

for

CONTENT



RESIDENCE 01



INTERNSHIP PROJECT 02



THESIS 03



ANDC 04



SIDC 05



PRODUCT DESIGN 06



URBAN DESIGN 07

“Architecture should speak of its time and place, but yearn for timelessness.”

- FRANK GEHRY.



RESIDENCE 01

RESIDENCE FRONT
ELEVATION



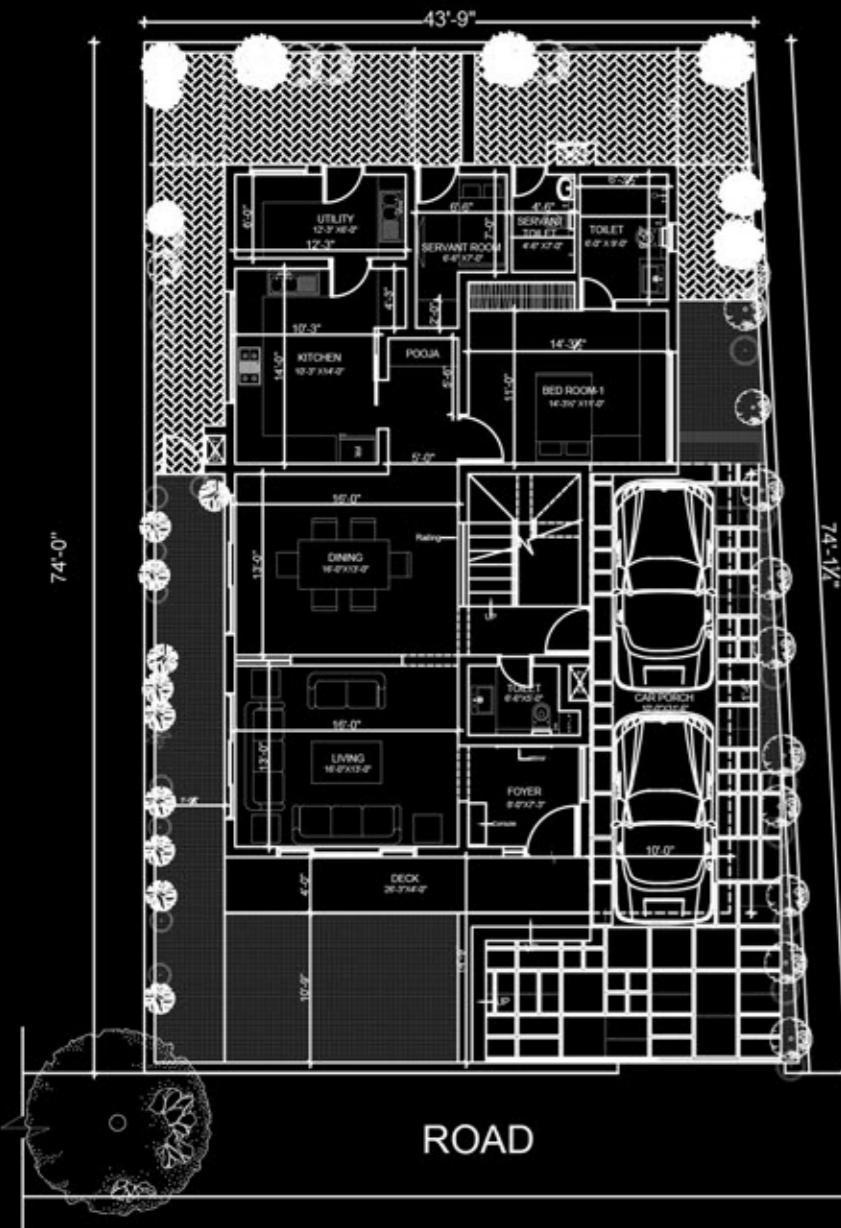
RESIDENCE
VIEW



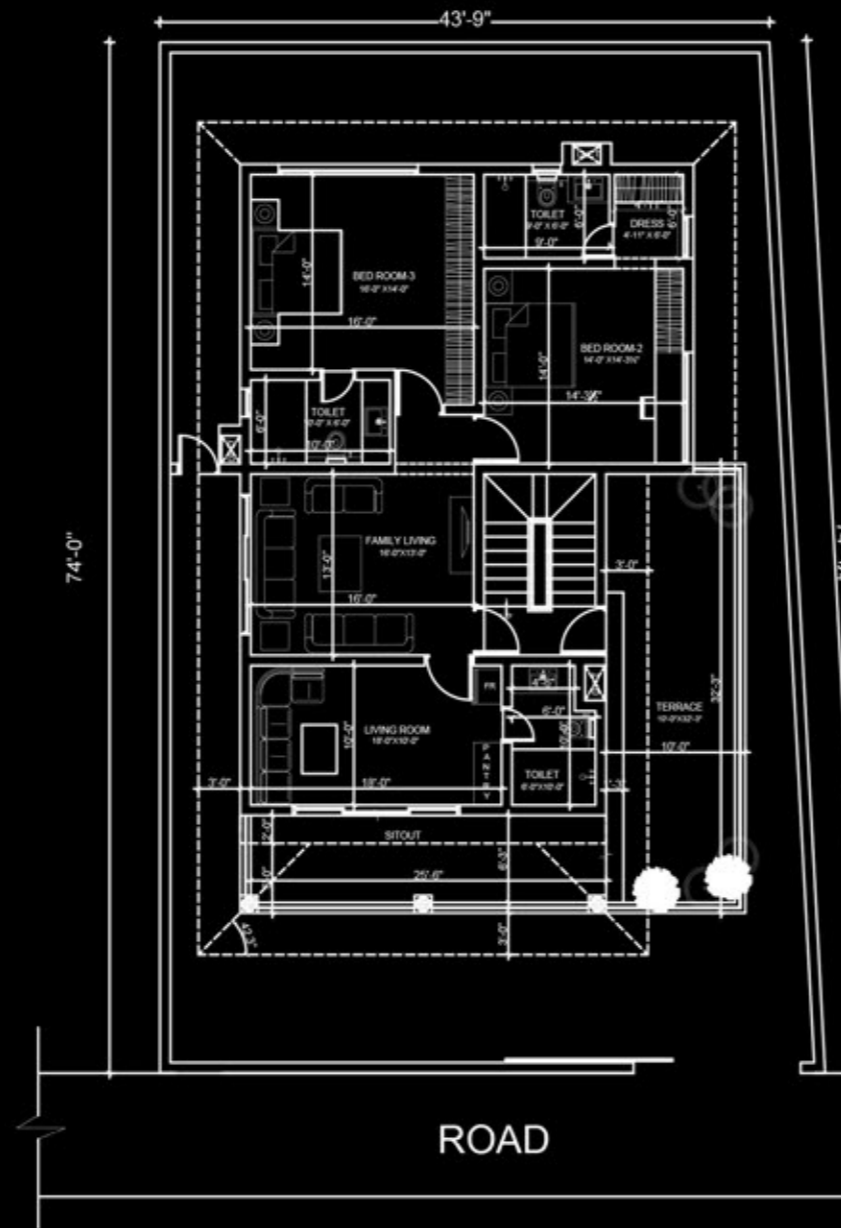


INTERNSHIP PROJECT 02

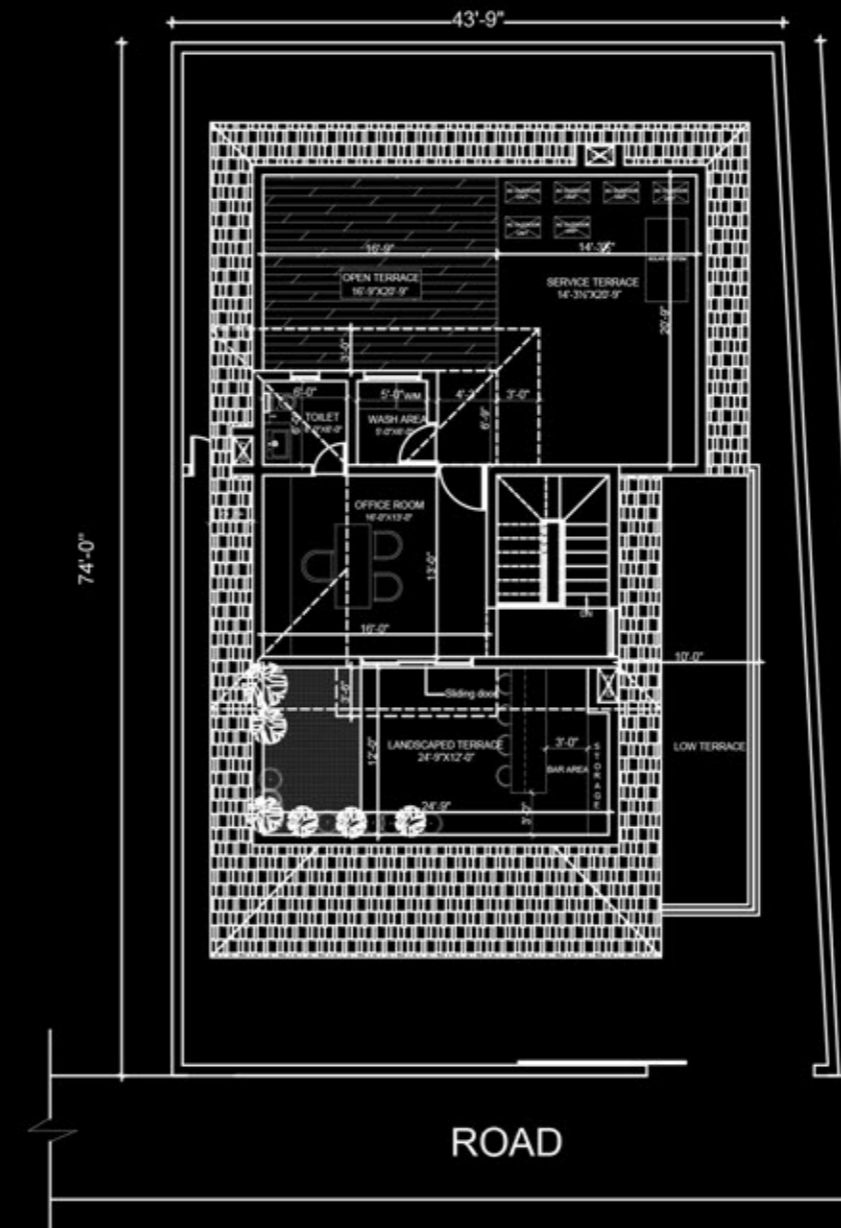
KARTHIK RESIDENCE SITE PLAN



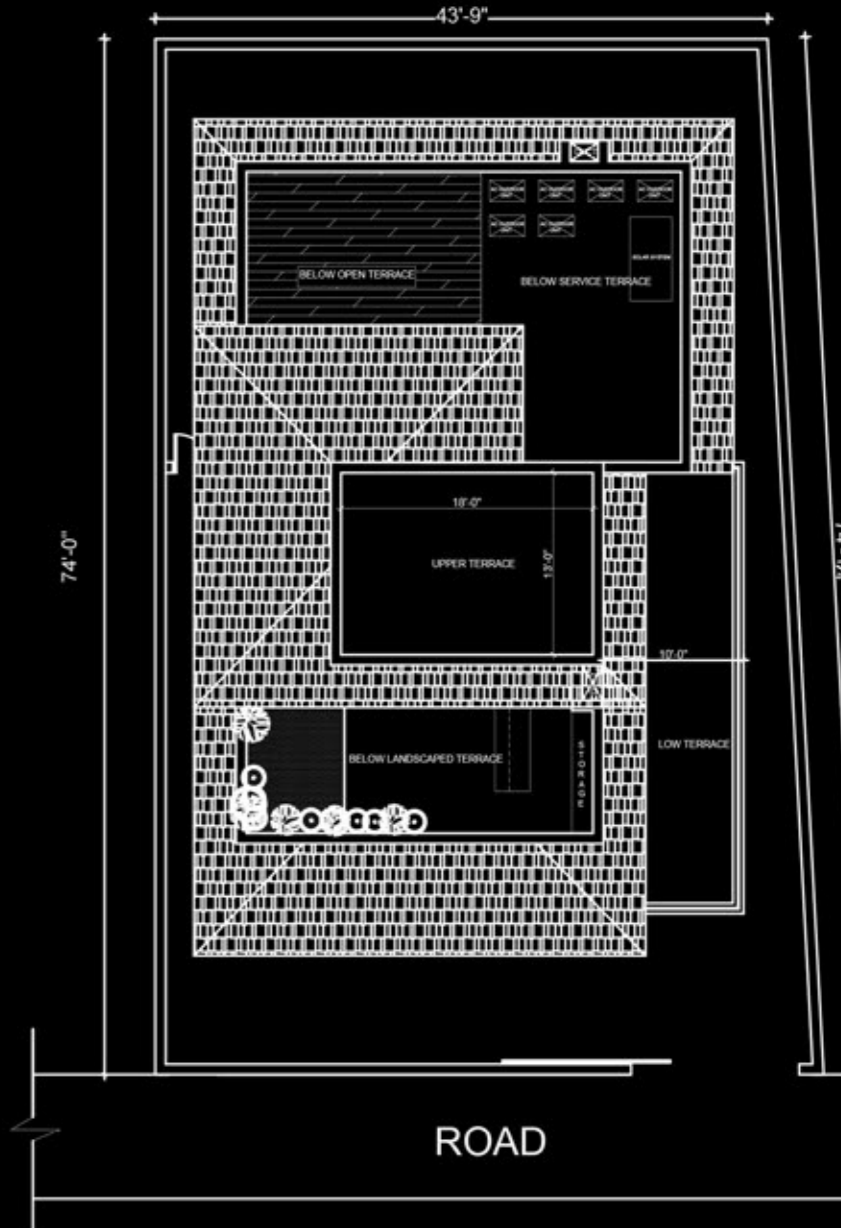
GROUND FLOOR PLAN



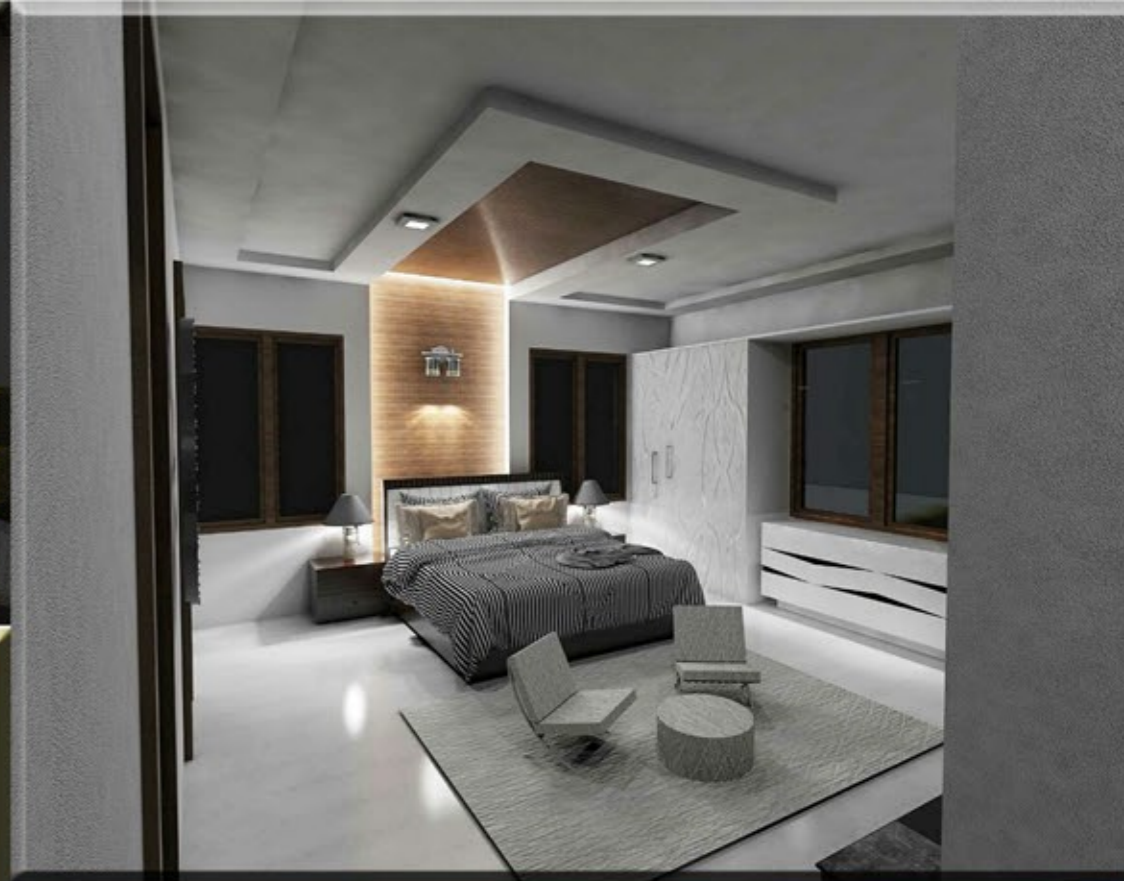
FIRST FLOOR PLAN



ROOF PLAN



KARTHIK RESIDENCE VIEW





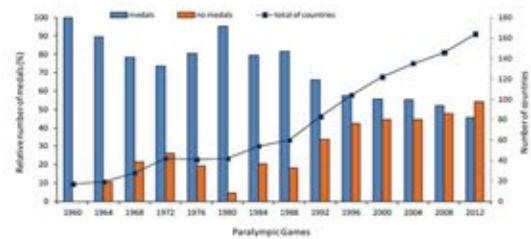
THESIS 03

INTRODUCTION :

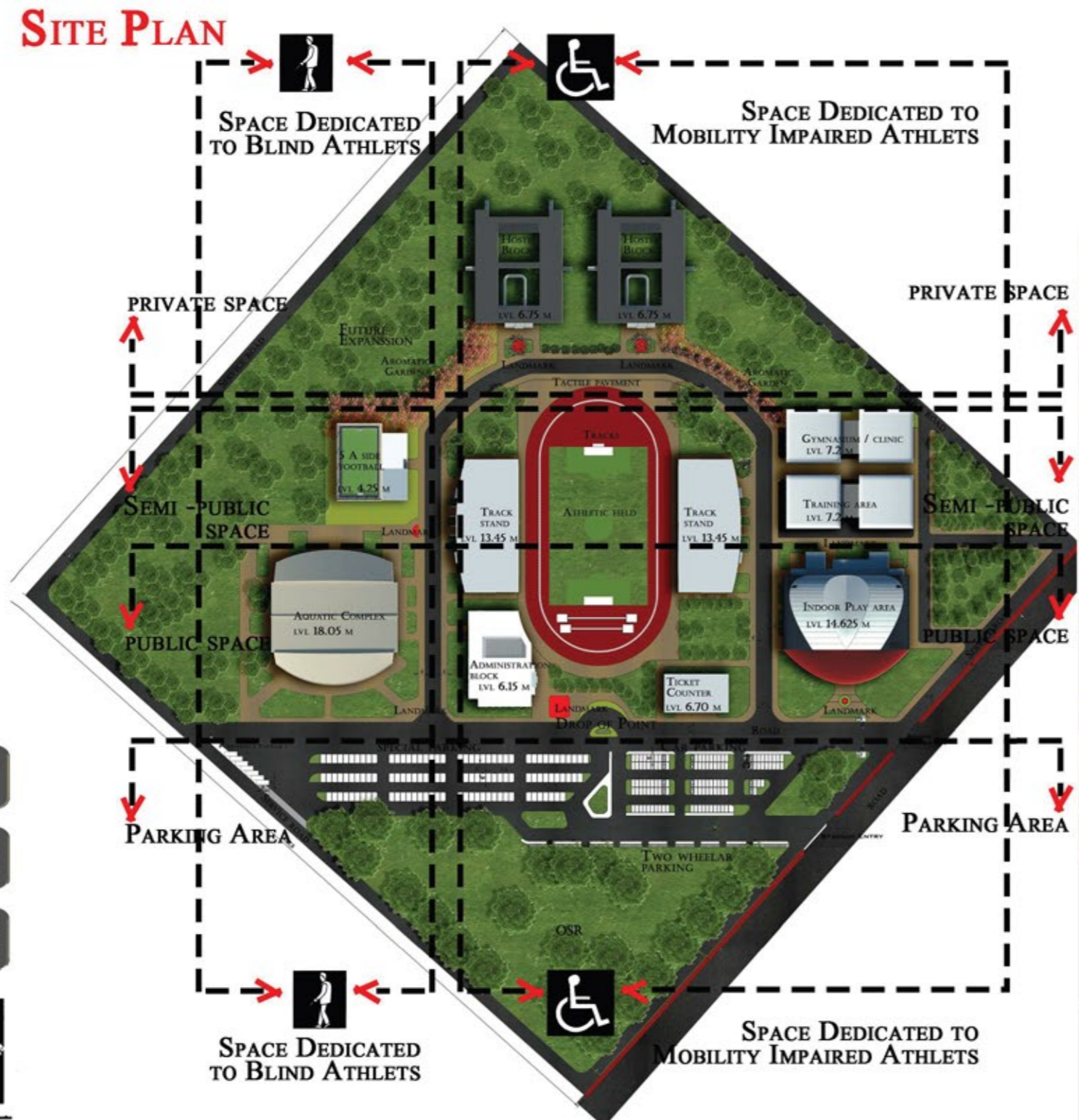
People with disabilities are vulnerable because of the many barriers we face: attitudinal, physical, and financial. Addressing these barriers is within our reach and we have a moral duty to do so..... - Stephen Hawking.

But most important, addressing these barriers will unlock the potential of so many people with so much to contribute to the world.

Governments everywhere can no longer overlook the hundreds of millions of people with disabilities who are denied access to health, rehabilitation, support, education, and employment and never get the chance to shine.



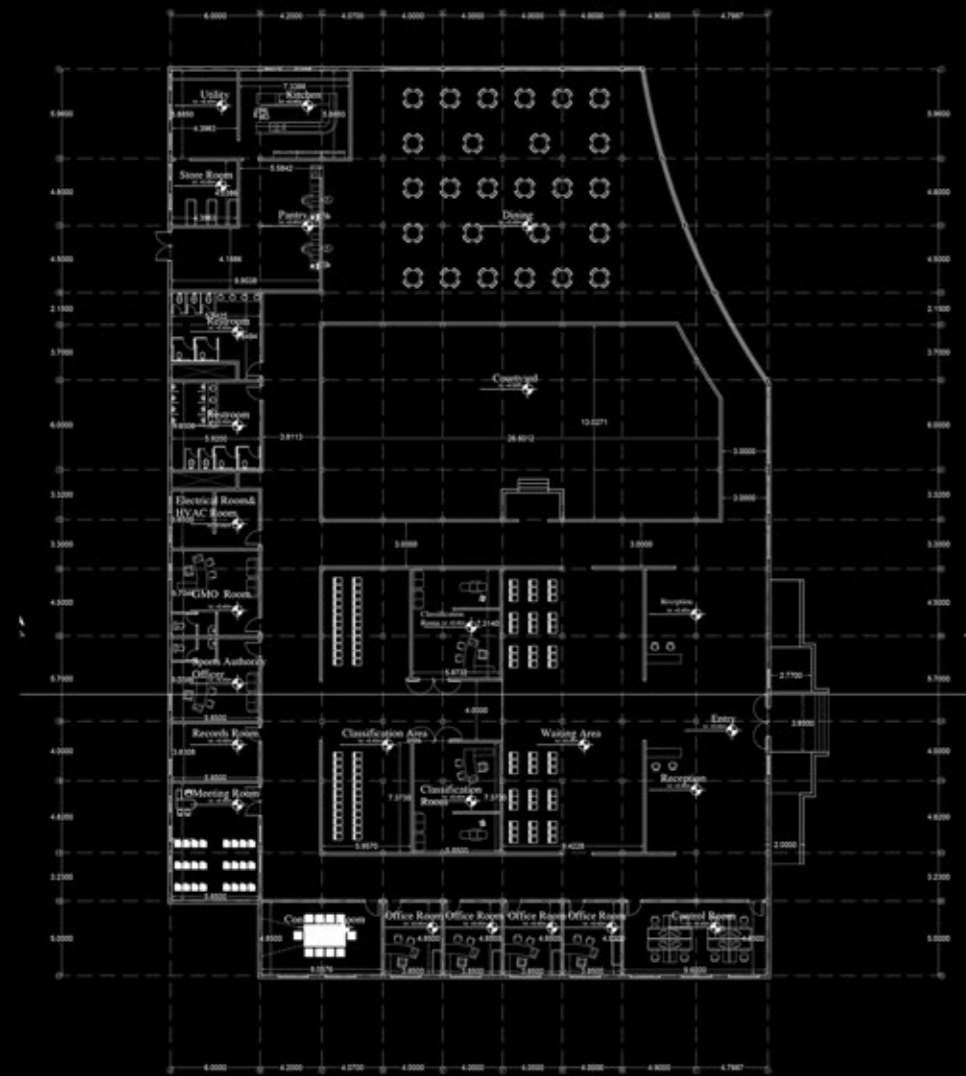
- VISION** To improve the lives of people with physical disability around the world.
- MISSION** To enable people with physical disability and chronic health conditions to lead healthy, active, and independent lifestyles through physical activity, sport, recreation, and research.
- VALUES** Passion, creating opportunities, integrity, changing expectations. "promotes independence" for people with disabilities by providing "opportunities to pursue active, healthy lifestyles."



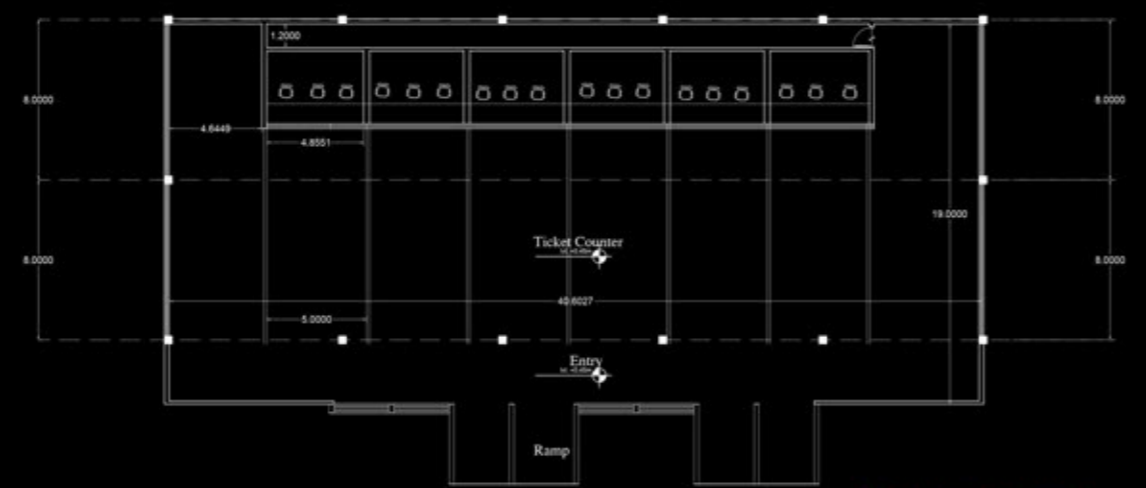
CENTRE FOR EXCELLENCE PARA SPORTS



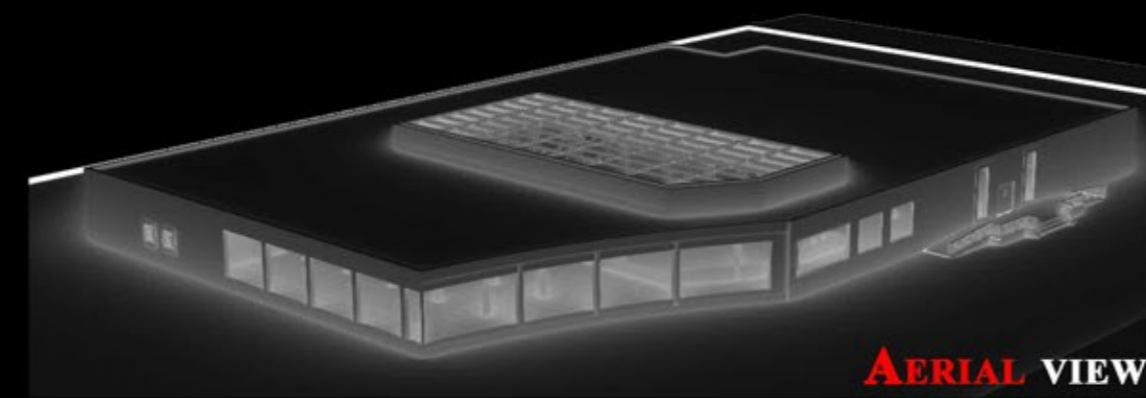
ADMINISTRATION PLAN



TICKET COUNTER PLAN

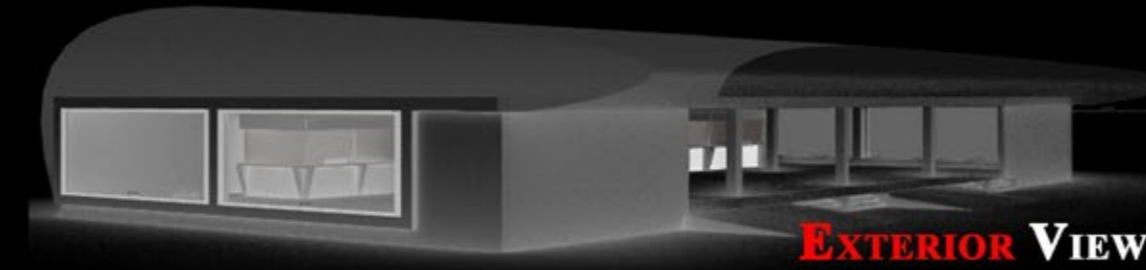
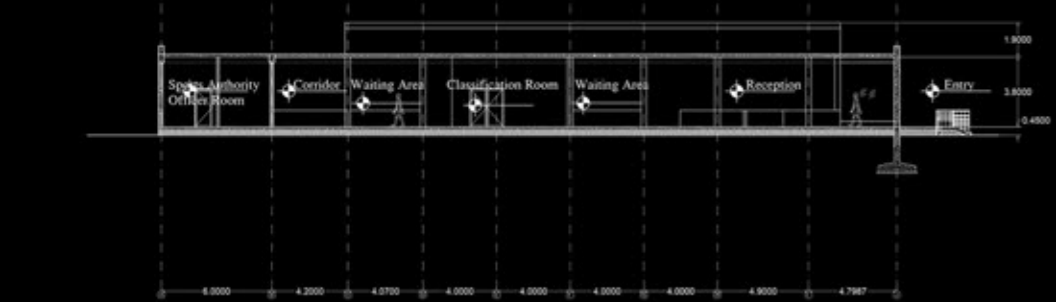


ELEVATION



AERIAL VIEW

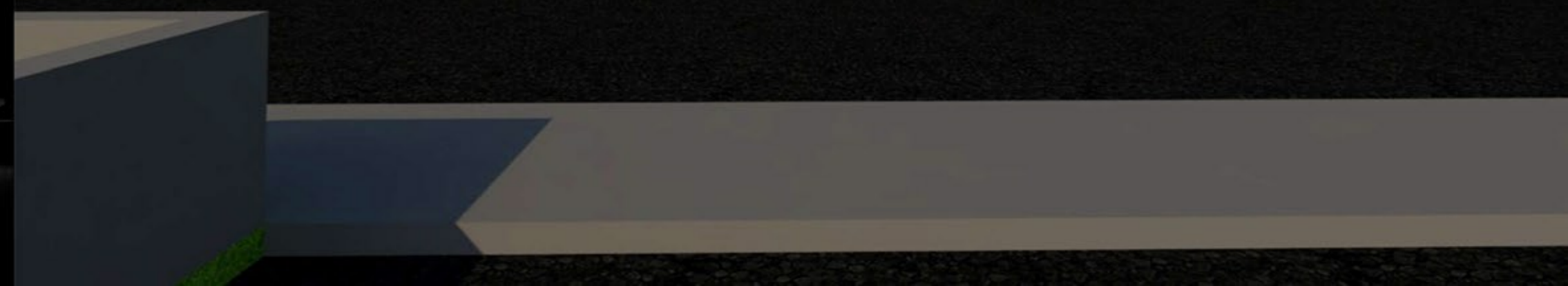
SECTION A-A'



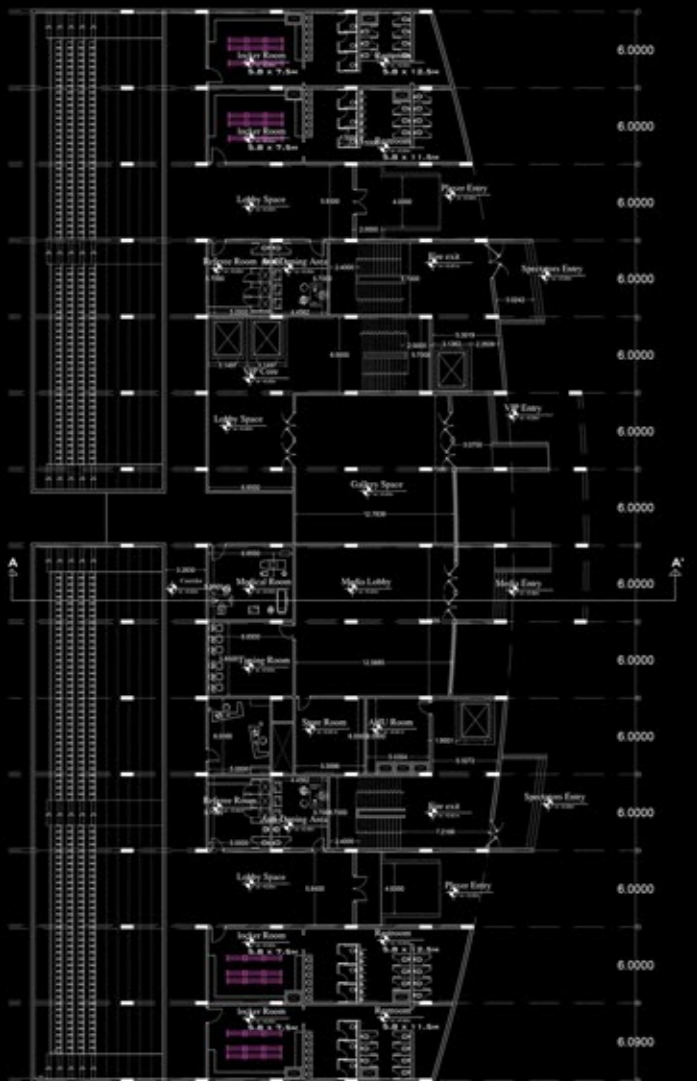
EXTERIOR VIEW

TICKET COUNTER

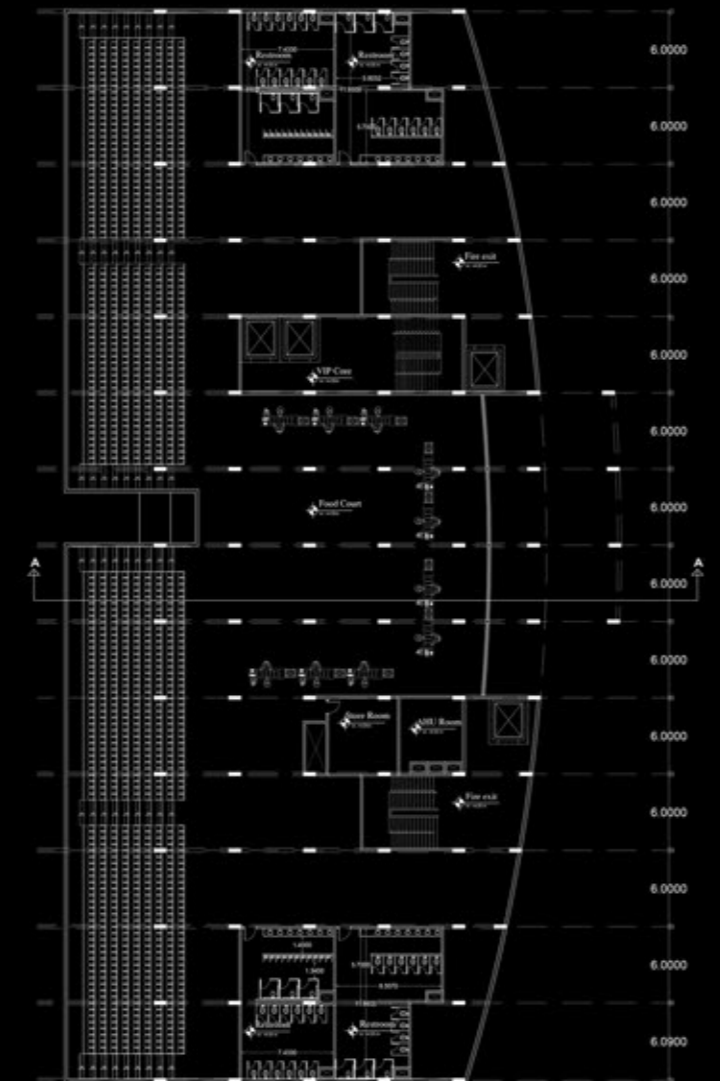
VIEW



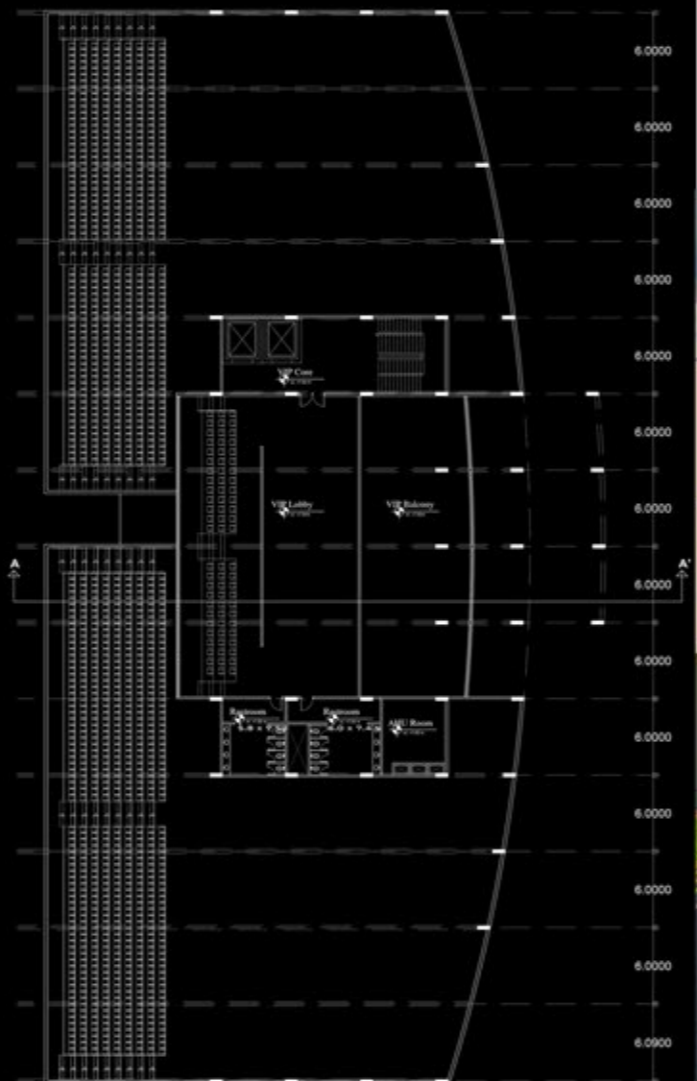
TRACK STANDS
GROUND FLOOR PLAN



TRACK STANDS
FIRST FLOOR PLAN



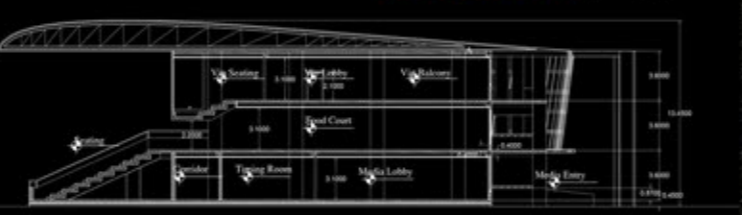
TRACK STANDS
VIP SEATING PLAN



ELEVATION



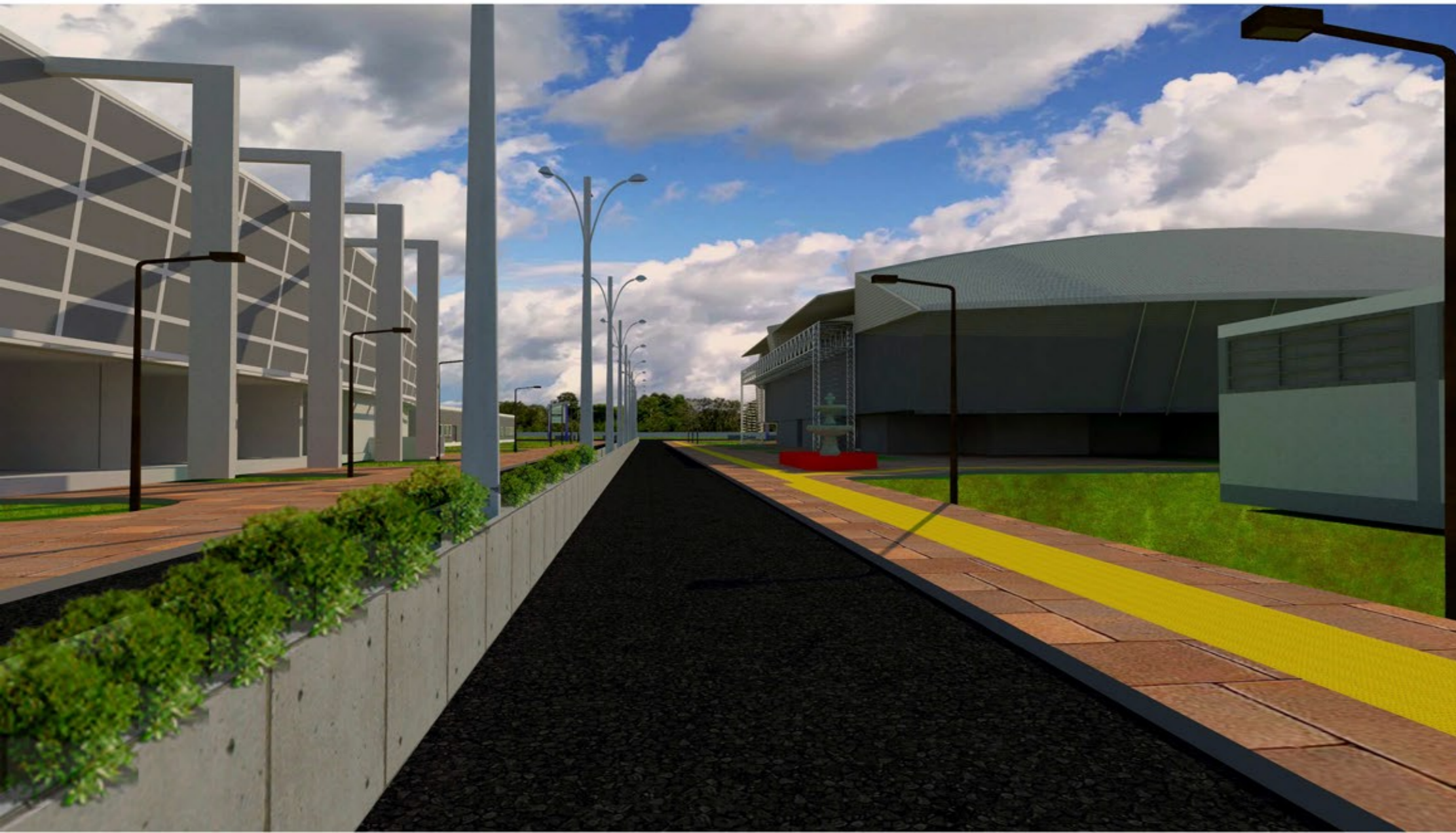
SECTION A-A'



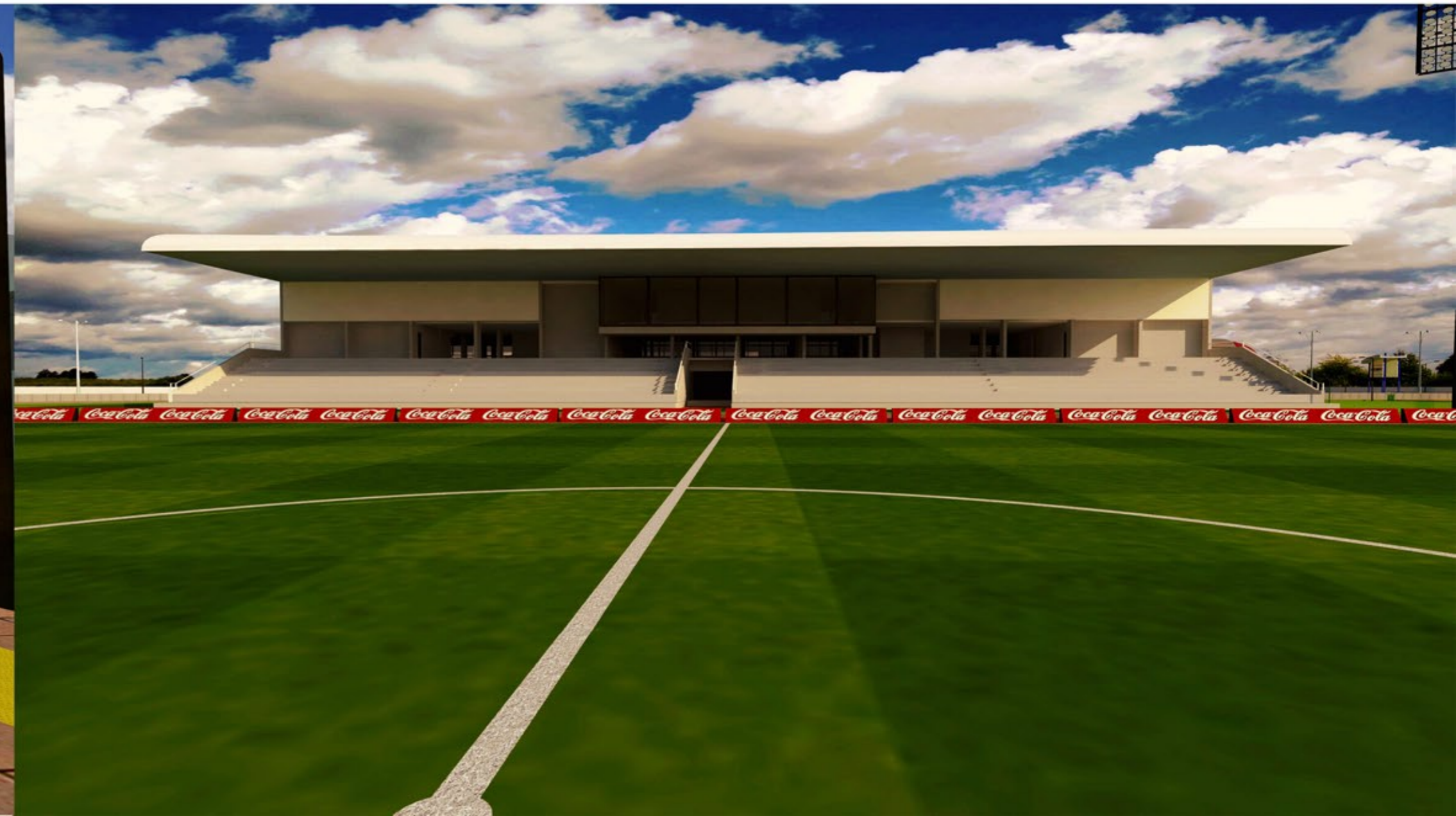
ATHLETIC TRACK AND FIELD VIEW



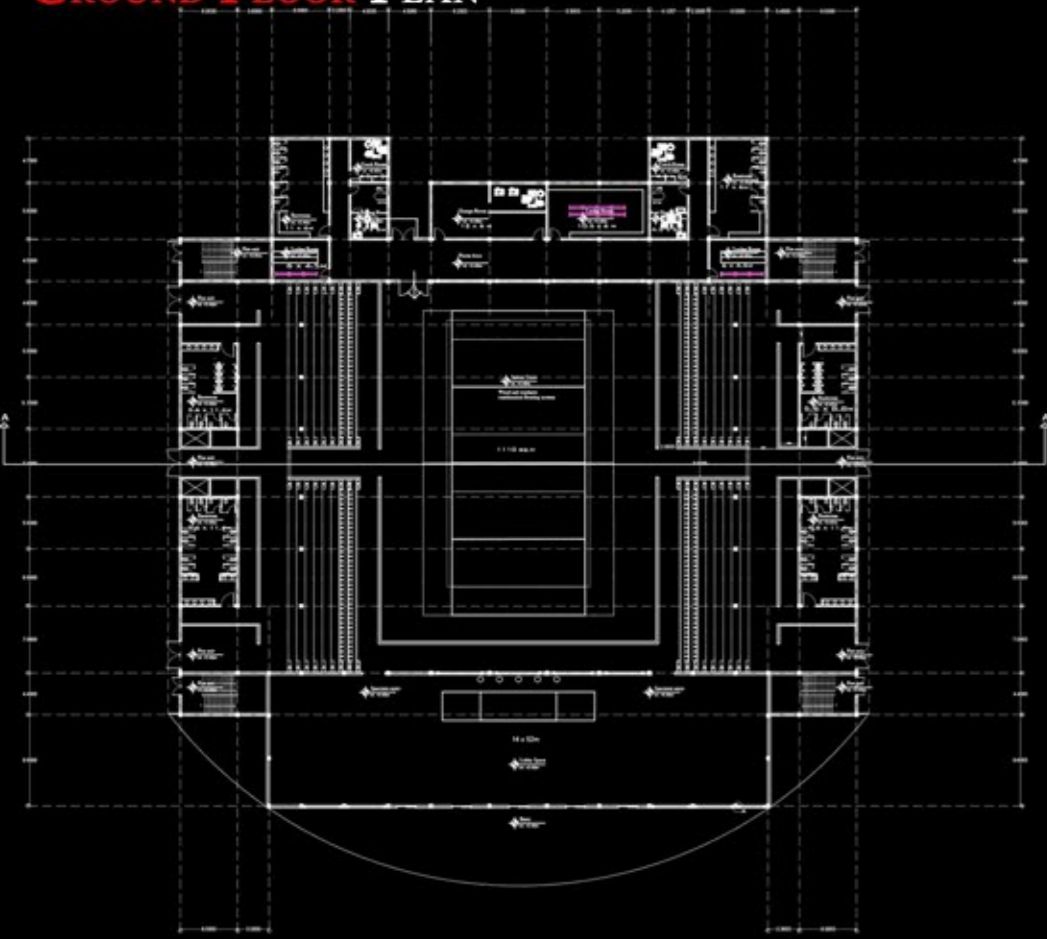
**ATHLETIC TRACK
AND FIELD VIEW**



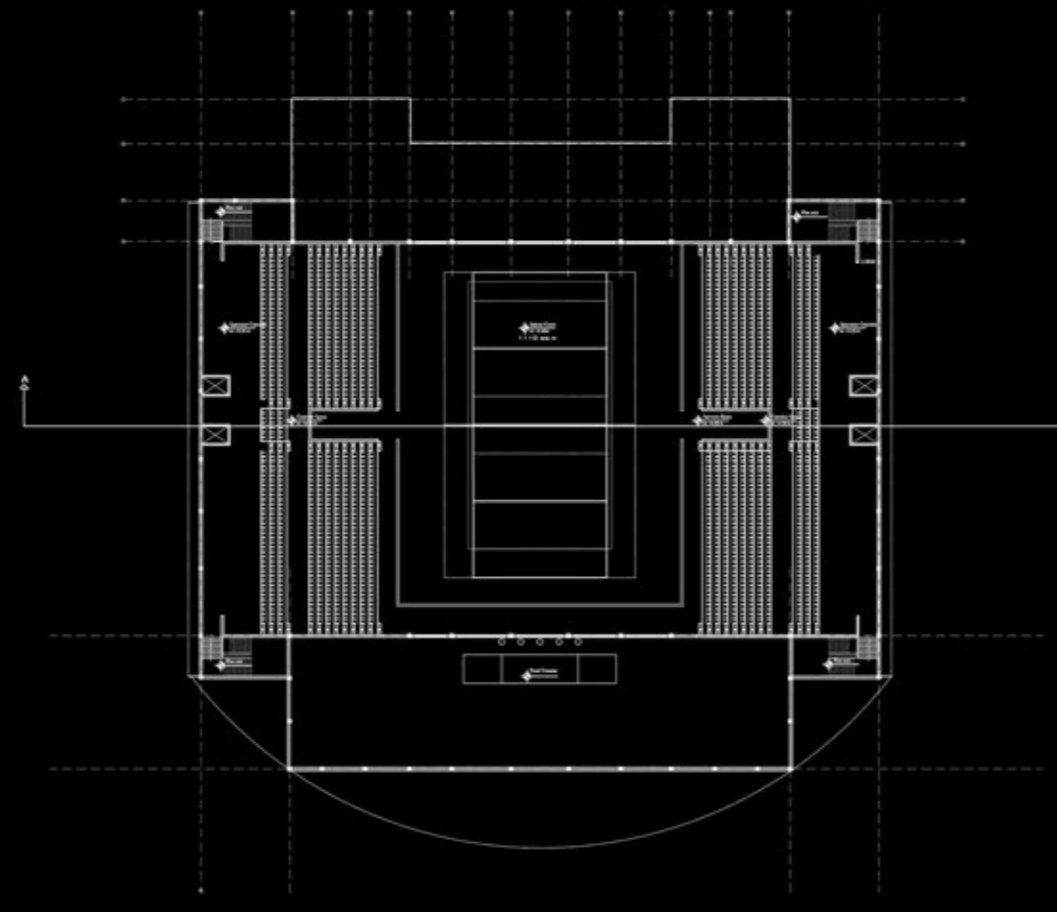
**ATHLETIC TRACK
AND FIELD VIEW**



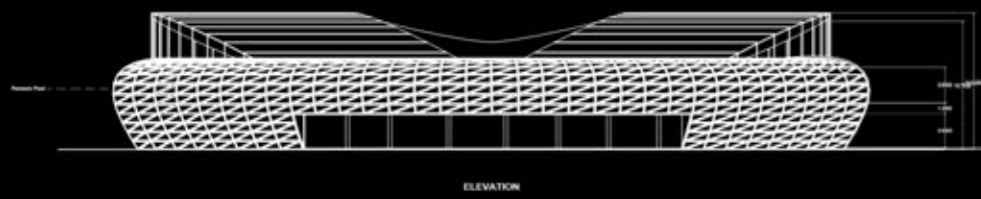
GROUND FLOOR PLAN



SEATING PLAN



ELEVATION

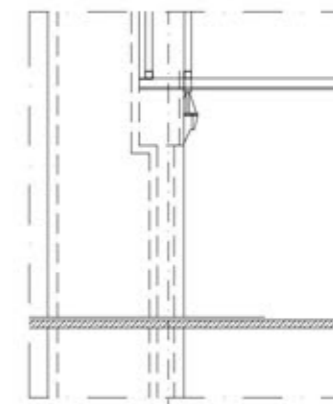
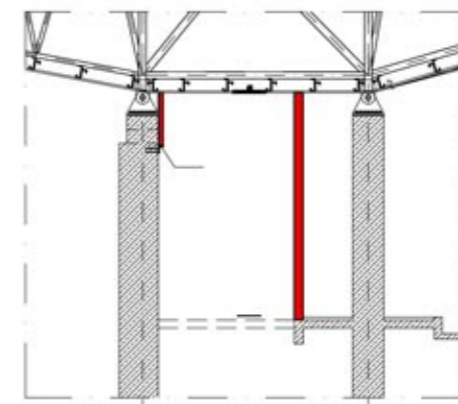
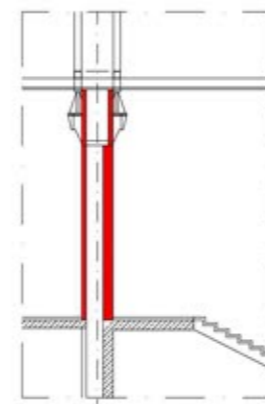


SECTION A-A'

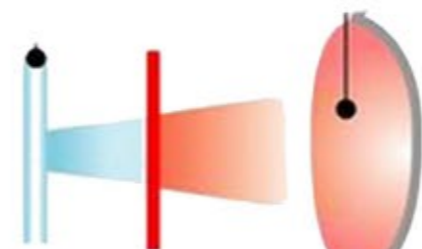


DETAILS

TRUSS DETAIL



PNEUMATIC PANEL

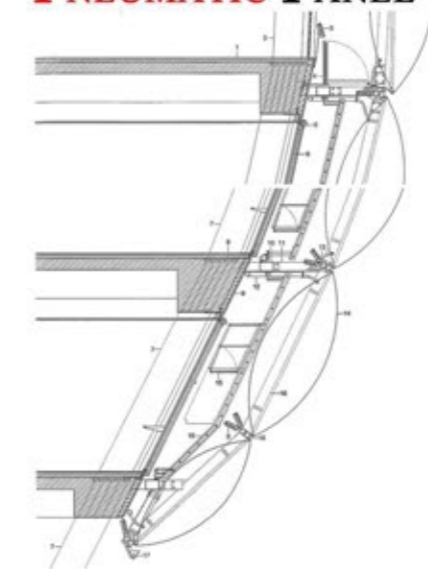


COLOUR
FILTER

ILLUMINATING
PANEL

FLORENCE
EMITING LUZ

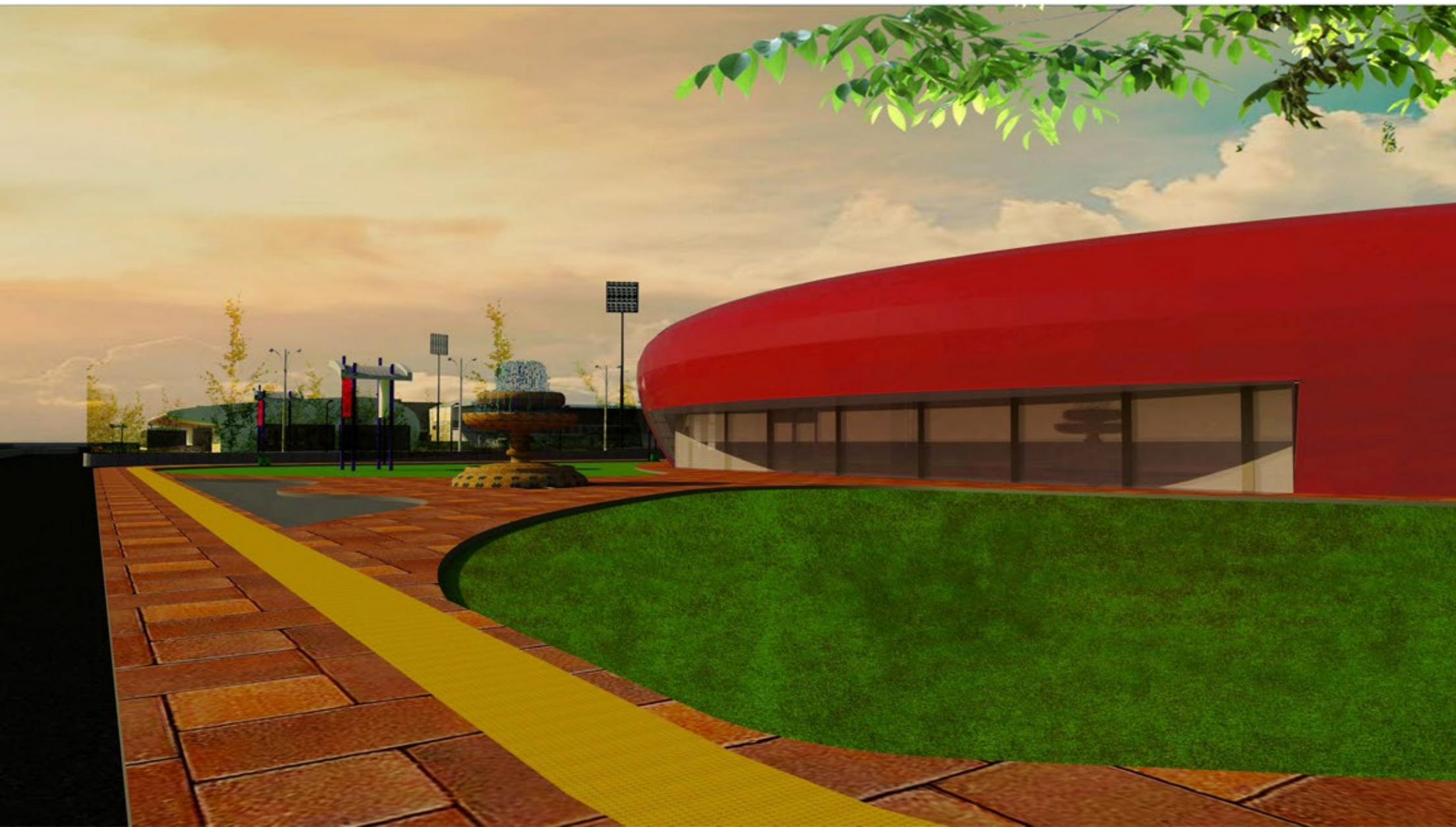
PNEUMATIC PANEL



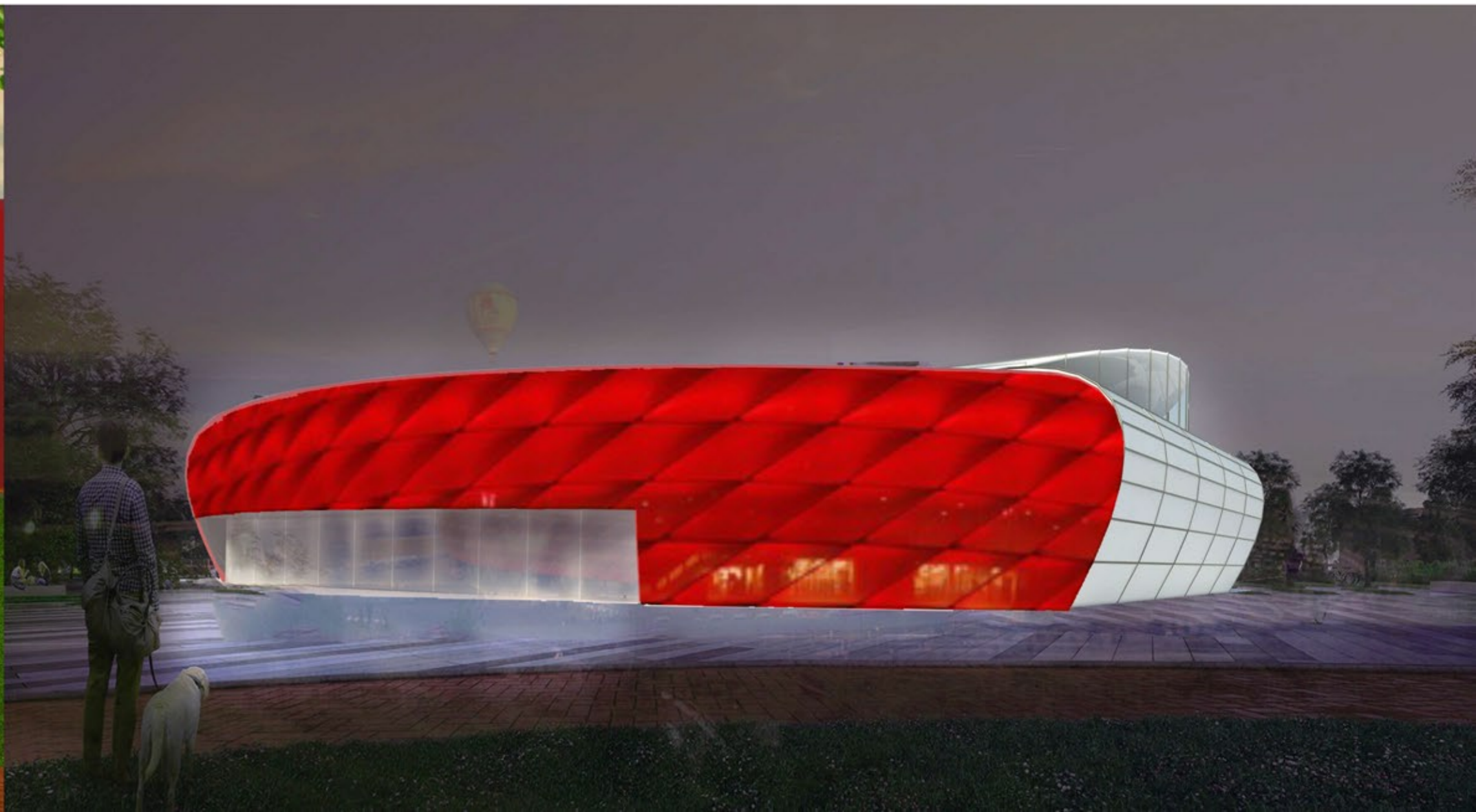
Section scale 1:50

- 1 60 mm mastic asphalt
- 250 mm concrete fillree beam floor
- 1250/900 mm reinforced-concrete floor beams
- 2 reinforced-concrete composite column
- 3 3500/300/60 mm lighting unit
- 4 4 mm sheet-steel smoke flap
- 5 roller sunblind
- 6 post-and-rail facade with double glazing
- 7 precast spun concrete column (variable dia.)
- 8 bolt fixing of precast concrete column
- 9 2x 12.5 mm fibre-cement sheeting with smooth render finish
- 100 mm mineral wool
- reinforced-concrete edge beam
- 10 200/300 mm steel RHS with traveller
- 11 facade bracket, 2x 100/80 mm steel flats
- 12 100 mm dia. air duct to facade
- 13 50 mm dia. polythene air tube
- 14 cushion, 0.2 mm ETFE sheeting
- 15 ladder of travelling system
- 16 secondary construction:
- 120/220 mm steel RHS
- 17 6 mm galvanized sheet-steel gutter

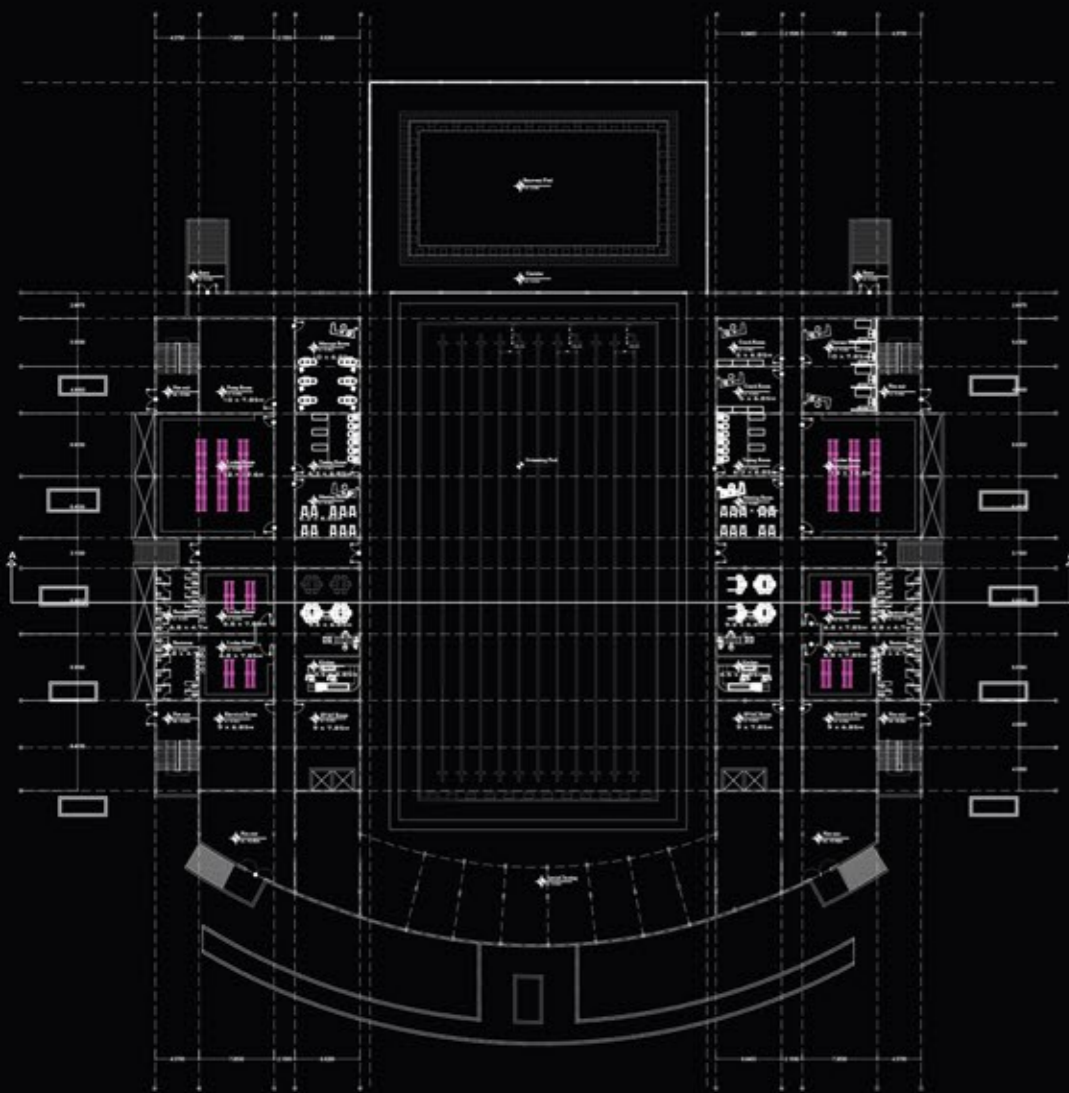
INDOOR PLAY AREA



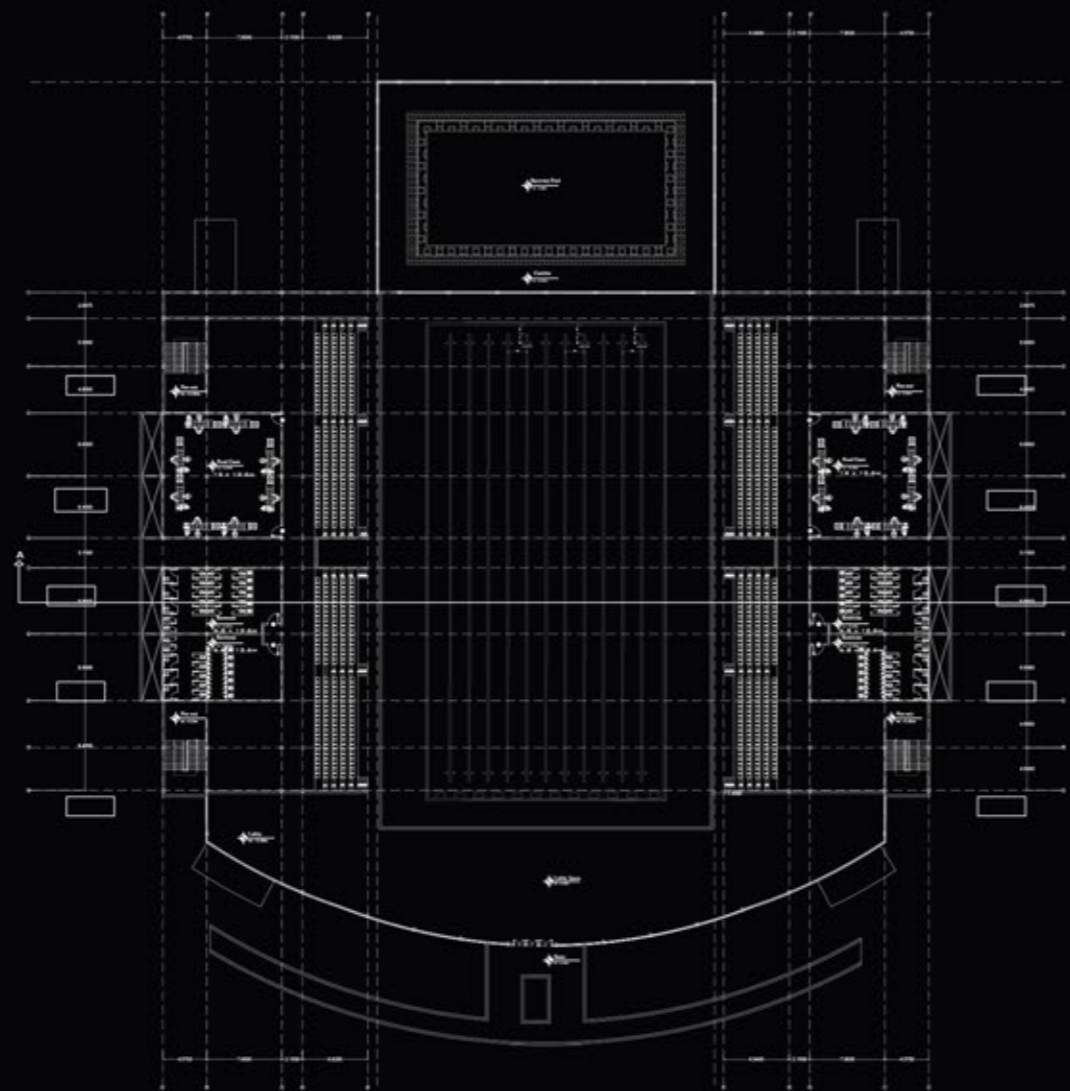
INDOOR PLAY AREA



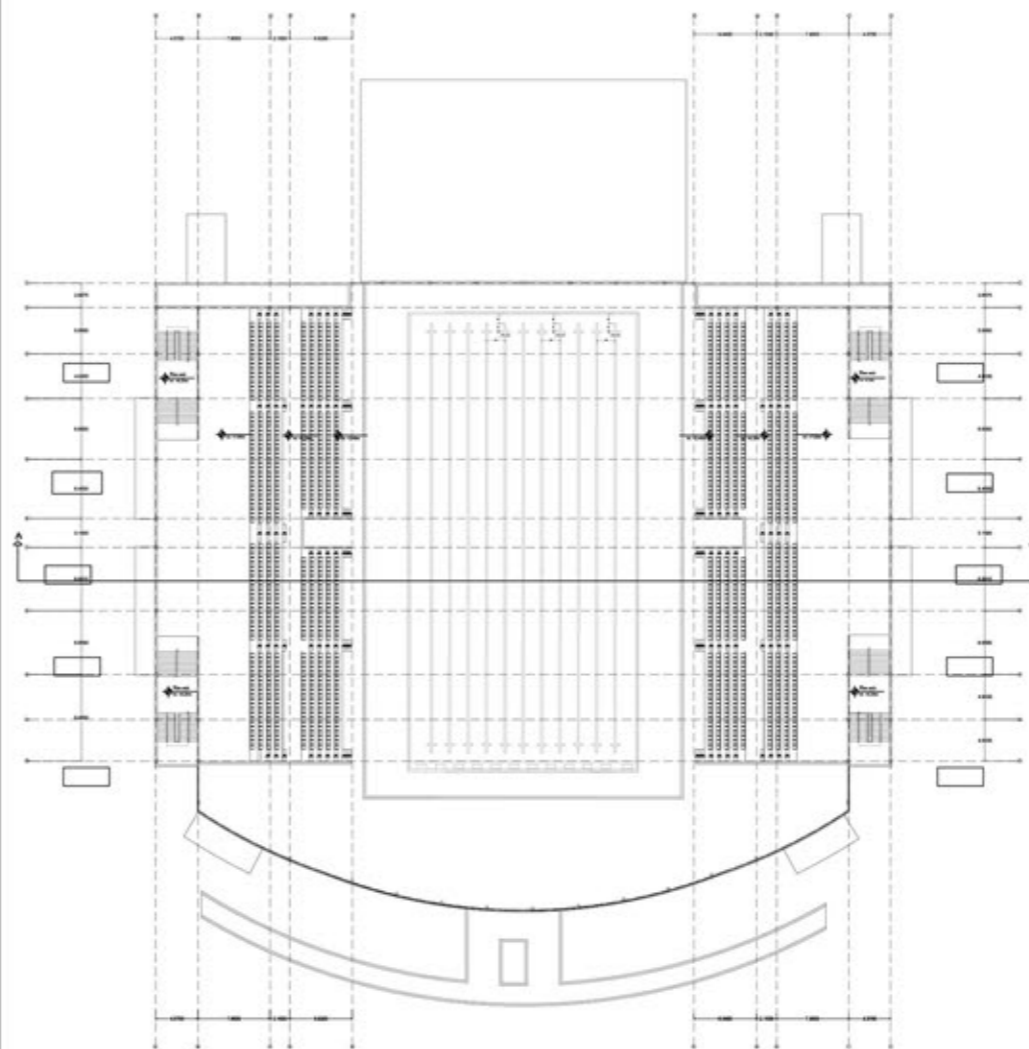
GROUND FLOOR PLAN



FIRST FLOOR PLAN



SEATING PLAN

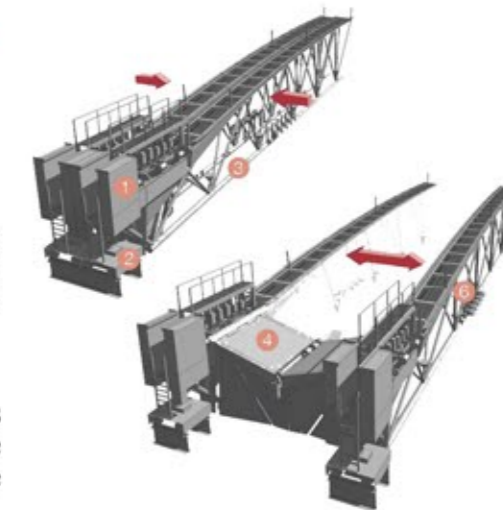


ROOF VIEW



RETRACTABLE ROOF DETAILS

- 1. Control gear boxes** .These gear boxes operate the actuators.
- 2. Trusses**
Each of the ten steel trusses that span the court weighs 70 tons.
- 3. Actuators**
Electronic actuators push down on the arms between the trusses.



- 4. Arms**
As the arms are pushed, they spread the trusses apart, closing the roof.
- 5. Lights**
120 sports lights are carefully arranged so the court is evenly lit.
- 6. Bogies**
The trusses run on these wheeled trolleys that run along a rail.

SWIMMINGPOOL DETAILS



DETAIL A



DETAIL B



DETAIL C

SECTION A-A'

TILES FIXED WITH WATER RESISTANT TILE ADHESIVE

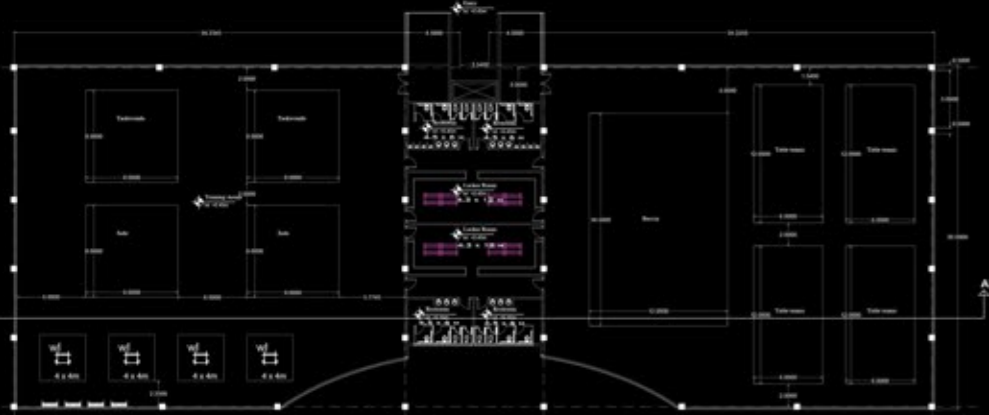
**SWIMMING FRONT
ELEVATION**



SWIMMING VIEW



TRAINING FLOOR PLAN



SECTION A-A'



ELEVATION



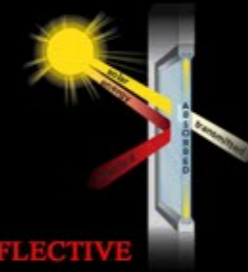
MATERIALS



ETHYLENE TETRAFLUOROETHYLENE

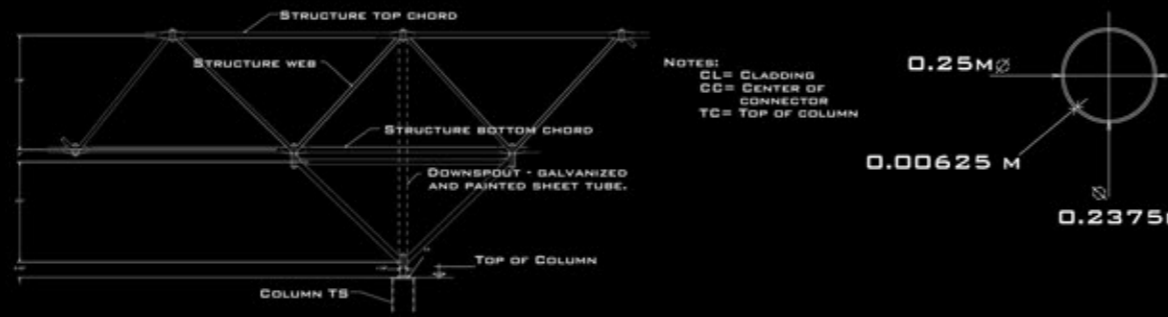


STEEL



SOLAR REFLECTIVE GLASSES

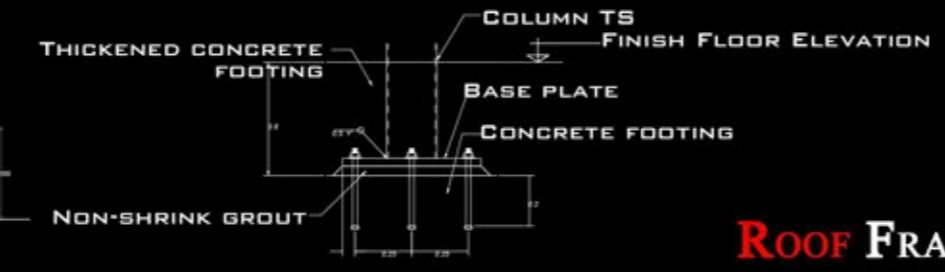
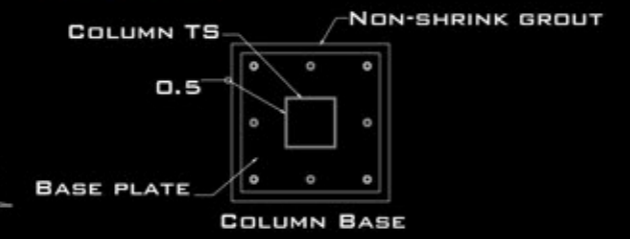
SPACE FRAME DETAIL



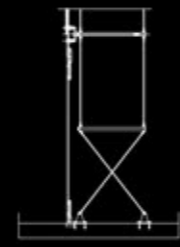
NOTES:
CL = CLADDING
CC = CENTER OF CONNECTOR
TC = TOP OF COLUMN



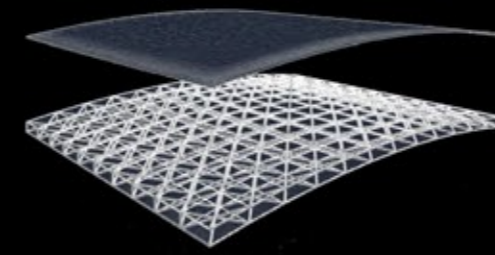
COLUMN DETAIL



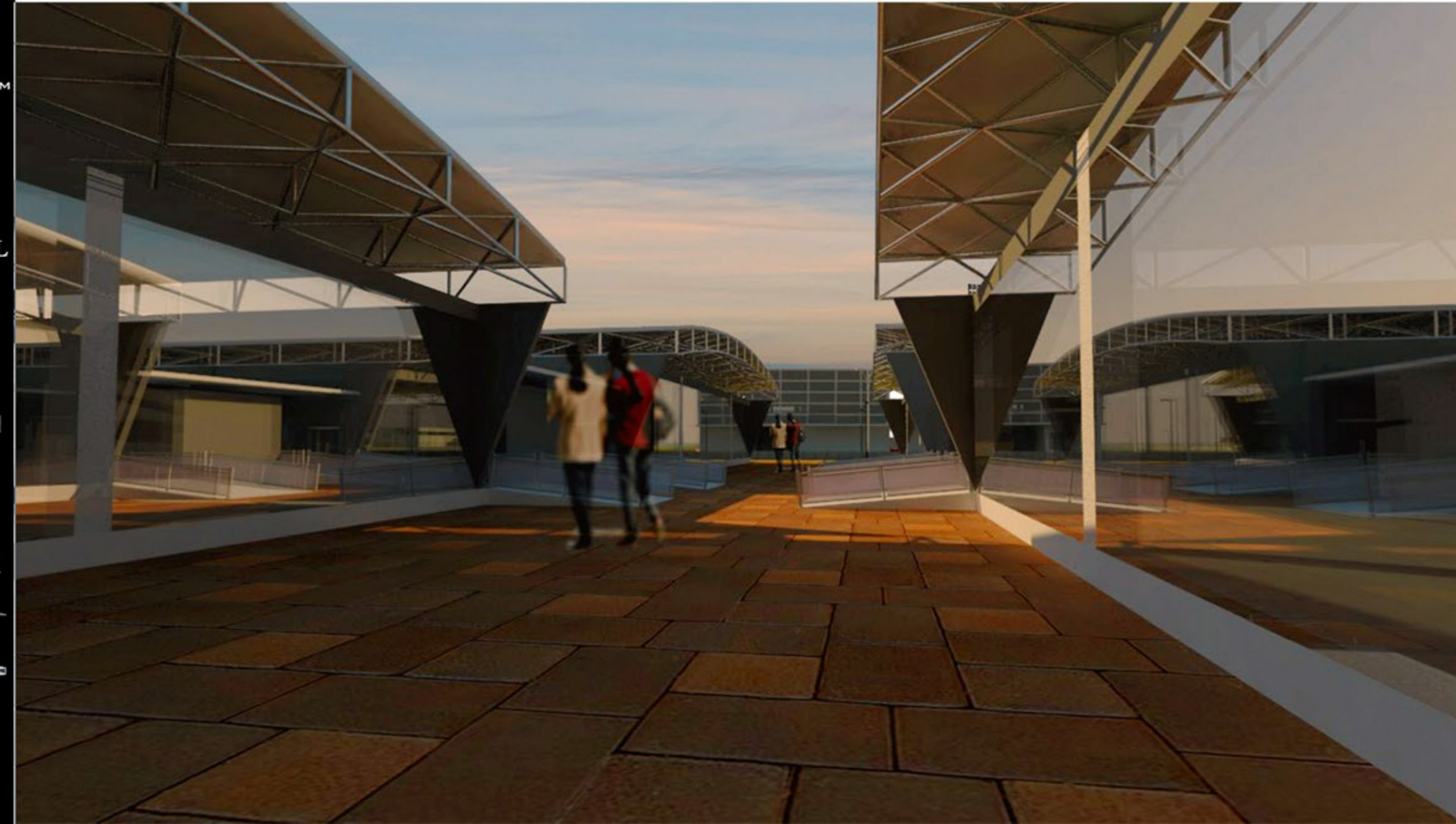
SPIDER GLASS FACADE DETAIL



ROOF FRAMEWORK



TRAINING AREA VIEW



5A SIDE FOOTBALL FLOOR PLAN



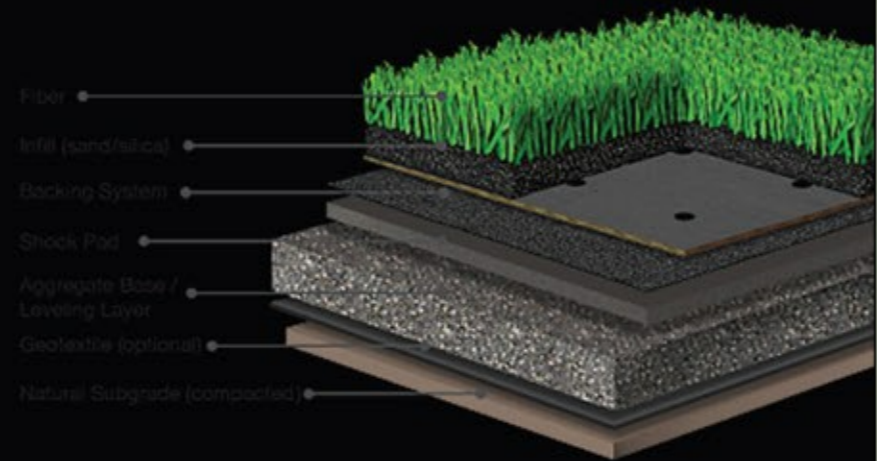
MARKER TILE

TACTILE PAVING

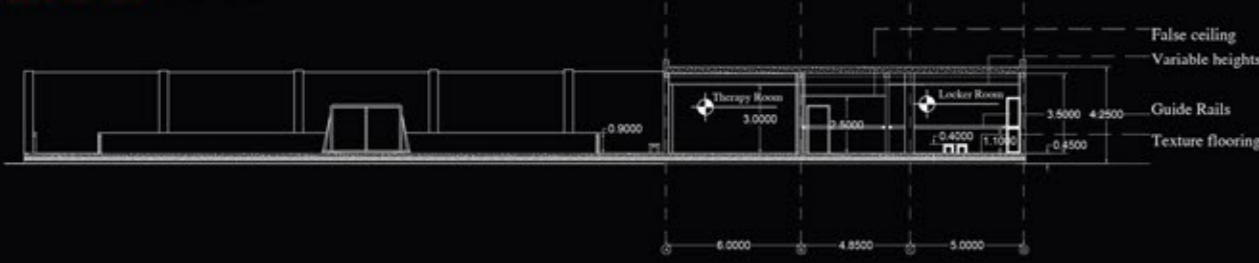


ANTI SKID FLOORING TILE

ARTIFICIAL TURF DETAIL



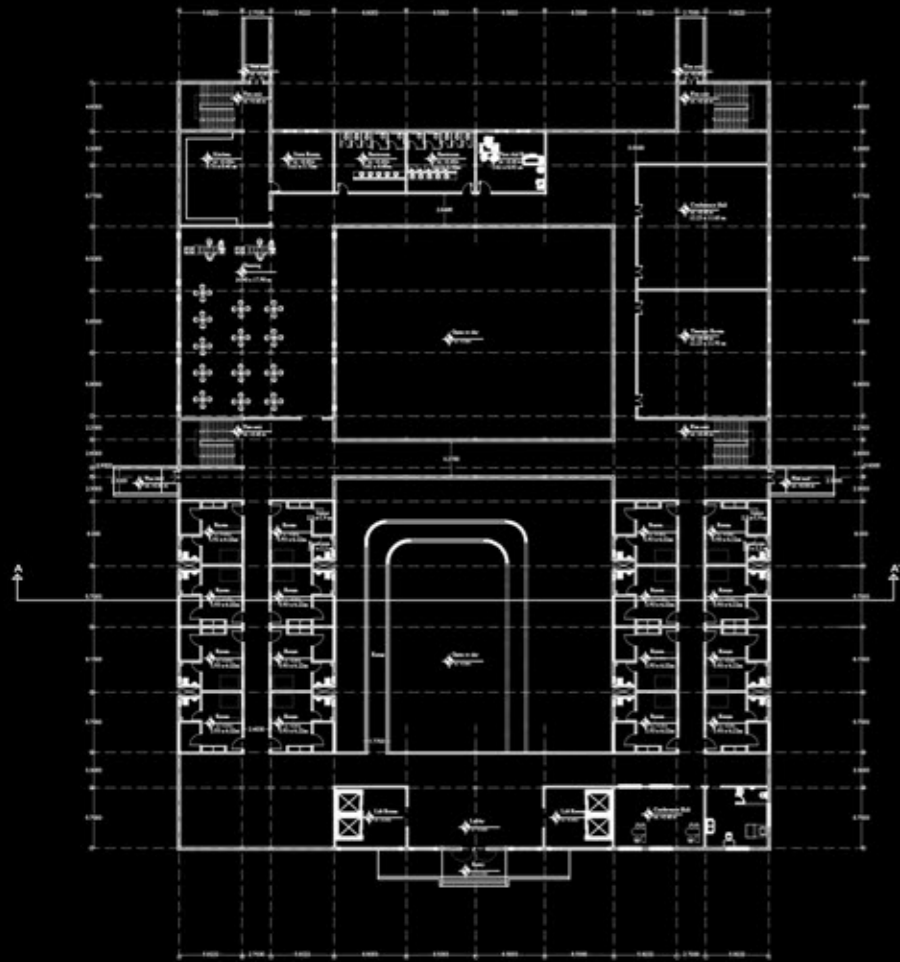
SECTION A-A'



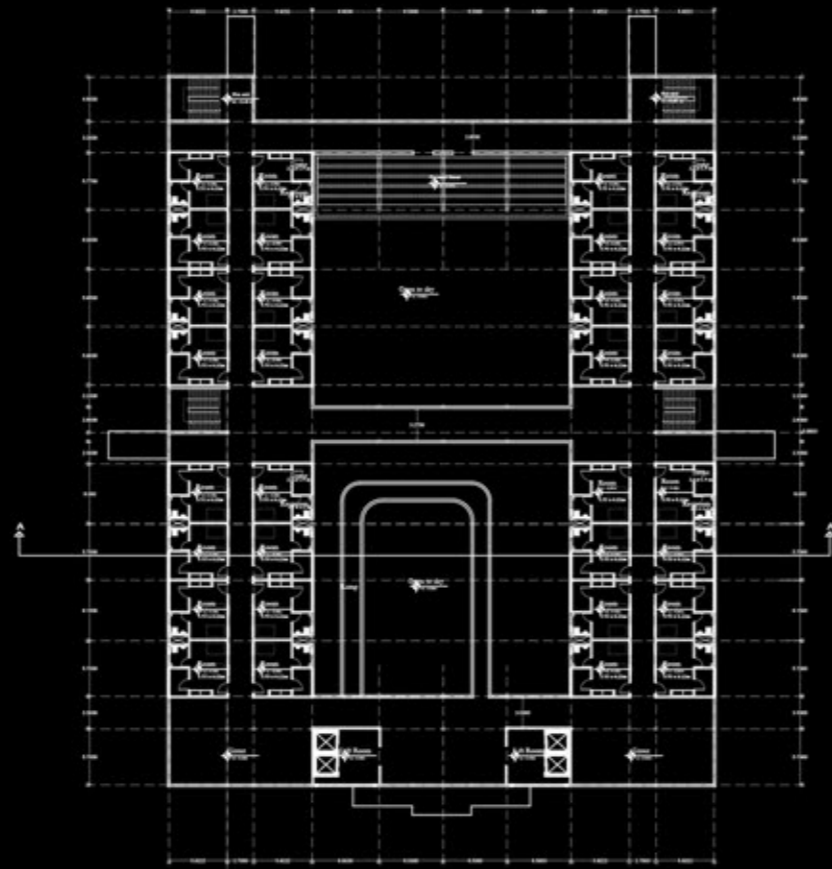
BLIND GAMES VIEW



GROUND FLOOR PLAN



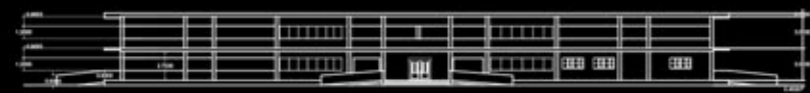
FIRST FLOOR PLAN



HOSTEL VIEW



ELEVATION



ELEVATION

SECTION A-A'



SECTION A-A'



ANDC 04

DEMARCATIION OF SPACES

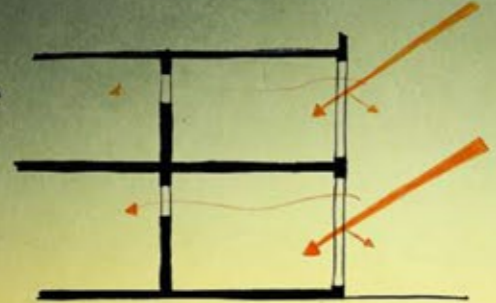
Large rooms with ample space and adaptable areas between the rooms. The subtle color, contrast, and adaptable lighting elements maximize use of users residual vision.



GUIDING PATHWAYS
Each bay of sensory trail wall is individually shaped. This helps people orient along the length of the circulation space. Floor finishes are of non slip material. Doors are either sliding type or the outward opening type.

A network of paths around the school and the gardens vary in finish from bound gravel which crunches under foot to recycled bound rubber and timber decking.

VENTILATION

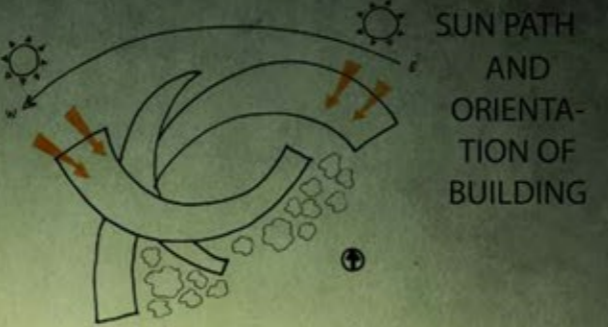


Each area is defined by separate finishes, which feel and sound different under foot.



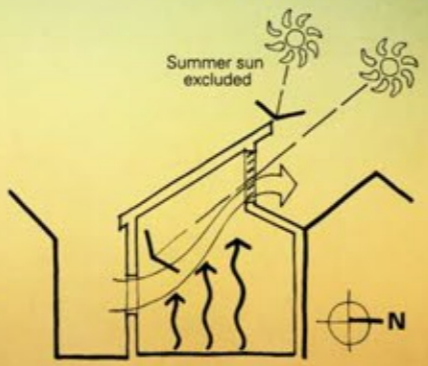
Redundant signage throughout the spaces, in Braille and pictograph and Moon, caters for the diverse communication abilities.

GUIDING COUNTERS



SUN PATH AND ORIENTATION OF BUILDING

The scale of these is then more appropriate for navigating and also minimizes any visual confusion by reducing the extent of the spaces.



Corridors are designed as streets, which also assist with orientation and mobility.

SHADING DEVICE

Differing tactile floor finishes serve as an alternative or enhancement to the trail walls for navigation and cuing in some locations inside the park.

ORIENTATION ACCORDING TO WIND DIRECTIONS



The curved form means that both internally and externally the building is broken down into manageable spaces.



The building was developed as a series of space groupings for simple orientation.

SITE ZONING :

The zoning of the site is done in such a way that the structure in the centre is the main structure given most importance even in terms of access.

The structure to the south of the site is the open air theatre whereas the one to the north is the reception.

Existing landscaping in the area is minimal and the waterbodies on it are man - made.

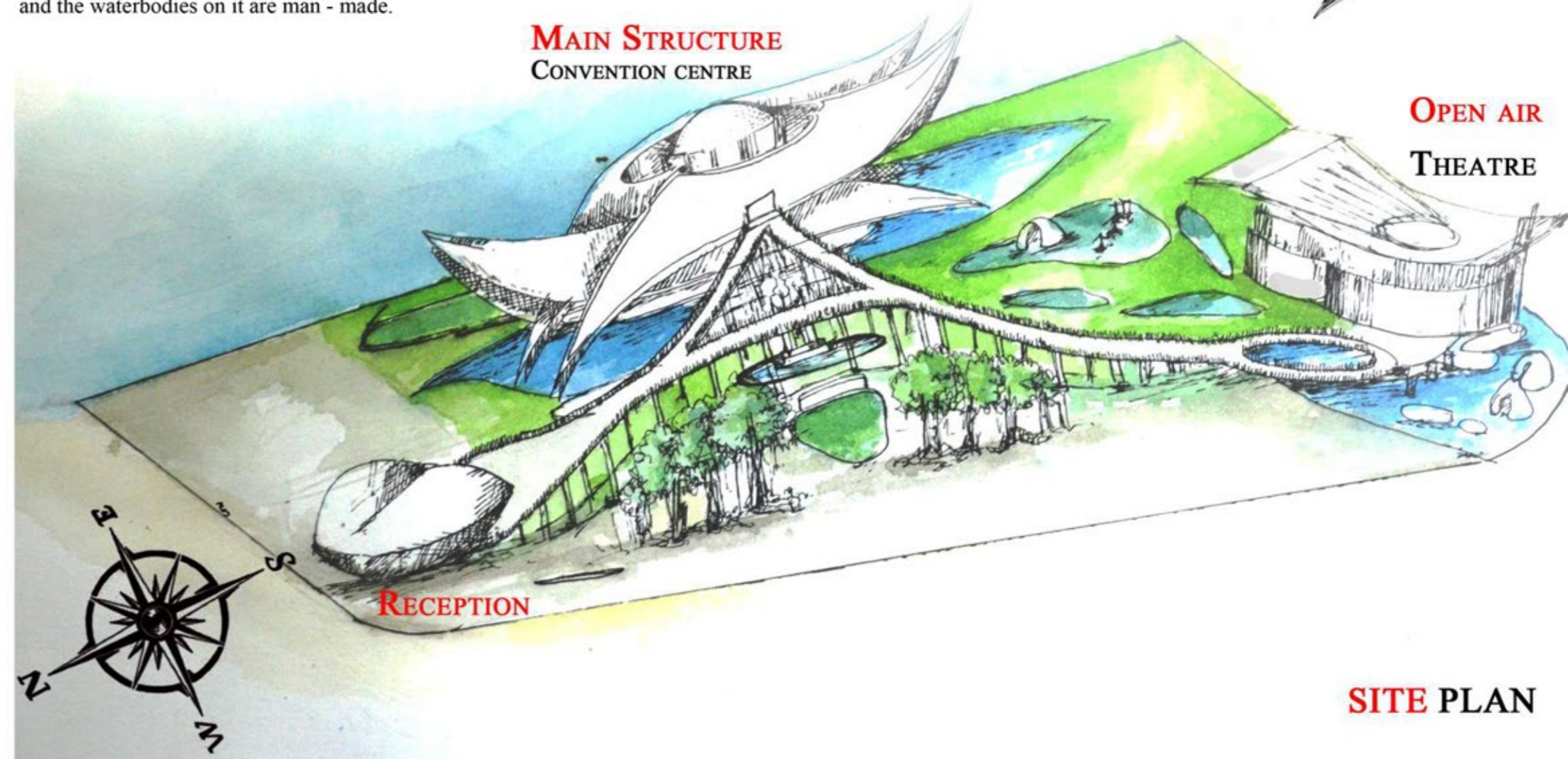
EVOLUTION OF FORM



NETHRA (ANDC)

MAIN STRUCTURE CONVENTION CENTRE

OPEN AIR THEATRE



SITE PLAN

EVOLUTION

The gradual development of something

REVOLUTION

A dramatic and wide-reaching change in conditions, attitudes, or operation

RE-EVOLUTION

The evolution of something that has been revolutionised and then later on, died down.



Society is defined as the aggregate of people living together in a more or less ordered community and it is the very same society that is responsible for the progress in their own community or over all, the country.

Equality may be defined as the state of being equal, especially in status, rights and oppurtunites. But living in society such as ours, we do not provide much attention to this word which might mean the world someone else.



Various forms of inequalities include :



Inequality on the other hand, may be defined as the lack of oppurtunites provided to certain people who have been categorized as otherwise.



Social Inequalities refers to the ways in which socially defined categories of persons are differentially positioned with regard to access to a variety of goods.



In most cases these "different people" are those unique individuals we see ever so frequently, the disabled.

SO HOW ARE THE DISABLED TREATED UNEQUALLY IN OUR SOCIETY?

Disabilities.....



The differently abled are not disabled only because they are physically or mentally impaired but also because society is built in a manner that does not cater to their needs.

We all know that,

"EXPERIENCE IS THE BEST TEACHER"

Society will learn only if they are made to step into the shoes of those who are disabled.

Society will learn the importance of not only those individuals but wil also start to love themselves.

DISABLED	SOCIETY
BLIND	BLINDFOLD THEM
DEAF	COVER THEIR EARS
DUMB	DON'T ALLOW THEM TO TALK
AMPUTEE	REFUSE THE USE OF ANY LIMB

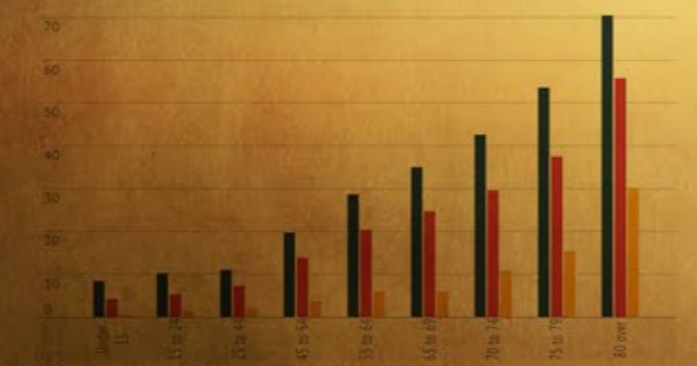
The society has already been through a lot of revolutionary movements , with just another one waiting to happen...

Disabled people who are treated unequally in the society tend to move into poverty due to the refutation of their rights.

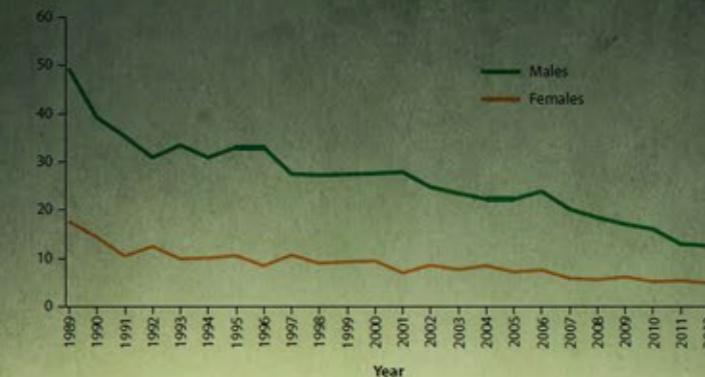
Slowly they become vulnerable to ill - health and succumb to their injuries due to improper treatment.



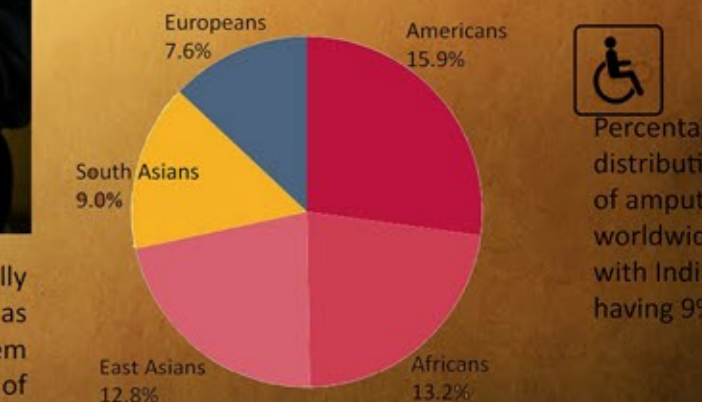
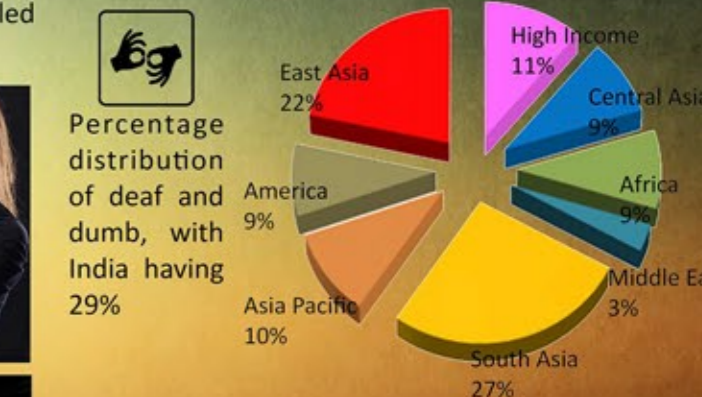
- **Reduced participation** in decision-making and reduced political and civil rights.
- **Deficit** in economical, social and cultrual rights.
- **Denial of oppurtunites** for economic, social and human development
- **Social and cultural exclusion**



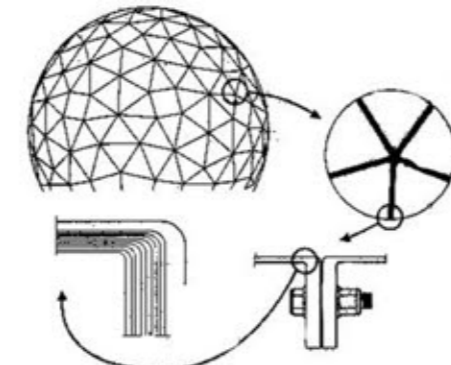
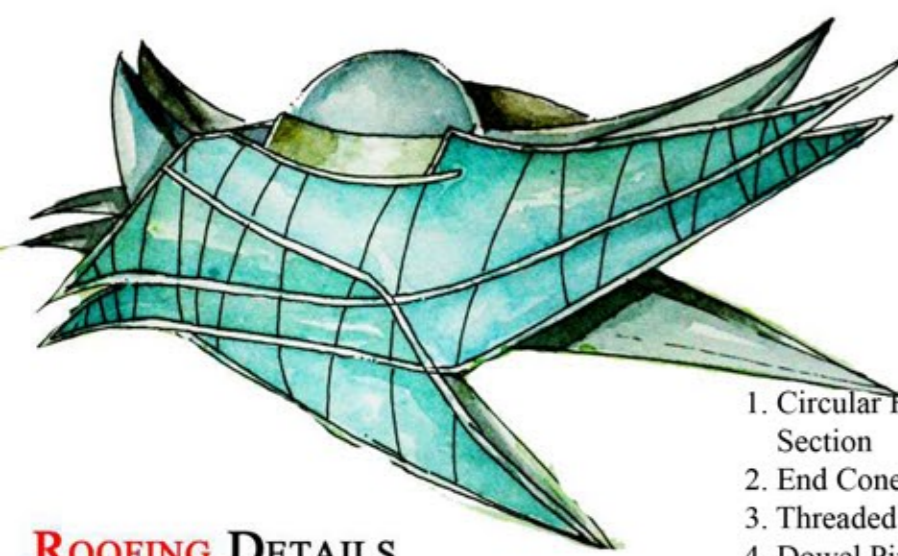
The society has been divided into two sects, namely the These include the blind, the deaf and dumb, the physcally "upper-class" and the so called "lower-class", who disabled and so on, people who are not considered as refuse to mingle with each other. But there is also a third "whole". But this basic classification has an affect on them sect, known as the "Incapacitated People". at a psychological level that almost none of us are aware of



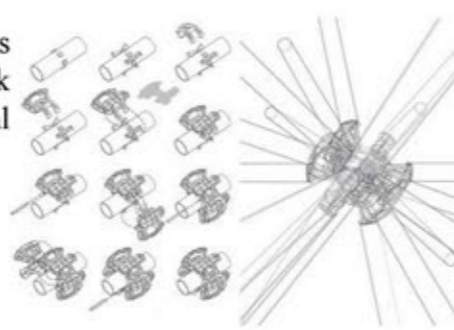
The above graph displays the number of people who suicide due to depression after being bullied and belittled by the society.



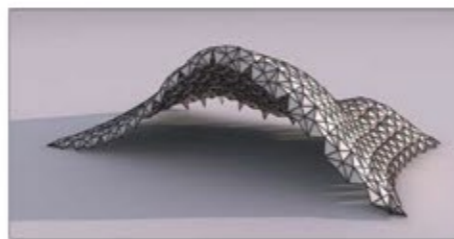
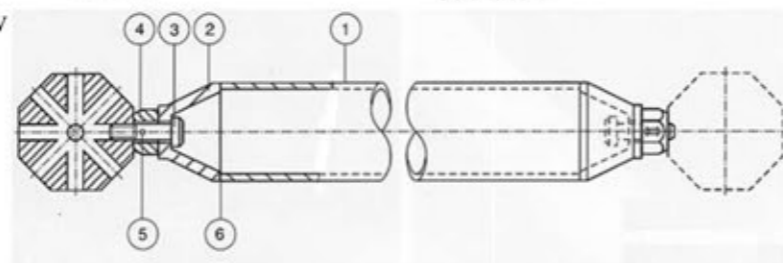
But the most important factor to achieve something revolutionary is **EQUALITY**.



The triangle formed creates a self-bracing framework that gives minimal structural strength and minimum material is used.

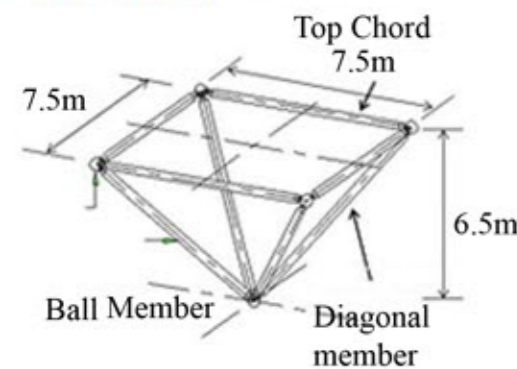


Here, one main hollow section is being connected to 4 other sections that branch out later.



1. Circular Hollow Section
2. End Cone
3. Threaded Bolt
4. Dowel Pin
5. Sleeve
6. Welded Seam

ROOFING DETAILS



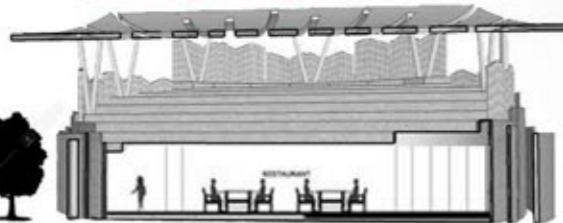
The auditorium is 60m long and 33m wide including the roof structure. It is designed using various materials like bamboo, metal, bricks and wood.

The layer of bamboo acts as a BARRIER for the auditorium. It helps in comfort cooling and acoustic purposes. It is also efficient as it is a locally available material. Bamboo is used as a contrasting material to hybrid steel.

SMP can be cast and cured into any "memorized" shape, from a thick sheet, to a concave dish, to a complicated open honeycomb network. SMP can also be used as a coating on another material.

The flooring of the structure has been designed with a difference in use of materials in such a way that the blind may be able to access all the places of interest with ease and comfort.

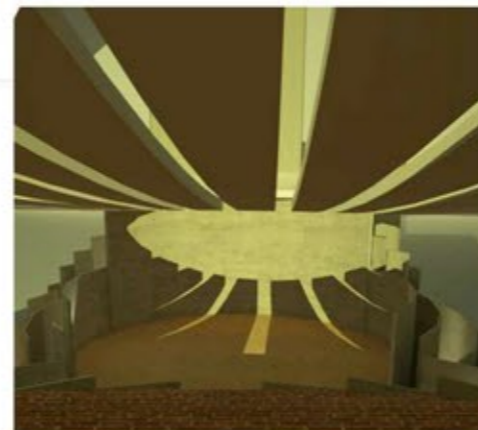
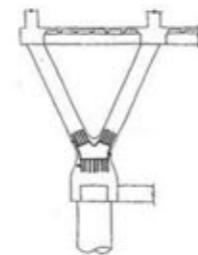
TRANSVERSE SECTION



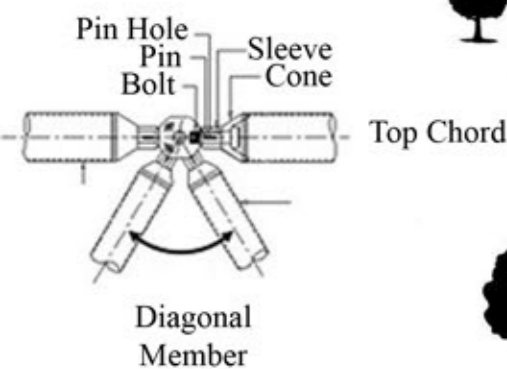
LONGITUDINAL SECTION



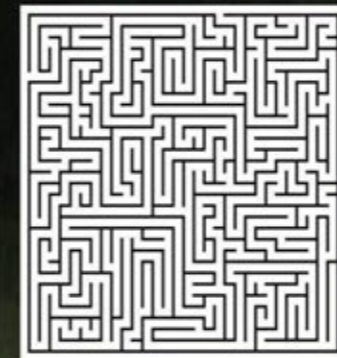
Here, V - Columns are used to support the roof and to pass the load from the super structure to the sub-structure.



Space frames are mainly used for the roof structure, to bring out the necessary flow and to decrease the weight of the roof.



SPECIAL FEATURES



The life of a disabled person is not a smooth one from start to finish. It has many unexpected turns and barriers and nothing better to form a mental picture of their lives, other than a MAZE.

A LIBRARY, which is built especially for the blind, where the more abled person will get to learn the art of reading brailles.



GALLERY

A place where the disabled are given an opportunity to display their talents in the form of arts and handicrafts.

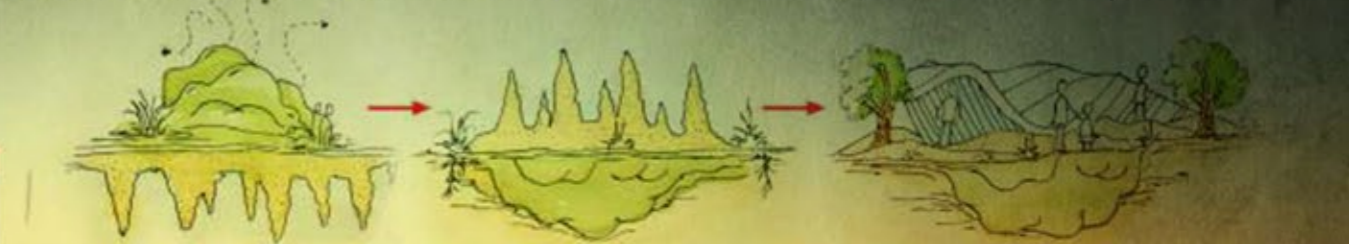


DUMPYARD



Usually to get rid of one dumpsite, another cleaner site gets converted into a dumpsite.

The existing dump has been pushed to the substructure which later, proves useful.



This has a more positive outcome in the existing site itself rather than taking the dumpyard somewhere else.

The dump below the building can be used to generate electricity.

The PATHWAY of INCENSE

A sense of smell has a deep emotional connection to the brain, this is why memories that are triggered by scent seem more easier to recall.

Jasmines are widely cultivated for the characteristic fragrance of their flowers and is widely grown in Asia.

Roses are native to Asia and they are widely grown for their beauty and often are fragrant.

This provides a sense of direction to those who cannot see.





SIDC 05

DESIGN DESCRIPTION

The design aims to position itself as a unique icon with provision of Sports, various leisure, recreational facilities for the locals as well as visitors from all over the world.

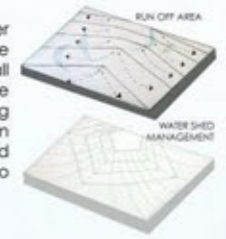
SITE - ZONING



Considering the surrounding as a whole, the zoning of the site is in three parts depending on the amount of activity and the decibels of sound. Starting with the vehicular zone, the noisy area due to the commotion of moving vehicles around the stadium. The live zone, which is the place with utmost people activity in the stadium and finally the calm zone which is a silent area with less movement or sound with the beautiful chirpings of the birds and the soothing wind from the shore.

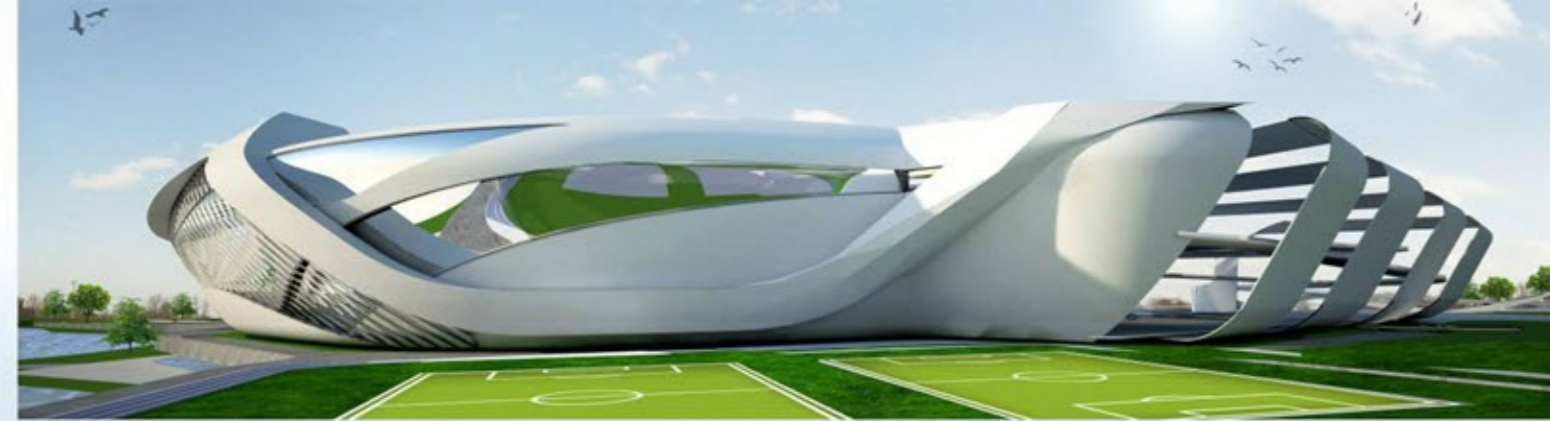
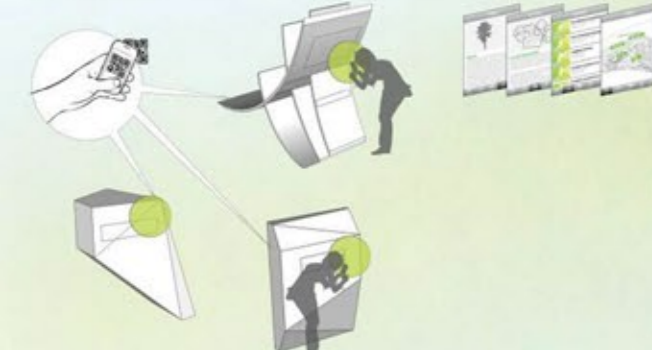
WATER RUN OFF

The site being located in a marshy land, has higher water table throughout the year. This is managed in the design with the help of gradual slopes along all directions surrounding the stadium ensuring the movement of water away from the stadium making the drains work efficiently. It is also implemented in the parking zone which is designed in levels and landscaped in such a way to allow water to run off to the lowest points in the site.



WAY FINDING AND INFORMATIVE SIGNAGE

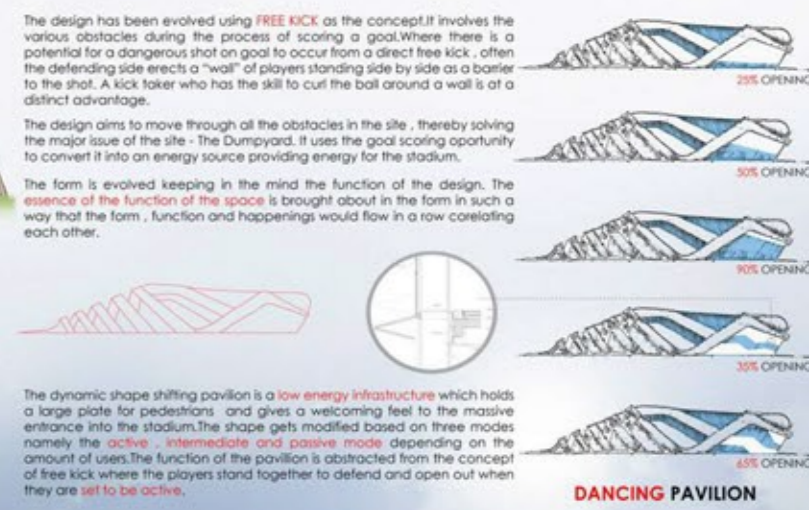
Making use of technology as a medium, Bar code scanner present throughout the site helps guide the people to the right path / place and also gives an insight about the happenings in the stadium with just one click on our smart phones.

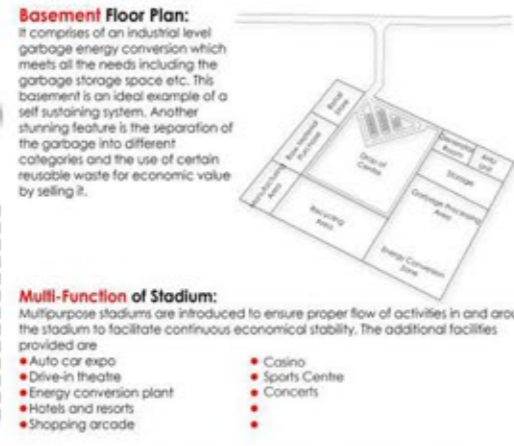
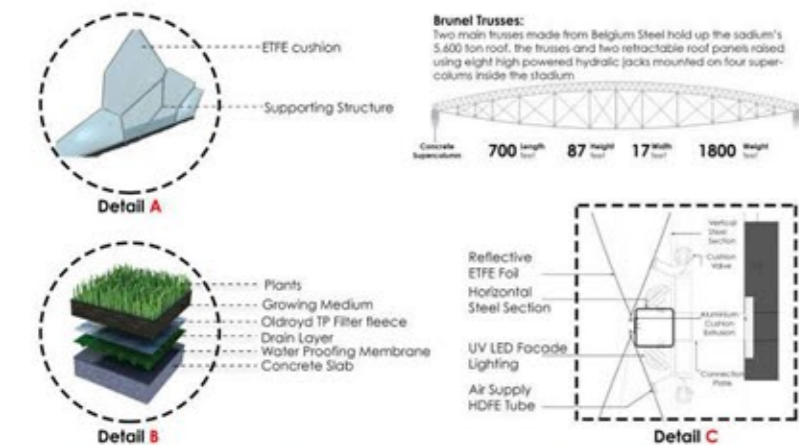


CONCEPT - FREE KICK



EVOLUTION OF FORM - FROM FREE KICK



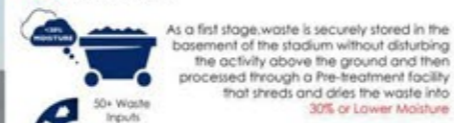


How it works?

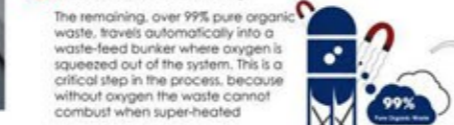
1 Waste Inputs



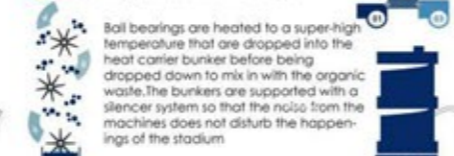
2 Waste Storage



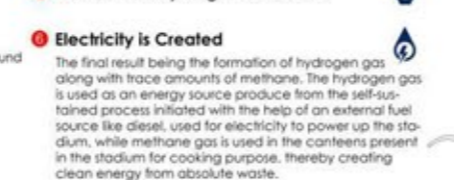
3 Waste Pre-Conditioning



4 Three Stage Reformer Process



5 99.99% Pure Hydrogen is Created

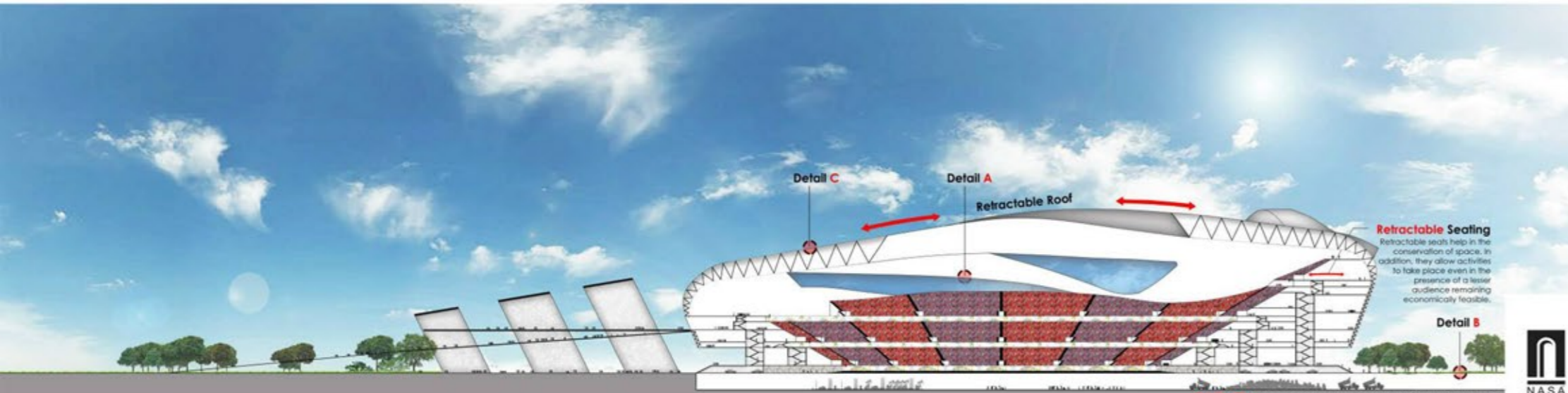
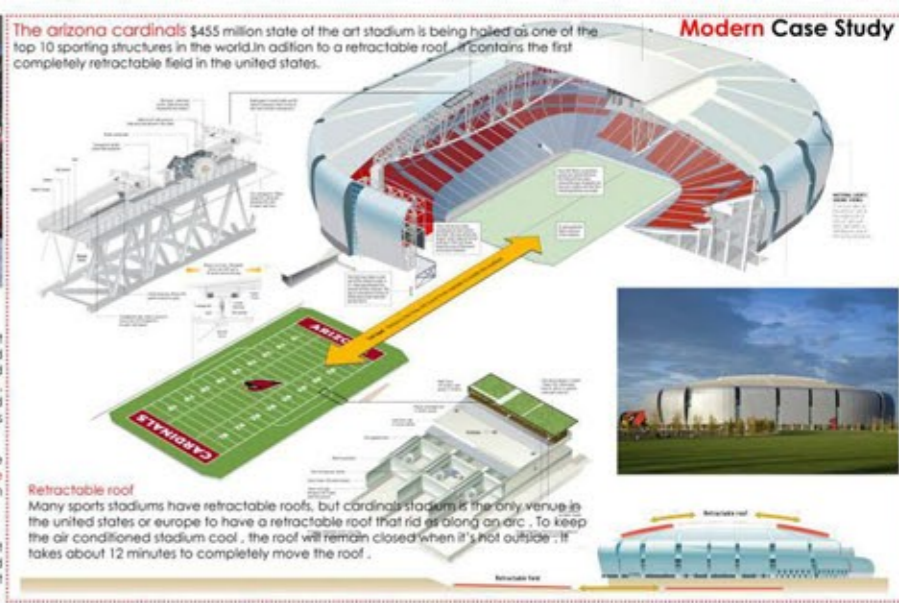


Multi-functionality of the stadium:

Inspiration for this stadium is twofold, stemming not only from historical spaces but also from the different facets of modern technology. The colosseum has proved to be a major inspiration in the construction and arrangement of underground spaces. It serves as a foundation for **Drainage, Space evolution, Site condition.** The futuristic face of the stadium can be seen in the retractable roofing and seating which serves to enlarge or reduce the area for appropriate activities, as space will be much in demand in the near future.

"90 minutes" is not a conventional stadium, as it includes several distinctive facilities mainly an auto car expo. Additionally, it also includes a **garbage conversion plant**, an alternative rugby pitch, a shopping arcade, a drive-in theatre as well as a **concert hall.**

Auto car Expo
Being an over populated city, there isn't much space to conduct an expo as it involves several carefully structured steps such as importing, storing and showcasing. The 90 minutes is one such stadium which makes such an event possible, showing that stadium construction can truly grow in leaps and bounds.





PRODUCT DESIGN 06

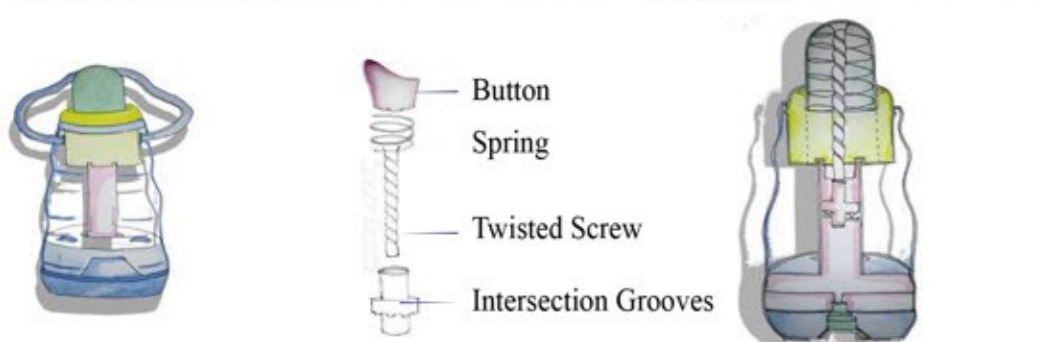
CONCEPT TO FORM EVOLUTION



EARLY IDEATION - AESTHETICS



EARLY IDEATION - MECHANISM SECTION DETAILLING



The basic mechanism followed in the tumble toy is rotation obtained by pressing a button, which is been followed in the existing churner.



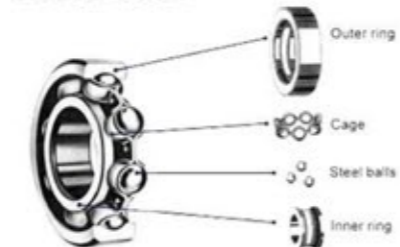
AESTHETICALLY PLEASING



MULTIPLE USAGE



NON ELECTRICAL PRODUCT



PORTABLE PRODUCT



MINIMALISTIC APPROACH

SECTION DETAILLING

Outer body
Stainless steel
Button with thumb pocket
Innerbody recyclable fibre

Spring to increase Suspension and efficiency

Twisted Screw

Rubber Stopper

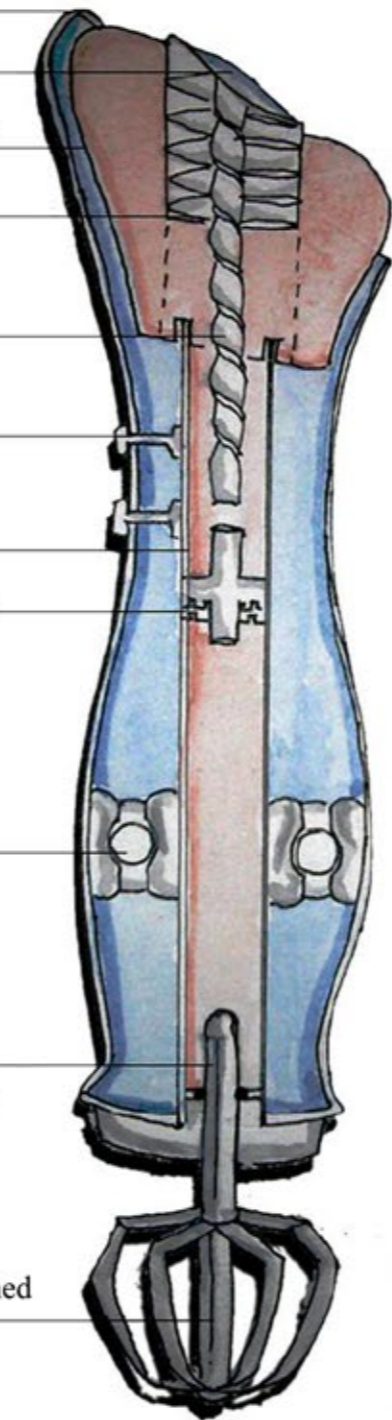
Cylindrical Case

Intersection Grooves

Ball-bearings with frames.

Detachable blades for various activities.

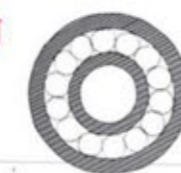
Stainless Steel designed DIE for long lasting durability and efficiency.



WHAT MAKES IT ROTATE CONTINUOUSLY ?

The ball bearing mechanism highly reduces friction between the cylindrical rod and the outer framework. This makes the rod rotate continuously for a long time without making it stop for some time.

PLAN



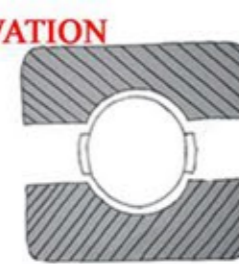
SECTION



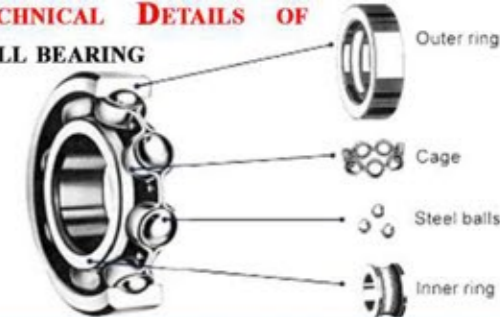
CROSS SECTION



ELEVATION



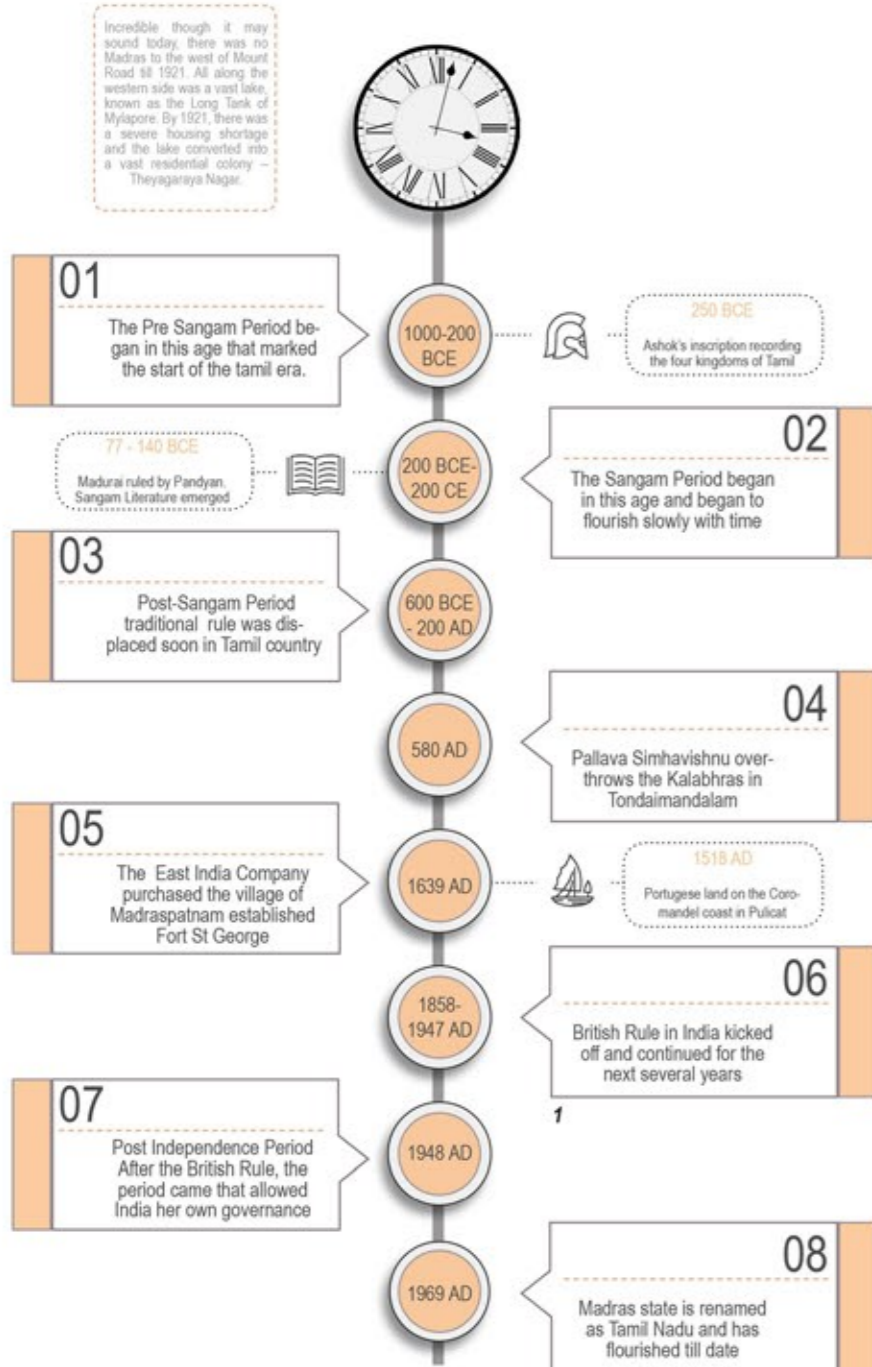
TECHNICAL DETAILS OF BALL BEARING





URBAN DESIGN 07

a brief history...



t - nagar

looking through time

How was T- Nagar started?

Thyagaraya Nagar, popularly known by its abbreviated form T. Nagar, is a neighbourhood in the city of Chennai, India. The neighbourhood is considered the biggest shopping district in India by revenue. Though conceived as a residential locality, it is now one of the principal shopping districts of the city. It is mostly famous for its plethora of Saree and gold retailers. The neighbourhood is served by Mambalam railway station of the Chennai Suburban Railway Network.

T. Nagar is the Commercial Capital of the City pushing back Parrys Corner, the centre of the city. Pondy Bazaar serves as the Satellite commercial hub for T. Nagar Panagal Park is located at the cen-

tre of the neighbourhood Mambalam village was a part of the Chinglepet District Prior to its inclusion in the city of Madras. Marmalon, Marmalong and Mamelon are some of the names by which this ancient village was known to the British. In the 1640s when Madras was in its infancy, this was a village known for its painters and printers-those who did Kalamkari work and block printing on cloth. The oldest surviving reference to Mambalam is the construction of the Mambalam Bridge across the Adyar River in 1726. The bridge was built by the Armenian Coja Petrus Uscan with his own money, the bridge was named Marmalong after Mambalam, a village on the Adyar River. There is no trace of Uscan's arched bridge now and a concrete structure, Maraimalai Adigalar Bridge, has taken its place. The village however, did not come under British rule till 1750. Urbanisation of Mambalam was started in 1911 with the construction of the Mambalam station on Egmore -Kanchipuram railroad.

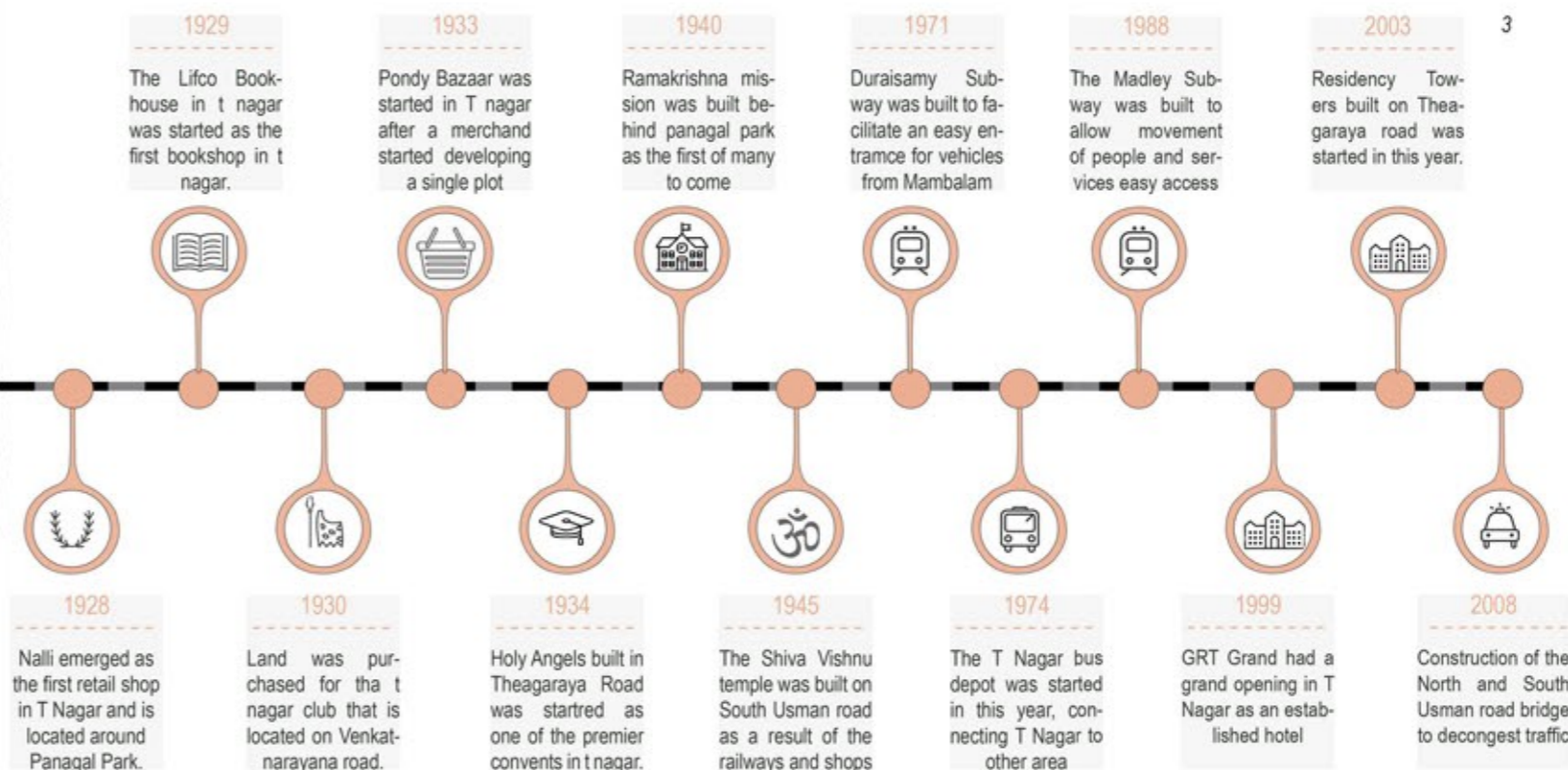
T nagar planning was started in the year 1923, using the concept of an open hand

fig (1) : general timeline-madras
fig (2) : view of the bus depot



01

buildings across the ages....



How was t nagar planned?

Thyagaraya Nagar had Mambalam High Road on west, Mount Road on east, Bazullah Road on north and Burkit Road on south. It was carefully established with earmarked facilities such as housing area, parks, schools, hospitals, temples and shops. From the early stages of T.nagar, the area rapidly grew to a popular settlement for the aristocrats, focusing on tasteful art deco styles. Ranganathan street was entirely an agraharam consisting of three main shops - Kumbakonam Vessel store, Lifo and kalyan Stores. These shops still exist in the same place. Soundarapandian, a merchant from pondicherry set up a series of shops in T.nagar which gave raise to the present Pondy Bazaar.

Development of T.nagar can be traced back from the time when Mambalam railway station was constructed in 1911. This Railway line connecting Kanchipuram to egmore led Weavers from Kanchipuram to migrate and settle in Chennai. T.Nagar bus terminus was the first depot to come up inside the city. Its location, in close proximity to Mambalam Railway Station, was an added advantage. With pucca pacca connectivity, T.Nagar developed into a place of cotmmerce. These advancements also attributed to 'Advantage' T.Nagar. V.I.Ps preferred to stay here. With the ever increasing footfall in Ranganathan Street connecting the railway station and the bus depot, it led to rapid commercialization in and around Ranganathan Street. The commercial spills started spreading towards the south Usman road and further up as time went by.

Kevin Lynch Ideology

The Lynch map helps us understand the overall legibility and the image of t nagar. T nagar as such is really image but the legibility is not clear due to the presence of tall buildings that cover the skylines

RESIDENTIAL ZONE:

This district is classified as the residential zone. It may consist mostly of individual residences and apartments. These districts are mostly occupied by middle and higher class people. This zone is quite peaceful with roads narrowing into inner streets with residences.

COMMERCIAL ZONE:

This district is classified as the commercial zone. It may consist of retail shops, . Shopping is one of the predominant activity in this zone with street hawkers adding to its visual character. This zone is mostly super active than the other zones.

EWS ZONE:

This district is classified as the EWS zone. It may consist of the slum and the housing board residences of the economically weaker section of the society. This district is occupied by the economically weaker section of the society. The housing boards near the coovam river have been arranged more in a linear pattern along the shape of the river.



GN CHETTY ROAD

This path begins from the node at panagal park extending upto the beginning of the Gemini flyover. This is one of the major path in t nagar which is quite broad in width throughout its length. This road is more posh when compared to the other roads. It has local landmarks like jeeva park, jain temple, ags etc. which add on to its character.



PONDY BAZAAR STREET

This path begins from the central node in panagal park extending upto the anna salai signal. This path is well known as Pondy bazaar. Shopping is the predominant activity with street hawkers adding to its visual character. There is more pedestrian movement. The presence of holy angels school creates traffic only in the peak hours. This path is quite narrow in the beginning which then widens reaching the Anna salai signal.



VENKATANARAYANA ROAD

This path begins from the lower node at panagal park extending upto nandanam signal. This path has more of a religious character due to the presence of temples, kalyana mandapams, etc. The area around the temple has more pedestrian movement. This path is quite narrow in the beginning which then widens reaching the Nandanam signal.



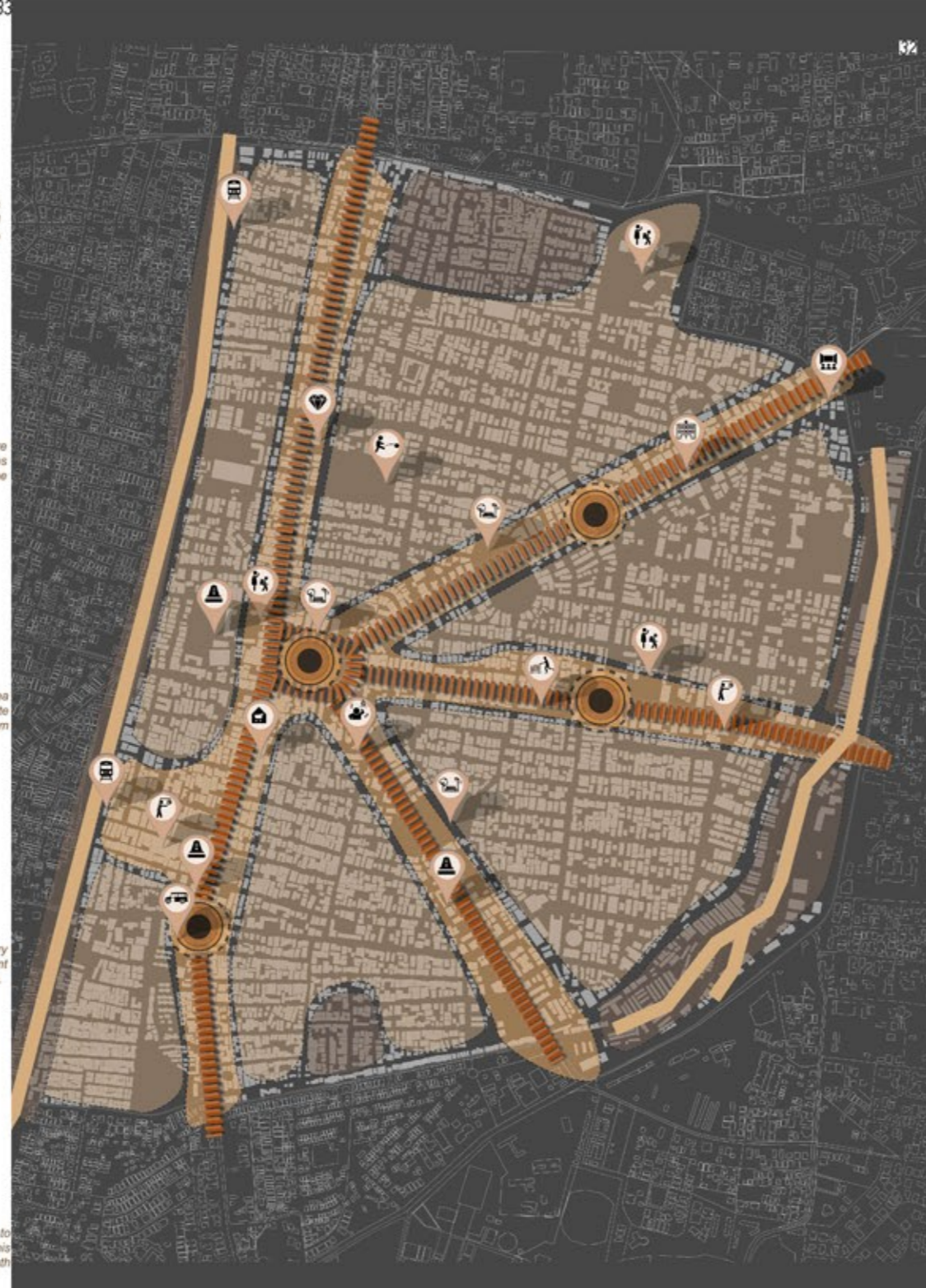
NORTH USMAN ROAD

This path begins from the node at panagal park extending upto the beginning of the mahalingapuram bridge. This path in t nagar is more commercialized with electronic retail showrooms and jewellery shops. This path is very active with shopping being its predominant activity. It has important landmarks like joyalukas, viveks, croma etc.

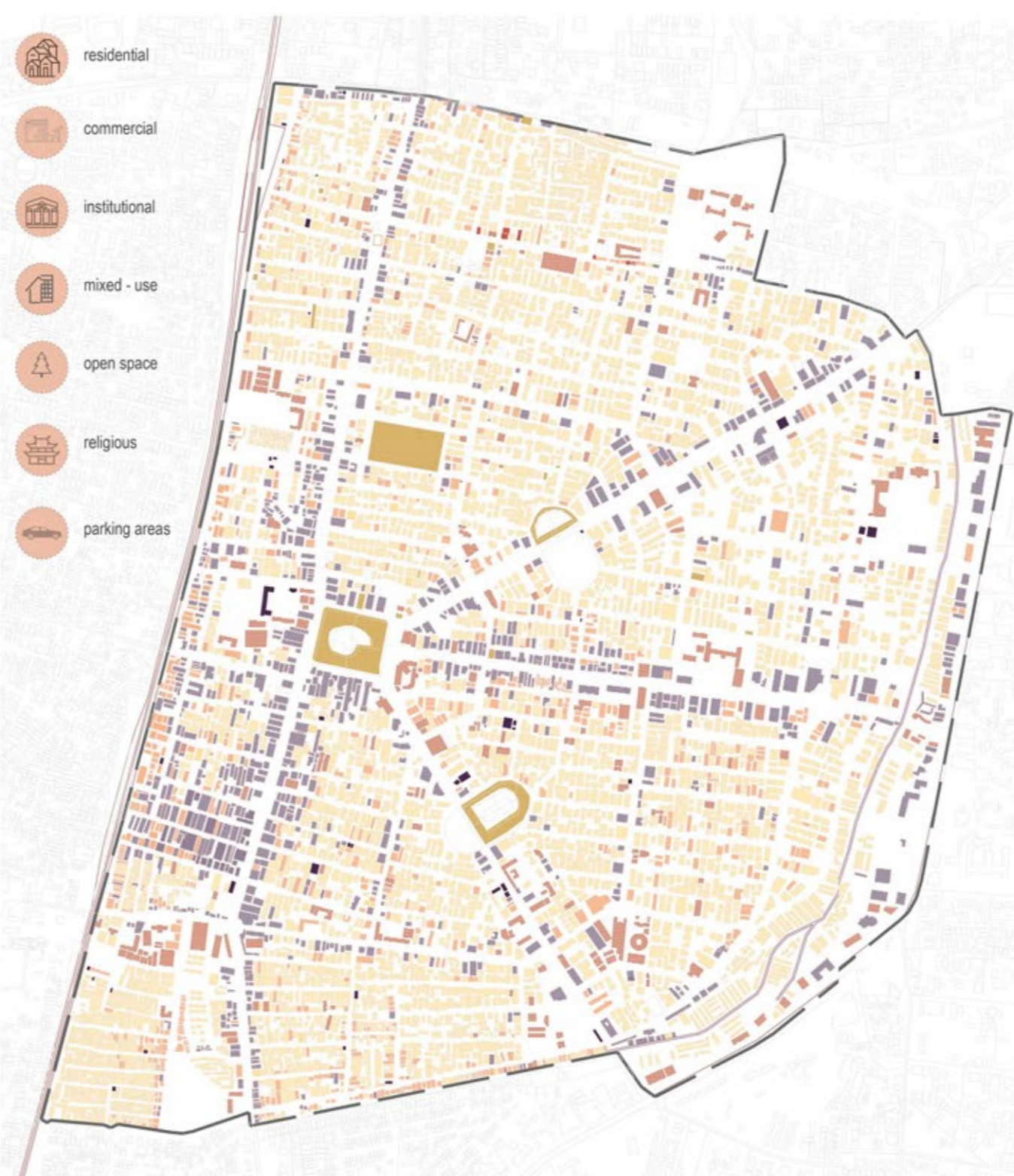


SOUTH USMAN ROAD

This path begins from the node at panagal park extending upto the t.nagar bus terminal. This path in t.nagar is well known for cheap shopping. Ranganathan street being a city level landmark adds on to its character. This path is highly congested with pedestrian traffic. This road is narrow due to the presence of the flyover which makes the path look congested.



- residential
- commercial
- institutional
- mixed - use
- open space
- religious
- parking areas



- 56 primary residential
- 17 mixed residential
- 09 institutional zone
- 14 commercial zone
- 03 open space zone

Inference

The existing landuse is supportive of a growing commercial and mixed usage area where the mixed use is proliferating into residential areas. If unchecked, these areas may grow bigger, disturbing the life of the residences. The residences, are of a completely different character and can remain so. The area near South Usman Road has almost transformed into an affordable commercial plaza.

The commercial areas, on the other hand, are instigated by some catalysts such as Vidyodaya School, Ranganathan street etc. where they start and grow.

The presence of street vendors created a lively, bustling commercial activity, that in the aftermath, has become monotonous.

Open Spaces for said commercial area is small as well and t.nagar would need more recreation and open space for the density it carries

fig (29) : building usage map
fig (30) : scattering of usage

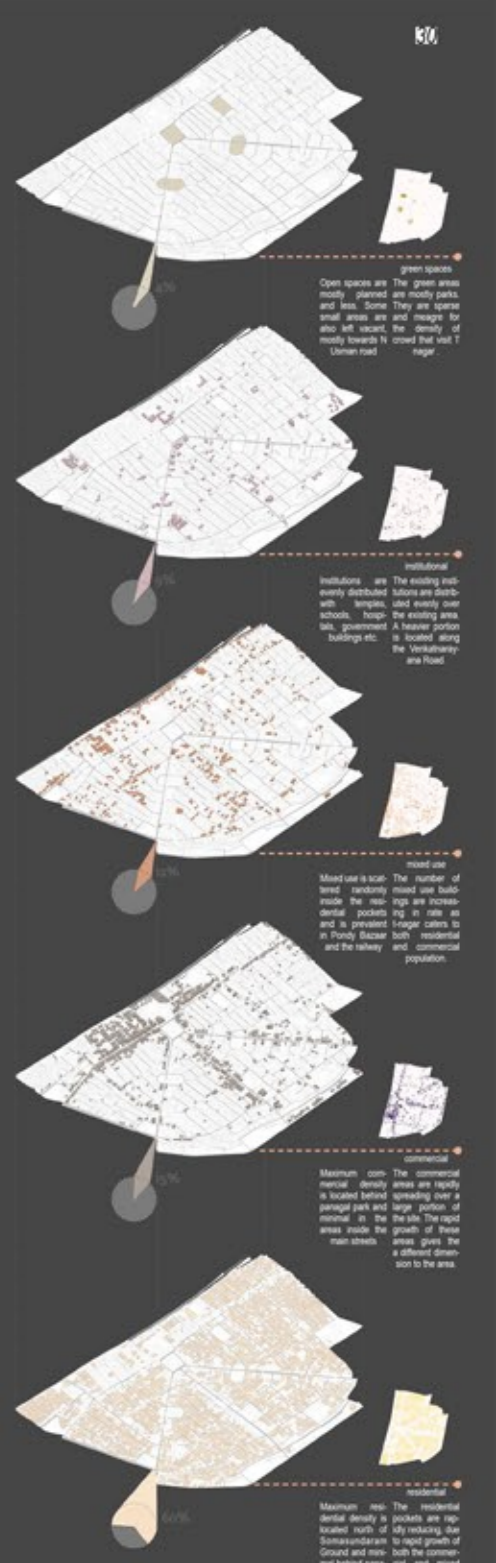


fig (32) : kevin lynch map showing path, node, edge, district and landmarks
fig (33) : the road sections

URBAN SUPPLY

SOLID WASTE MANAGEMENT



URBAN SUPPLY

WATER AND SANITATION



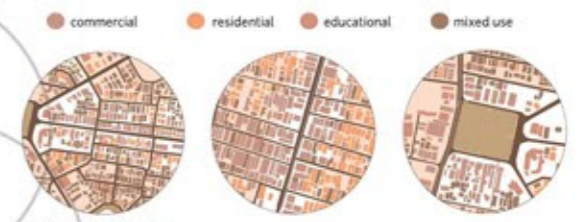
PUBLIC AMENITIES



fig (50) : public amenities map
fig (51) : smart city amenities

SMART CITY PROPOSAL

T Nagar has been short listed for area based development, based on the preference from series of citizen engagement, polling. T Nagar is a prominent commercial hub across South India, it has already been established development in the corporation of Chennai. Hence, improving the existing infrastructure and overlaying smart features will set a benchmark that can be replicated across Chennai.



- ### CURRENT PROPOSALS
- Pedestrianization of Thyagaraya Road, South Usman Road and areas around Panagal Park
 - Dedicated hawkker zones in pedestrian areas
 - Elevated skywalk connecting Mambalam railway station and T. Nagar bus terminus
 - Redesigning of Panagal Park
 - Traffic signals in the area to be integrated
 - Multilevel car parks to be set up at four locations
 - Existing flyovers across three roads to be extended
 - Two additional bus terminus to be built near Valluvar Kottam and Saidapet
 - Storm water network to be improved
 - Public conveniences to get a facelift

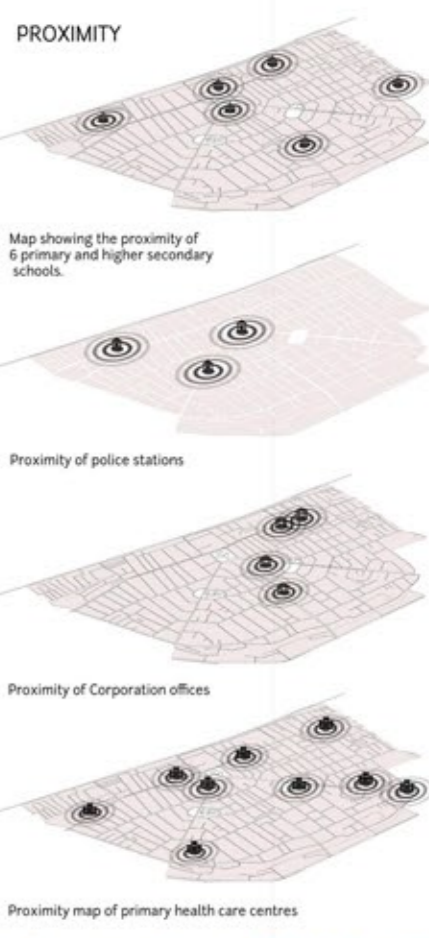


- ### INFRASTRUCTURE SERVICE
- Linking urban greenery with building plan approvals
 - Concrete surfacing of all Bus route roads and BT / CC surfacing of all roads
 - World-class roads in select corridors; pilot in Ashok Nagar
 - 2 Waste Processing facilities at Minjar and Kuthambakkam
 - Remediation and reclamation of Kodungalur and Perungudi dumping yards
 - Providing facilities for firefighting at dumping grounds.
 - Waste to energy projects (bio-degradables) at zonal level
 - Formation of a Model park using the segregated recyclable waste materials by providing fencing.
 - Demarcation of Perungudi dumping ground and Pallikarai Marsh Land
 - Formation of Green belt in dumping grounds
 - Creation of awareness for better environment in solid waste management.
 - Conversion of all street lights to Energy efficient street lighting which can save 80% of the energy cost



- ### SWOT ANALYSIS
- #### STRENGTH
- High coverage in core area
 - Improved quality of roads and strong connectivity
 - Strong focus on quality – A separate QC department
- #### THREATS
- Scope for rationalization of packages and work contracting
 - Higher initial cost associated with Concretization
 - Low land availability in the core city area
 - Proliferation of hawkers in roads/ footpaths
- #### WEAKNESS
- Road density saturated in the core area
 - High cost for road reforming and relaying
 - Encroachments in roads/ footpaths
 - Management of multiple contractors

- #### OPPORTUNITIES
- Focus on Non-motorised transport – Pedestrianisation, Cycle tracks and cycle sharing scheme
 - Move towards concretization of roads – Lower life cycle cost
 - Land pooling and other innovative methods for Land development





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