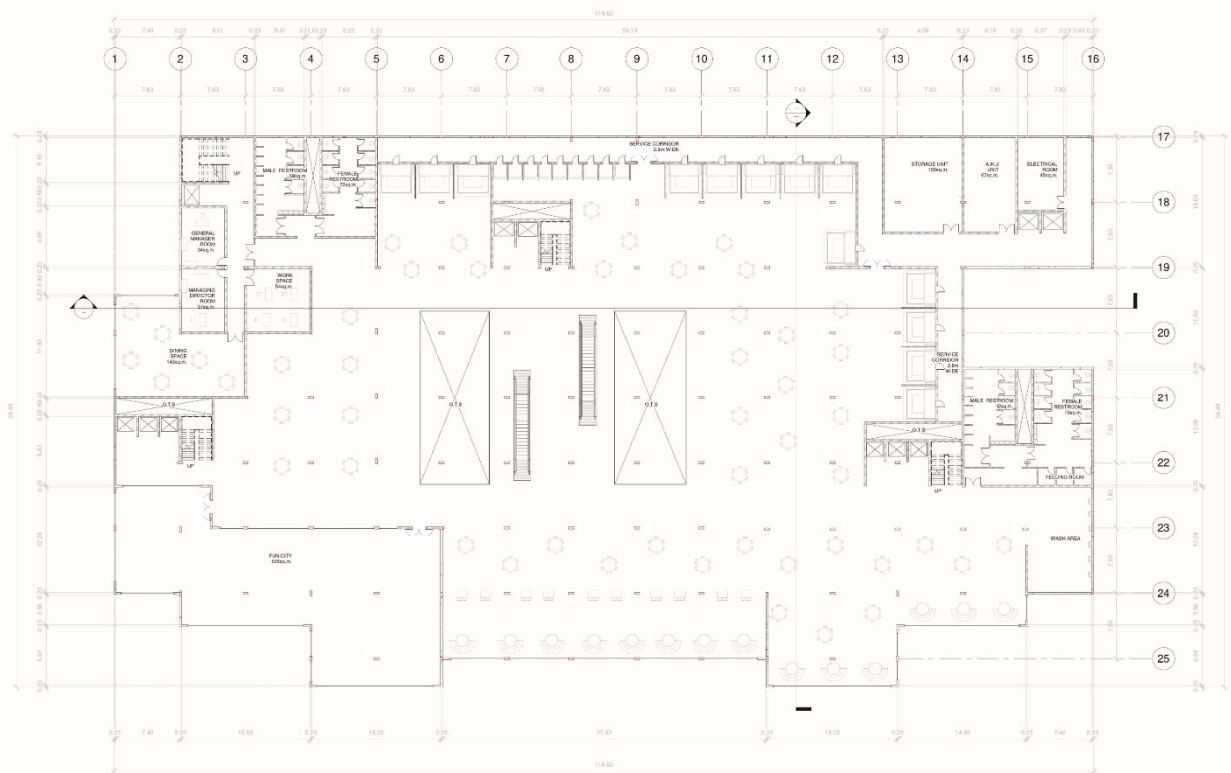


7.3 Lower underground basement parking plan

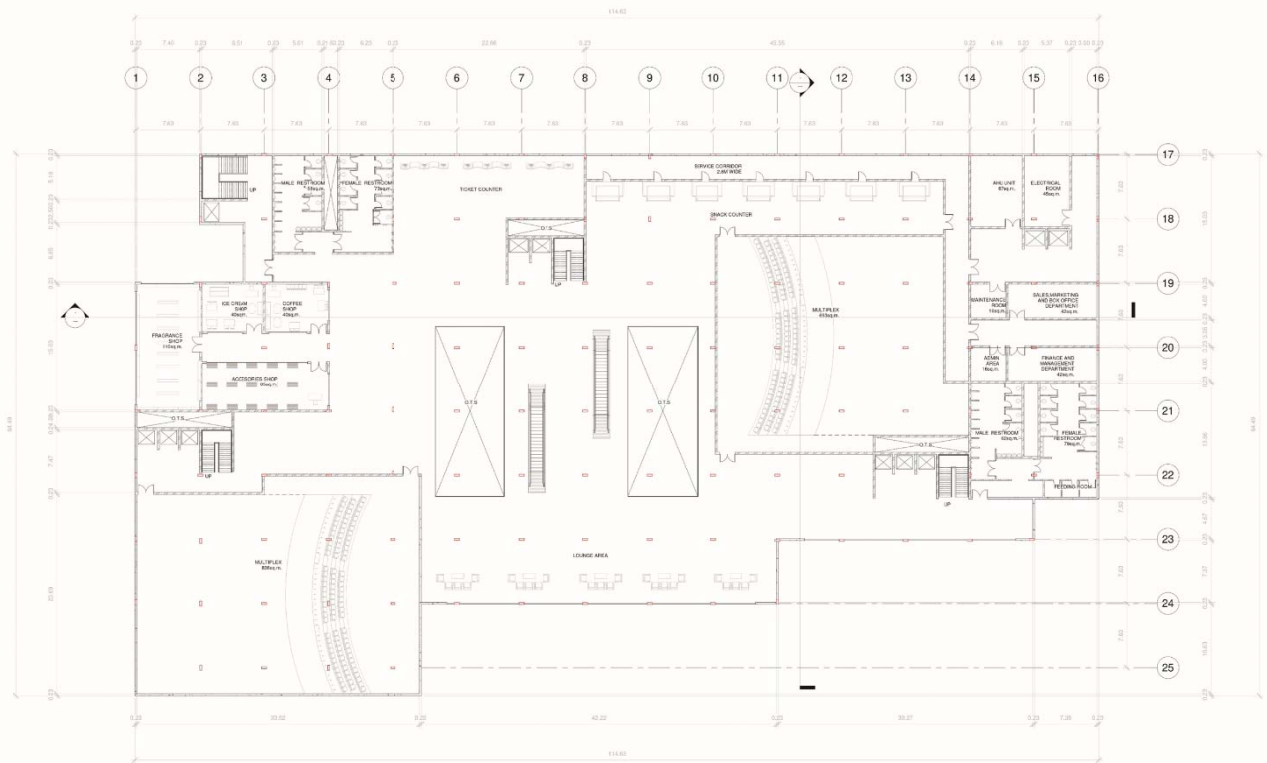


7.4 Mall ground floor plan

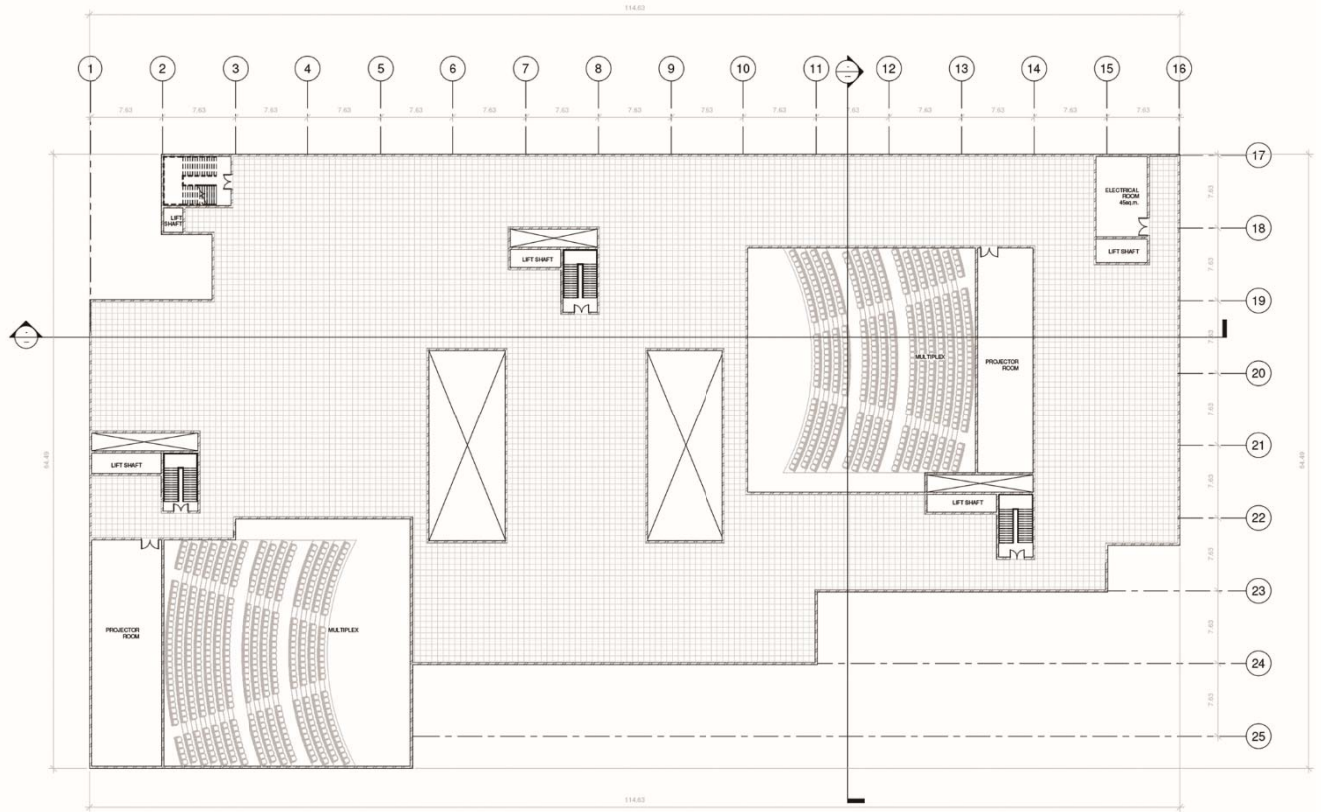




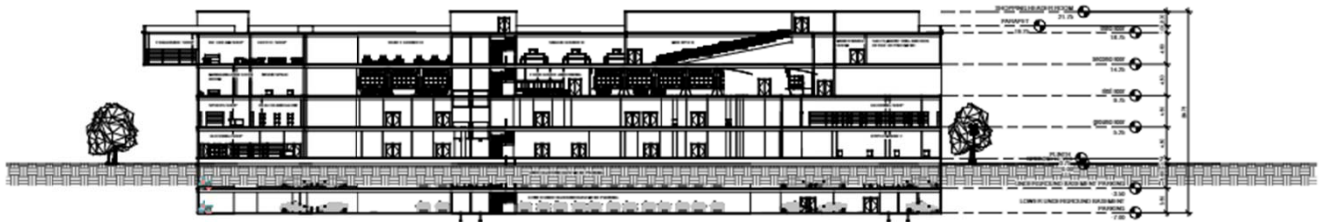
7.6 Mall second floor plan



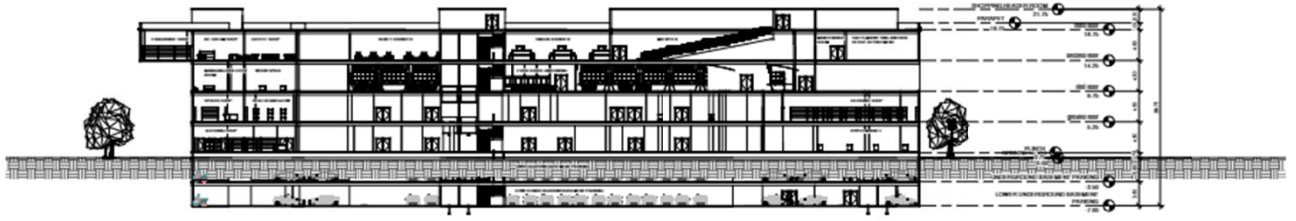
7.7 Mall third floor plan



7.8 Terrace floor plan



7.9 Mall section AA'



7.10 Mall section BB'



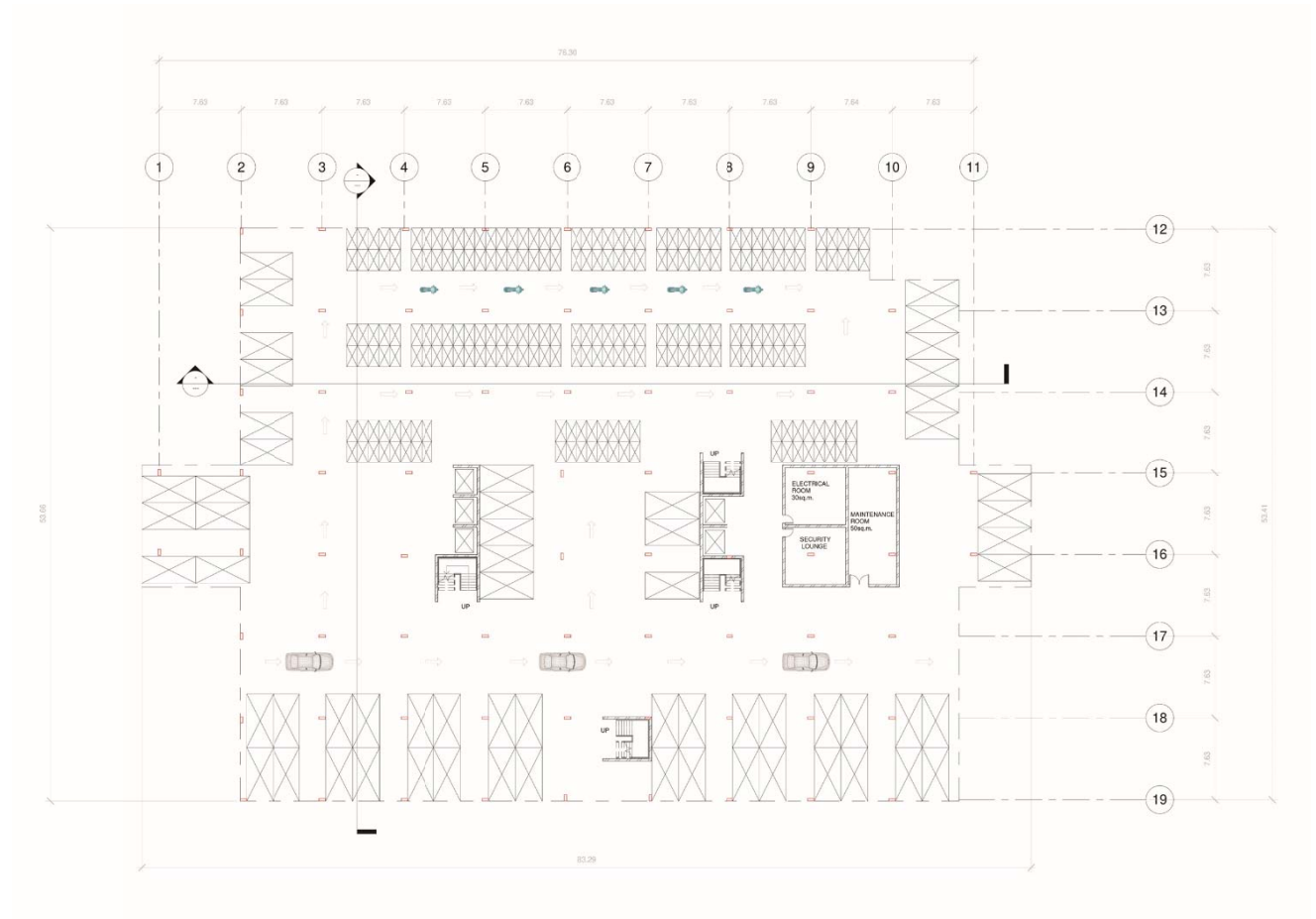
7.11 Mall elevation



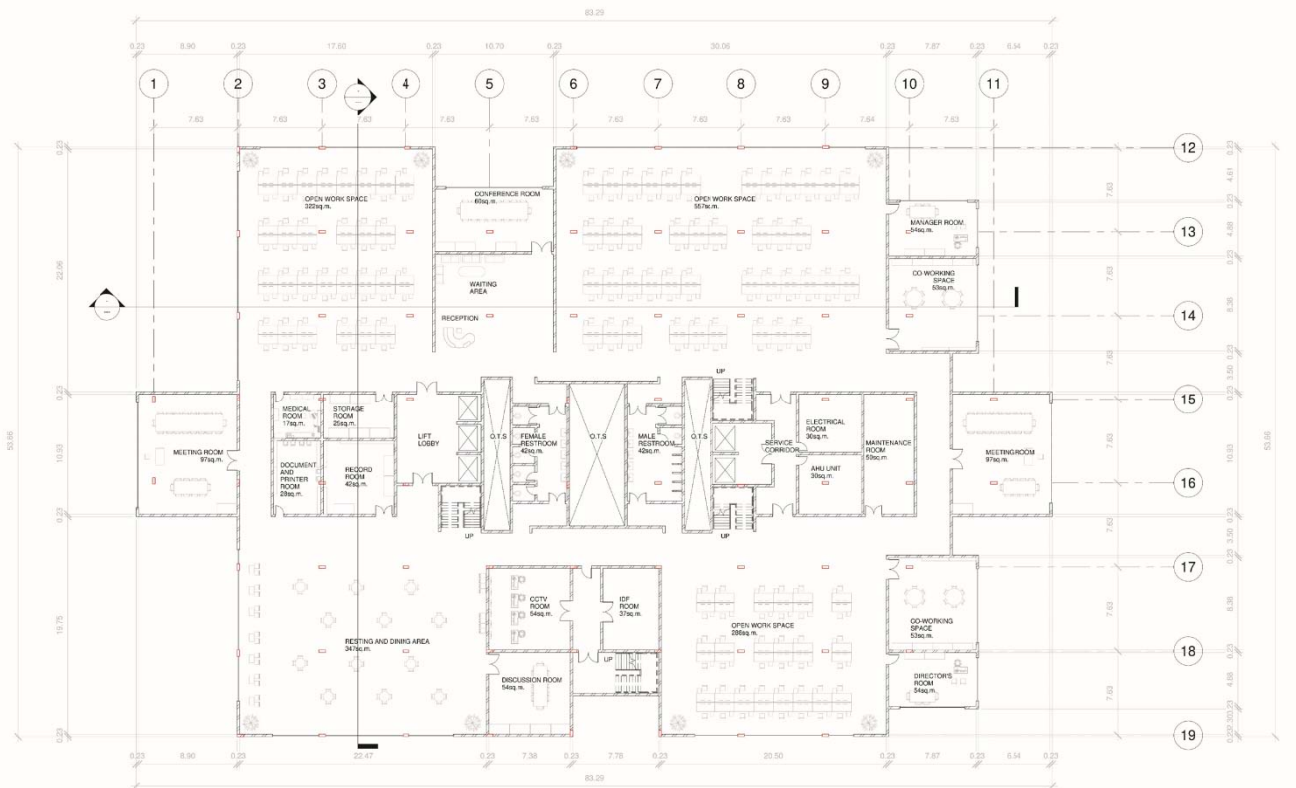
7.12 Mall views

7.3 OFFICE COMPLEX:

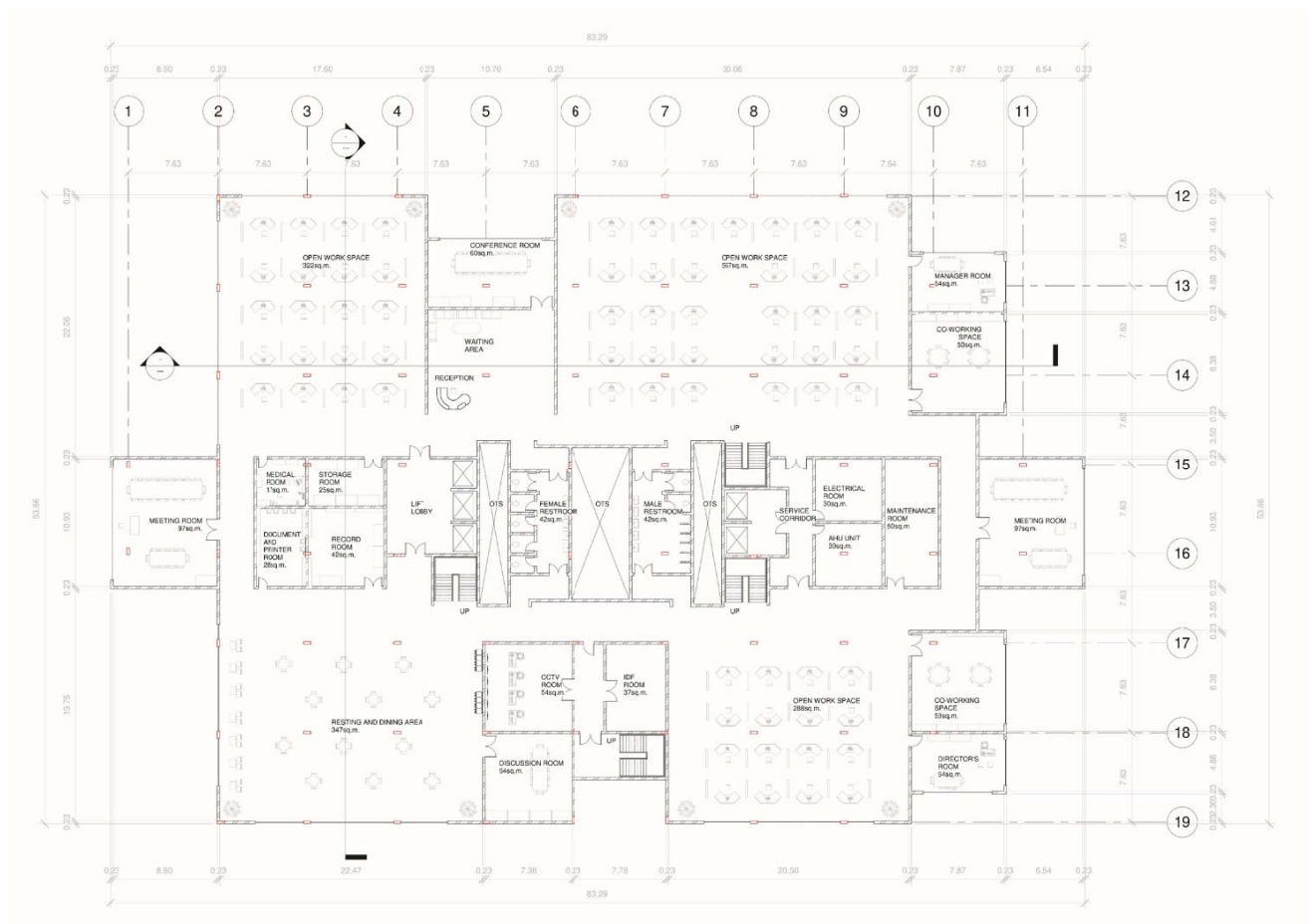
FLOOR PLANS:



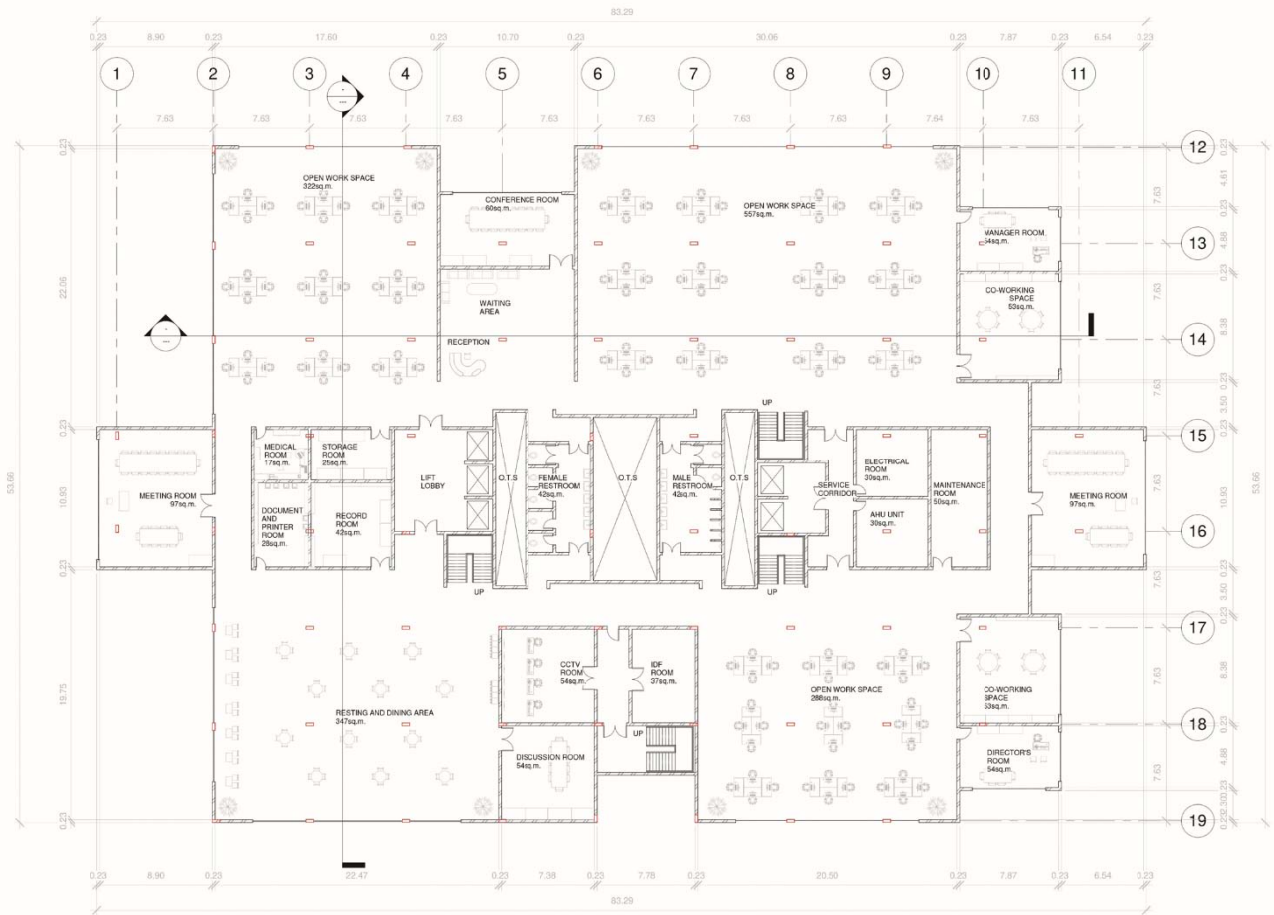
7.13 Stilt parking plan



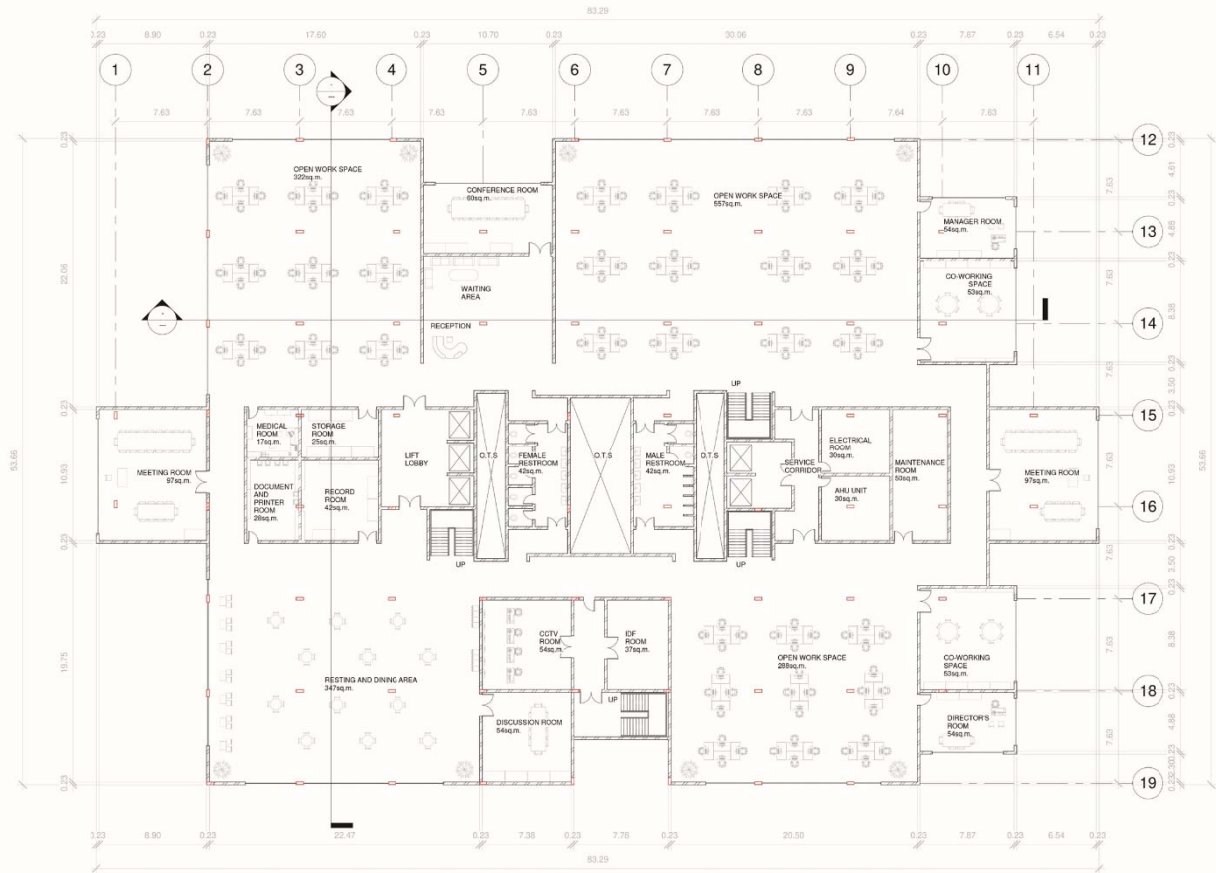
7.14 Office ground floor plan



7.15 Office first floor plan



7.16 Office second floor plan



7.17 Office third floor plan



7.18 Office section AA'



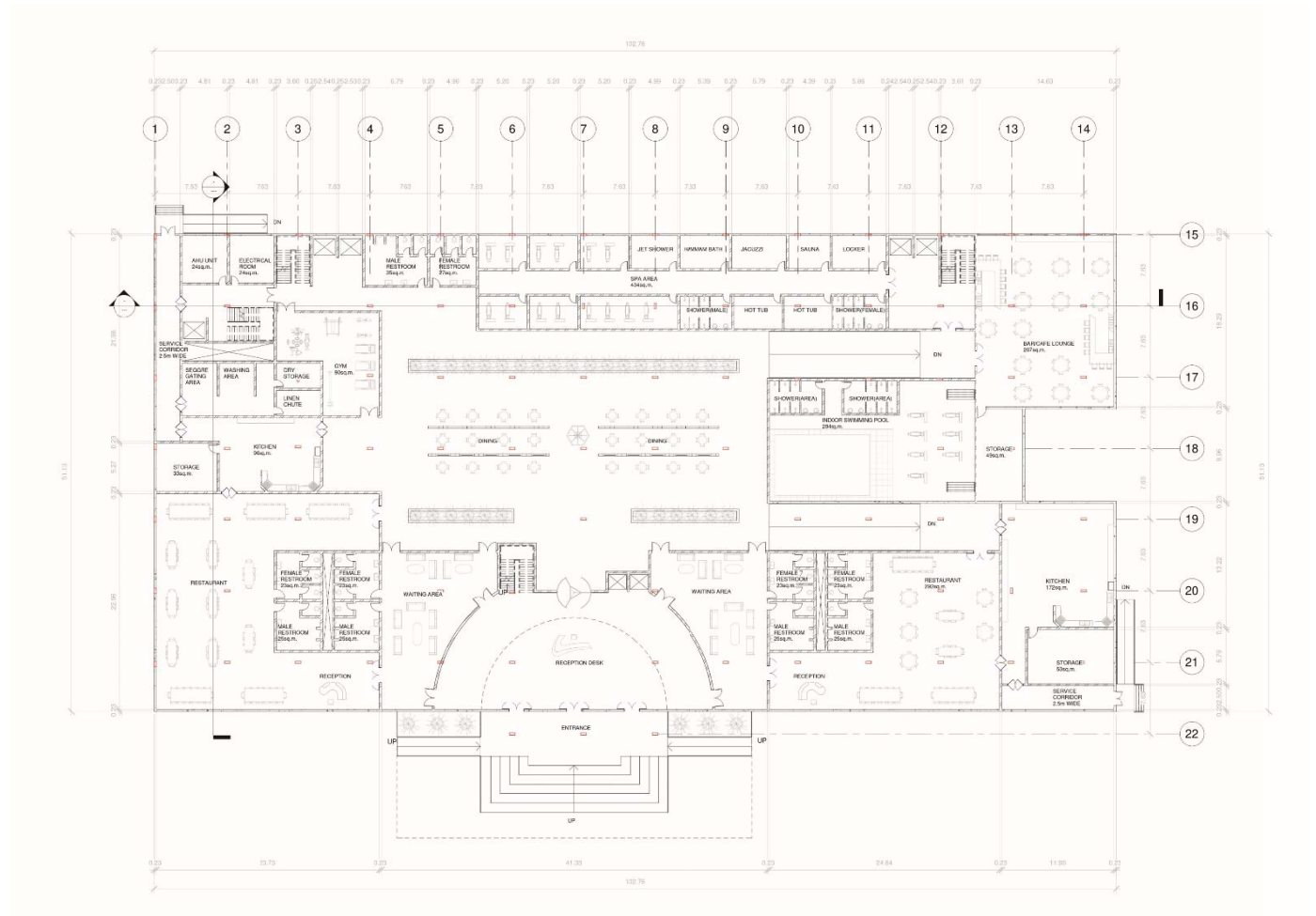
7.19 Office elevation



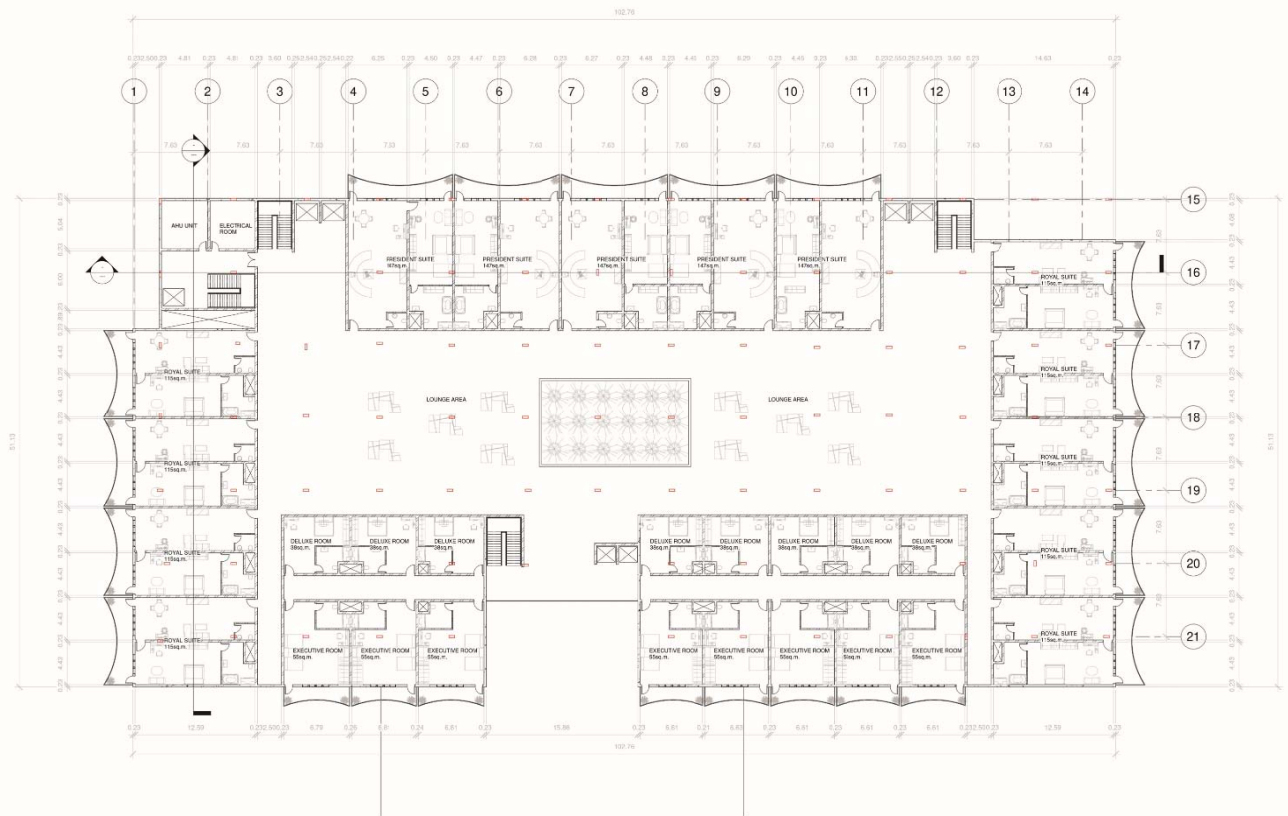
7.20 Office views

7.4 BUSINESS HOTEL:

FLOOR PLANS:



7.21 Hotel ground floor plan



7.22 Hotel typical floor plan



7.23 Hotel elevation



7.24 Hotel views

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