

Women's Sports Complex, Rangpur

Seminar II

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I am thankful to the Almighty for making me capable of reaching this far in life. This project is very close to my heart since I was always fascinated by sports.

I thank the teachers for their continuous support and tough love without which all of these might not have been possible.

I am thankful to all my friends and classmates without whom these five years would have been not this good.

Abstract

The decision to construct women's sports complex in every divisional headquarter is a part of the women empowerment program by the Government of Bangladesh. Playing sports will help women to be physically fit and it also helps lift their self-esteem, making them less prone to social dangers and more likely to develop a positive mind set towards life and set goals to achieve them in the long run.

Rangpur Women's Sports Complex is the next in line to have been proposed by the Government of Bangladesh under the authority of National Sports Council. As instructed by the government, the complex shall have outdoor sports such as football, cricket, athletics etc. and also have indoor sports such as swimming, volleyball, handball, badminton etc. and a gymnasium.

Since Rangpur is the new division, it will be subjected to development. The Sports Complex is one of the many infrastructures to be built along with redevelopment of stadiums in Netrokona and Nilphamari. The aim of this paper is to analyze the site and assess the programs in proposal with respect to the local area and propose a design for the Sports Complex.

Chapter 1: Introduction

A brief Background

Rangpur, one of the most recent City Corporations of Bangladesh, is blessed with natural resources like open places, parks and water bodies at the center of its city heart (Nilufar,2013). This area has high potentiality to be developed as the central “Recreational Hub” of this newly announced City Corporation (Nilufar,2013). The Division has an estimated area of 2370.45 sq. km. and is bounded by Nilphamari and Lalmonirhat districts on the north, Gaibandha district on the south, Kurigram district on the east and Dinajpur district on the west. It was declared in the year 2010. Since then the government has planned significant development for the division.

The city as a collective project exists because its public spaces exist as well (Rubén, 2012). These public spaces have an important role regarding the environmental, economic and social context in the city as well as sources or providers of life, quality and sustainability (Chiesura, 2004). Since Rangpur is very much underdeveloped, proper planning is required to make efficient use of the available land area.

Due to its high potential, the city is being subjected to intense development. Several large scale government projects are either on going or in planning phase. All of these projects cumulatively form the new master plan of this newly announced District. The process of preparing Master Plan for Rangpur City Corporation of Rangpur, the newest divisional town of Bangladesh, has been undertaken to provide guidance for the development and development control of this area (Nilufar,2013). It is found that a

number of large and medium scale open spaces are scattered in Rangpur city which can set as the “Breathing Zone” of the city(Nilufar,2013).

These scattered places are the potential sites for infrastructure development. Planning and project have been selected in order to help progress the growth of public interaction spaces and recreational spaces. Noticeable attention has also been given to the sports sector, since they promote various skills as well as social interaction. The Government together with National Sports Council has decided to renovate the existing stadiums and construct sports facilities in various locations of the division. The next big project in line is the Rangpur Women’s Sports Complex.

A sports center offering a variety of different sports facilities, especially under one roof. They act as an institute by providing teaching and training in many sports. The government will use this facility to help women teach various types of sports. This will not just produce skilled sportswomen but will also act as a women empowerment program where they learn to be independent and educated.

Sports and leisure infrastructure within urban centers represents part of the tourism infrastructure, together with the communication ways, accommodation establishments, restaurants, bars, pubs, summer gardens, conference centers, exhibitions and fairs; their main part is to support the tourism act (Cozea, 2013).

Sports has one of the largest platforms in the world, it can lift a nation's value and prestige. Over the years many nations have used this opportunity to enhance their reputation by providing state of the art sports facilities and giving opportunity to those who seek. As a result, many nations are also famous for the players they produce. Some of the examples are, Brazil and Argentina are famous for star footballers like Messi, Ronaldo, Ronaldinho. USA has some of the best basketball players like Kobe Brant, LeBron James and Shaquille O'Neil. Thus the government is trying to promote sports in order to enhance the country's reputation.

Project Brief

- Project Name: Women's Sports Complex
- Client: National Sports Council
- Site Location: Rangpur
- Site Area: 10 Acres
- Funded by: Government of Bangladesh

Aim and Objective

- The Sports Complex offers a broad range of activities and facilities for both recreational users and those who wish to play sports at a competitive level.
- The Sports Complex will provide the females to learn and train in various sports.
- Through sports women will be taught on empowerment. They will be taught to be independent and also to have a high self-esteem.
- The women will be promoted from beginners to intermediate and then to advance levels of sporting where they will be capable to challenge others on a national level.
- Additionally, the field can be used to generate income to help fund the complex, and provide public gathering in terms of concert and events.

The aim of this project is to promote mental and physical growth of women through training and academics. The complex will also have a hostel where they can live being surrounded by a sporting environment. They will be taught various sports of their likings and will also have small competitive events. This will help build confidence and boost self- esteem among the females.

Programs

List of programs:

Football

Basketball

Tennis

Cricket

Table Tennis

Handball

Volleyball

Swimming

Boxing

Gymnastics

Carom

Chess

Judo, Karate

Chapter 2: Literature Review

2.1 Global Appeal of Sports

A definition from European Sports Charter (2001) states that: "Sport means all forms of physical activity which, through casual or organized participation, aim at expressing or improving physical fitness and mental well-being, forming relationships or obtaining results in competitions at all levels."

Sports is not just a physical activity where the trainee can achieve physical fitness, it also fosters psycho-social development. They make people more goal oriented and enhances their ability to work in a team. Different sport has its different advantages. For. Example, playing football is associated with being able to work well together within a group of people. The time limit also pushes towards ensuring success within a specific time frame. It also teaches to pursue and proves that cumulative success is better than personal success in the long run.

Nelson Mandela once stated that:

"Sport has the power to unite people in a way little else can. Sport can create hope where there was once only despair. It breaks down racial barriers. It laughs in the face of discrimination. Sport speaks to people in a language they can understand."

The famous 'El Clasico' match, of the 2015-2016 season had an estimated viewer of 400 million, according to FIFA. The India vs Pakistan World Cup group stage match had a reported audience of 288 million alone in India according to ICC report. These states signify that sports are a globally viewed and is an appreciated form of entertainment.

Although, there is also the dark side of sports which comes in the form of racial

discrimination, religious discrimination, match fixing and drug abuse. All of these are part of a larger world of sports.

A proper exposure in this field will help improve social growth and boost self-esteem in people. Studies done by various Universities state that sports not just help physical growth but foster's once psychological growth. Tahliya Shariff, an alumnus from York University mentioned that sporadically they were made to do some light exercises before classes. These light exercises were aimed to speed up the heart rate so that blood would be pumped to brain faster. The increased blood flow allows the brain to store more information than usual. Therefore, sport is a physical activity that is encouraged all over the globe.

2.2 Health Benefits

Sport England, an organization who encourages people to be more physically active in sport, has done various sport related surveys. **Following are some of the benefits sports have on people according to their surveys:**

- Physical activity, including sport, is linked to reduced risk of over 20 illnesses, including cardiovascular disease and some cancers
- Taking part in regular sport can save between £1,750 and £6,900 in healthcare costs per person.

- Published studies show the positive effects of sport on education include improved attainment, lower absenteeism and drop-out, and increased progression to higher education. For instance, young people's participation in sport improves their numeracy scores by 8 per cent on average above non-participants.
- Reduce in depression, anxiety, psychological distress and emotional disturbances.
- Other studies have found that sport programs aimed at youths at risk of criminal behavior can enhance self-esteem and reduce reoffending.

Being physically active plays an essential role in ensuring health and well-being, and there is a large body of research investigating the benefits of exercise (C3, 2011).

The role physical activity plays in many diseases, such as type 2 diabetes, heart disease and many cancers, means that the World Health Organization (WHO) estimates that:

- Physical inactivity is the fourth leading risk factor for global mortality (C3, 2011).
- Physical inactivity is responsible for 6% of deaths globally around 3.2 million deaths per year, including 2.6 million in low- and middle income countries, and 670,000 of these deaths are premature (C3, 2011).

Adults who participate in daily physical activity have a 20-30% lower risk of developing depression (Chief medical officers 2011). For existing sufferers, physical activity is an effective means of reducing symptoms (US Department of Health and Human

Services,2008). European Commission’s White Paper on Sport stated that ‘as a tool for health enhancing physical activity, the sport movement has a greater influence than any other social movement’ (European Commission, 2007).Physical activity has a significant effect on the body. As mentioned above it acts a catalyst to help prevent and in cases reduce diseases.The table below, which uses statistics from the Chief Medical Officers’ report, shows the dramatic effects which being active have on all-cause mortality and on some of the major diseases (Sports Wales, 2014).

The physical health benefits of sport

Reduction of risk, if regularly physically active

<u>Reduction in risk</u>	<u>(%)</u>
All-cause mortality	30%
Type 2 diabetes	30-40%
Metabolic disease	30-40%
Cardiovascular disease	20-35%
Coronary heart disease	20-35%
Stroke	20-35%
Falls in older adults	30%
Colon cancer	30%
Breast cancer	20%

Source: Welsh Government, 2014(Sports Wales, 2014)

2.3 Youth and Sports

Schools and high-schools are now more inclined towards sports activities. During childhood and youth, physical education at school provides an excellent opportunity to learn and practice skills likely to enhance lifelong fitness and good health. These activities may include daily running, swimming, cycling and climbing, as well as more structured games and sports (European Commission/EACEA/Eurydice, 2013. *Physical Education and Sport at School in Europe*). From the earliest of ages, if the children are encouraged towards sports, they develop positive attitude towards life and are less prone to be affected by the negativities. Although there are adverse negative effects but they are due to the media hype and public embarrassment of failure which usually happen in larger platforms, such as intake of disallowed substances for enhancing skills. Proper guidance is required to keep these negativities at bay. (European Commission/EACEA/Eurydice, 2013. *Physical Education and Sport at School in Europe*)

Many countries have taken sports as an important platform for social and economic growth. The system provides youth leagues for the children and teens in order to prepare them for higher divisions. Football leagues, Cricket leagues, basketball leagues are some of the most famous youth leagues around the world. Even Third World Countries such as Bangladesh and India have their own leagues system. This helps promote sport and reduce health and social problems. As mentioned before, being engaged in sports help boost self-esteem and people are less prone to criminal activities. These countries have taken initiative to give the sports foundation a stronger

infrastructure so that in the long run they can reduce criminal activities and health hazards and promote success and excellence for all.

The United Nations have categorized persons from age 15-24, inclusive, as youth. Regardless of that in a wider term it can be said that every child from 24 and below can be considered as youth. The National Youth Council states that, 'while there is no correct definition of youth, the term generally refers to people between the ages of 15 and 24'.

Many adults believe that if involvement in organized sport is not begun by age 7, an athlete will sufficiently lag in skill execution, such that future performance accomplishment is unlikely (Weirisma, 2000). Of serious concern among pediatric sport science researchers is the impact of high intensity sports on the psychological development of children. Through properly structured sport programs, children have the opportunity to experience enhanced self-esteem and self-perception (Weirisma, 2000). It is therefore. Better to introduce sports to children at the earliest of ages as possible.

However, there are also negative effects of sports on youth. Two major psychological concerns related to the experience of children in specialized training programs include youth sport withdrawal/burnout and the over-involvement and expectations of parents and adults in youth sport programs (Weirisma, 2000).

Burnout has been referred to as "the long-term end result of emotional and/or physical exhaustion" (Weirisma, 2000). This occurs when the participant loses interest due to failure to achieve a certain standard within a specific time, discouragements from parents, shifting of interests from sports etc. Continuous pursue of perfection can result in over exhaustion and may force to take the fun out of the sport. The entertainment value of sports is one of the major reason youth are attracted to it. Once they find it become boring, they will gradually lose interest.

Parental involvement is also commonly associated with specialization. Few, if any, youth sport programs would survive without the instrumental support and volunteer time of parents committed to providing positive opportunities for children (Weirisma, 2000). Nonetheless, support and encouragement have limits, too, and parental involvement often becomes excessive, especially when adults see specialization as a means for a child to advance socially or economically (Weirisma, 2000). While adults value the achievement outcomes of specialized sport participation, children do not place the same importance on external rewards, nor is it likely that these outcomes are enough for a child to choose involvement in a sport at the relative costs involved, such as moving long distances and leaving family to train with a particular coach (Weirisma, 2000).

External influences have a huge impact on youths, especially during their teenage days. Too much pressure or little can be perceived as a negative thing by the children. Therefore, the parents need to be careful on how much they push their children into sports or pull them from it.

Another form in which sports is useful is in acquiring of scholarships. Many youngsters with encouragement of parents begin specialized sport training in a single sport at young ages with the goal (hope) of obtaining a college scholarship, often with considerable expense for the family (Malina, 2010). There is however a degree of unreality in achieving scholarship at university level. The student has to have sufficient GPA along with specialization in sports. Only 22/1000 girls (2.2%) and 20/1000 boys (2.0%) participating, in high school sport in 1999 to 2000 received partial or full scholarships(Malina, 2010).

In most cases usually football and basketball player get the scholarships. Other sports have command, but not as much as these two. Discussions of talented male youth basketball and football players dominate the media. The extent of the search for talent in basketball at young ages is evident in The Hoop Scoop, a commercial enterprise that nationally ranks players in 6th to 12th grades(Malina, 2010).

However, all these achievements lead to intense competition between students and at times even parents. As a result, students at times tend to cease sports due to over exhaustion and parental pressure. Continuous practice leads to isolation from peers at times.

Focus on a single sport and the associated time commitment may foster isolation from age and sex peers, especially during adolescence, and may alter relationships with peers, parents, and family (Malina, 2010).

Few individuals who specialize in sport at young ages make it to elite levels and reap the social, economic, and other benefits associated with success (Malina, 2010). Along the way there are many dropouts. But all of these are majorly due to the external forces. Excess of anything can lead to major destruction of anything. Therefore, keeping the pressure and expectancy at optimum level will bear fruits. Since sports acts as a remedy, as long as the pressure is optimum.

2.4 Sports and Crime Co-relation

A London based organization 'Project Oracle', published a paper in October 2013 that co-relates sports with youth and crime. They gathered information from various sports organizations and their statistics and made a synthesis on co-relation between sports, youth and crime. Their data indicates that there is a significant reduction in crimes due to increase in sporting activities. During the 'Kickz' sessions, the overall results for crimes often associated with young people reduced by 23% for robbery, 13% for criminal damage, 8% for anti-social behavior and 4% for violence. Such a method shows a correlation between youth crime and the 'Kickz' interventions. However, it does not show whether the program in particular caused the lowered crime rates, or whether it has contributed to a sustained pattern of lowered crime.

In general terms, there were two types of sports-based projects: those that focused exclusively on delivering sporting activity (perhaps associated accreditation and sport-specific development opportunities such as coaching), and others that used sports as a

hook to bring people into a wider range of activities and achieve multiple goals. This distinction between diversion and hook programs is based on the conceptualization of sport-related activities from Cryer (Cryer,2005).

Three conceptualizations of sport-related activities to reduce crime and reoffending behavior (Cryer, 2005)

1. Sports as diversion or distraction: when young people are playing sport under supervision, they are distracted from negative environments and under surveillance so do not commit crime at the same time. (Cryer, 2005)
2. Sports as cognitive behavioral therapy: inculcating bio-social values such as moral values, discipline, respect for others, teamwork, self-esteem to address factors that may cause deviant behavior. (Cryer, 2005)
3. Sports as hook: using the salience of sports engage young persons in what can be called 'relationship strategy', to attract them and encourage them to adhere to programs delivering wider interventions. (Cryer, 2005)

Although there are negative effects of sports as well. As briefly mentioned before media hype and peer pressure may result in a divergence of track. Lack of proper coaching or mentoring can lead to negatives effects also. The youth might tend to cheat or even be aggressive at times in order to achieve the goals. The 'Street Leagues' research done by Project Oracle have observed unintended clashes between teams since the players were from different gangs. These often resulted in violence in many cases.

2.5 Women and Sports

Another category of sports is defined by women. Growing trend of women empowerment and gender equality has led to increase in women playing sports. Official survey done by FIFA in 2017 has shown that there is a drastic rise in number of female football players between the recorded period of 2000 to 2006. Whereas women players have increased from 22 million to 26 million men have increased from 242 million to 265 million. Although there is a significant difference in number but increase rate of females is double than that of males, compared to their 18.2% to the men's 9.5%.

Women have been subjected to work at the back of the scene, as a result they have low self-esteem and lack of confidence. When men see these objectified images, they do not look at a female athlete as an athlete; instead, they see a caretaker, a keeper of the household, a wife, mother, and most often, a sex object (Hanson, 2012). This has often been the case especially when it came to teens and young adults. Women Sports Foundation has done extensive research with women and the advantages they have when they are physically active in sporting activities. Their research states that females are less likely to be socially harassed and succumb to sexual and drug habits if they are engaged in sports. They also proved that women who are physically active have a significantly reduced chance of having Osteoporosis, which is the excessive loss of bone mass. Among the infected population of America, 80% are women. Being engaged in sports allows them to develop bone density as a result they are less likely to succumb to it.

Chapter 3: Site Analysis

3.1 Site Location

Site Location



Fig1: Site Location (Source: Google Image)

City Centre

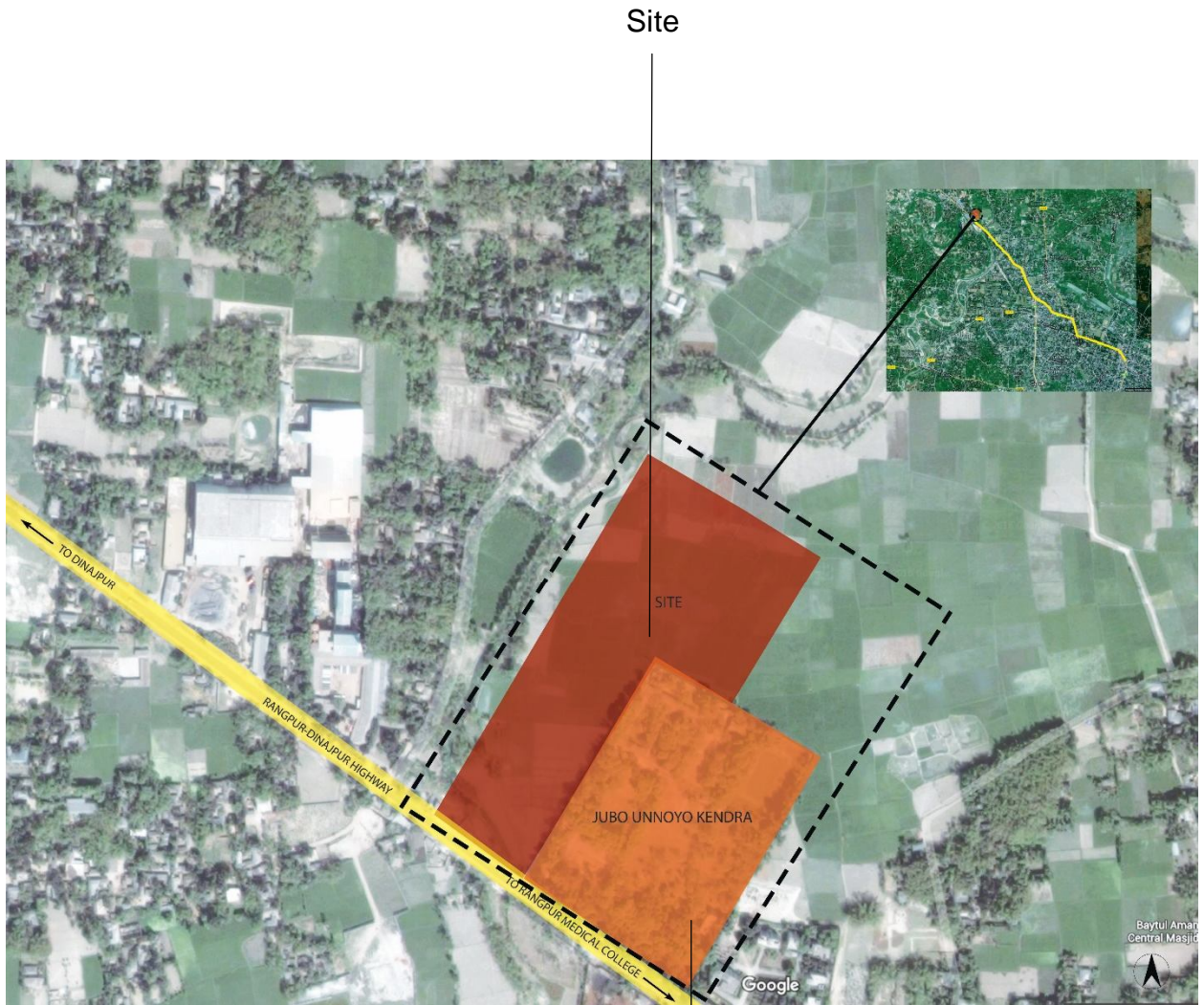


Fig 2: Site(Source: Google Image)

Jubo Unnoyon Kendra

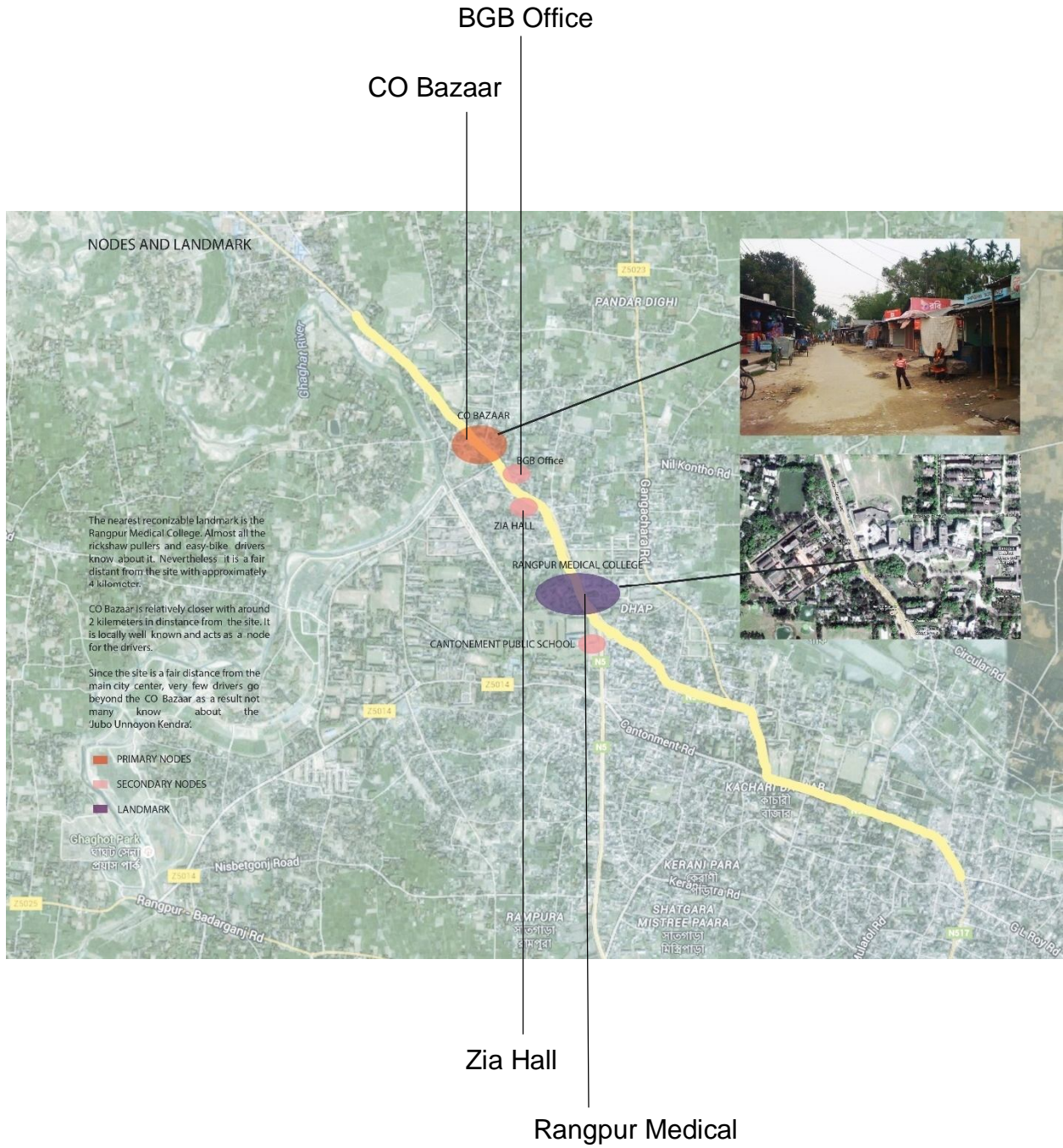
3.2 Site and Surroundings

The proposed site for the Women's Sports Complex is in Rangpur Sadar area. From the main city center the distance is near about 8 kilometers. The site is located adjacent to the 'Jubo Unnoyon Kendra', which lies on the Rangpur – Dinajpur Highway. Saidpur is about 34 kilometers from the site, while Dinajpur is at a distance of 74 kilometers.

The site is of 10 acres in area and comprises of agricultural plants. The north-eastern side is entirely of agricultural field, while the north-west has some factories and houses. The south-eastern side has BGB guest house and park, while the south-western side has numbered shops and in further west lies a residential area, comprising of single storied low cost houses.

The Rangpur city in itself is under developed. Therefore, majority of the outskirts area have tin-shade low cost houses in huge numbers. The city center has fair amount of hotels and building of multiple stories.

3.3 Nodes and Landmark



The most notably recognized location is the Rangpur Medical. It acts as a landmark for the local and also for those who come by, due to its scale and age.

CO Bazaar is one of the most famous bazaar of Rangpur City. Almost everyone in Rangpur especially who live in a close proximity know about the bazaar.

Between them there are two other notable locations that acts as secondary nodes. Zia Hall and BGB office. Although, BGB office is situated through a large linear area, the main gate of the office acts as a node and there is a residential area on the opposite end of the road.

The main road that runs adjacent to the Rangpur Medical extends further away connecting the above mentioned nodes and further extends to become the Rangpur – Dinajpur Highway.



Fig 2: Site(Source: Google Image)

3.4 SWOT Analysis

3.4.1 Strength

- The open surrounding area is perfect for sporting activities and also provides a healthy environment
- The surrounding itself is very calm since it is just at the edge of the city, therefore it has very minimal sound and air pollution.
- The closest factory is also at quite a distance therefore there is no immediate sound and air pollution.
- The site has major exposure at north and south sides, although the lengthier side is inclined at north-west and south-east.

3.4.2 Weakness

- Since the entire city is yet to be developed, major facilities need to be set-up.
- Only one major road connects the site to the city, and there is minimal scope for having alternative routes.
- During the summer, it gets very hot especially during the noon and afternoon.

3.4.3 Opportunities

- The people of Rangpur will have a government provided sports facility to help them hone their skills.
- The lack of surrounding infrastructures provides for a subtle more environment friendly design opportunity.

- The site area and surrounding is perfect for such sporting complex.
- Development of the site will work as a catalyst of improvement and urban settlement of surrounding areas

3.4.4 Threats

- The only threat the site provides that it will contribute to the loss of agricultural land

3.5 Topography

The entire site and beyond is covered in green and trees are at the perimeter north - western perimeter of the site. The entire site is flat land and has no contour surfaces. Although, the side is about 6 feet below the road level. The land height needs to be increased and proper drainage is required especially in the rainy season.

3.6 Road Network

Primary Road

Secondary Road



Secondary Road

The Rangpur – Dinajpur Highway is the only major road near the site. The secondary roads lead to internal small clusters of tin-shade houses. The main road is 24 feet in

width, immediate adjacent to the site entry, with a couple of feet offset. The primary road is subject to all kinds of vehicles but the traffic is very light, as the city is not densely developed yet and since it is just at the edge.

The secondary road witnesses easy-bike, CNG, motor-cycle, and non-engines vehicles like rickshaw and van. The route mainly leads to the small cluster of houses, which are at fair distance upon the entry.

3.7 Climate Condition

Rangpur is situated at the northern end of Bangladesh. As a result, the city has abundant rainfall during monsoon season, high temperatures during summer and extreme cold in the winter.

Bangladesh Agricultural University conducted a research on the climatic condition of Rangpur, Rajshahi and Dinajpur. The data includes climatic study of 50 years from 1961 to 2010.

According to the data, the annual average temperature showed decreasing trend over the period of study for Rangpur region by $0.0262^{\circ}\text{C}/\text{year}$ (Fig. 1), in Rajshahi region the annual average temperature showed decreasing trend by $0.0134^{\circ}\text{C}/\text{year}$ (Ferdous & Baten, 2011)

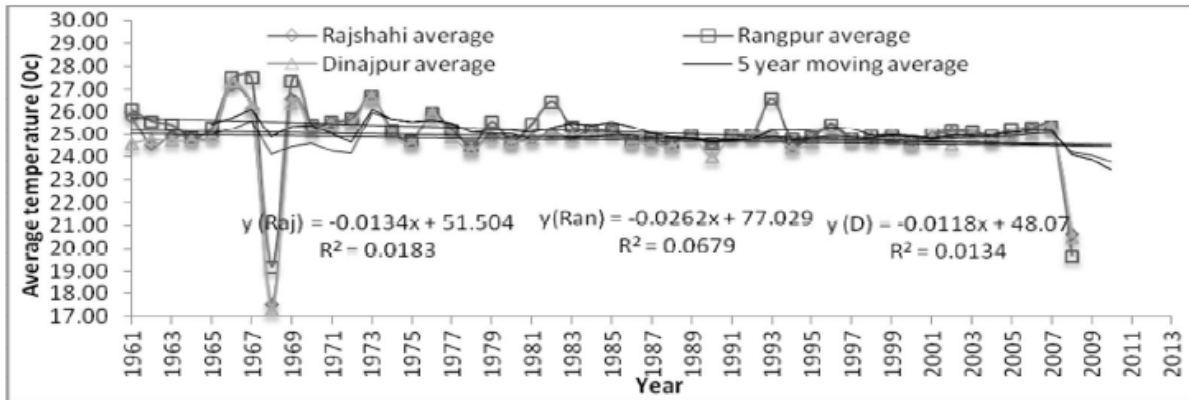


Fig1: Annual average temperature, 5 year moving average and trend line over Rajshahi, Rangpur and Dinajpur region during 1961-2010

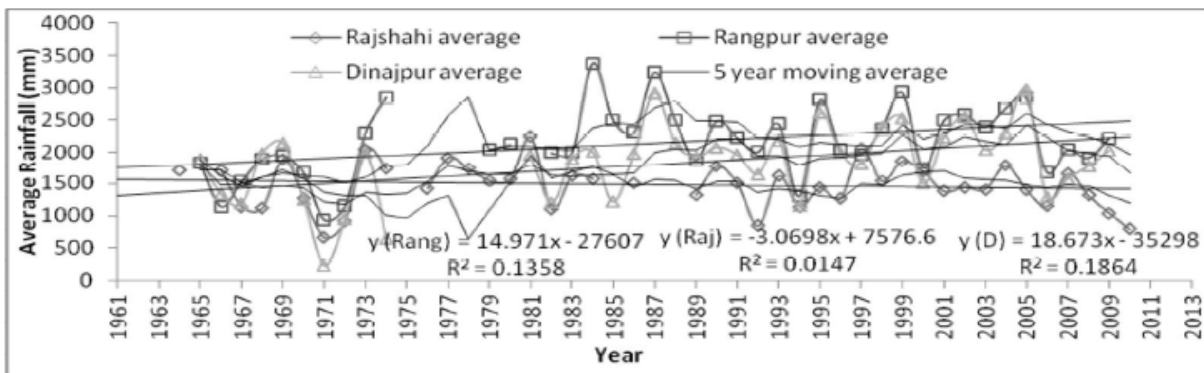


Fig2: Annual average rainfall, 5 year moving average and trend line over Rajshahi, Rangpur and Dinajpur region during 1961-2010

The figure 1 shows that during summer and winter, Rangpur has the highest and lowest temperature count. Figure 2 shows that Rangpur also has the highest amount of rainfall among the three regions in survey.

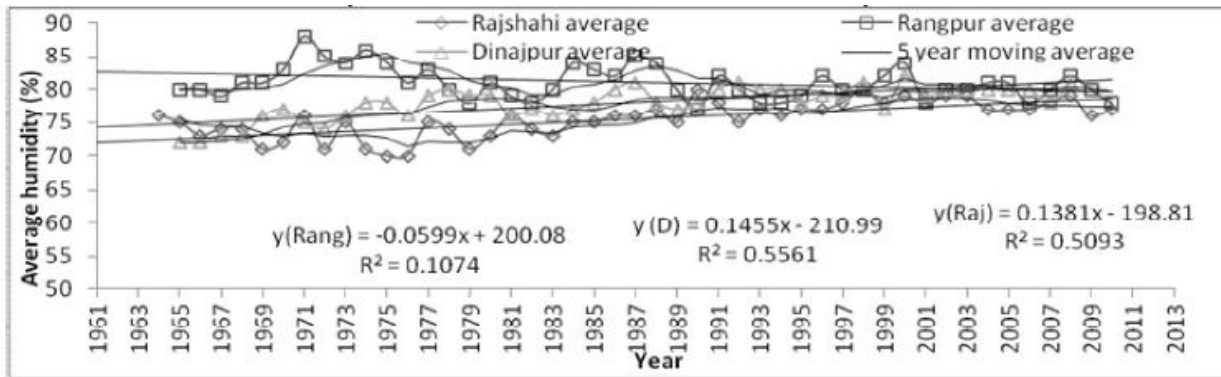


Fig 3: Annual average humidity, 5 year moving average and trend line over Rajshahi, Rangpur and Dinajpur region during 1961-2010

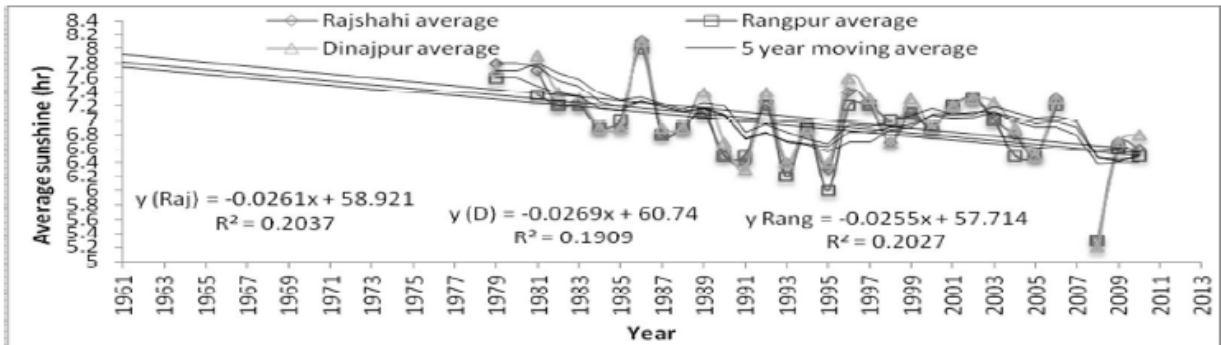


Fig 4: Annual average sunshine, 5 year moving average and trend line over Rajshahi, Rangpur and Dinajpur region during 1961-2010

Due to the high temperature during the summer, Rangpur also has a high humidity count. Although the annual average humidity of Rangpur decreased while the others increased over the past years. From 2001 the average of all the three regions is almost the same, although Rangpur still has highest count among them.

Figure 4 shows that the average sunshine of the three regions have decreased significantly over the period of 1961-2010.

Chapter 4: Case Study

4.1 Sports Complex in Chatenay-Malabry



Architects: aEa – Agence Engasser + Associes

Location: 2 Avenue, Leonardo de Vinci, 92290, Chatenay-Malabry, France

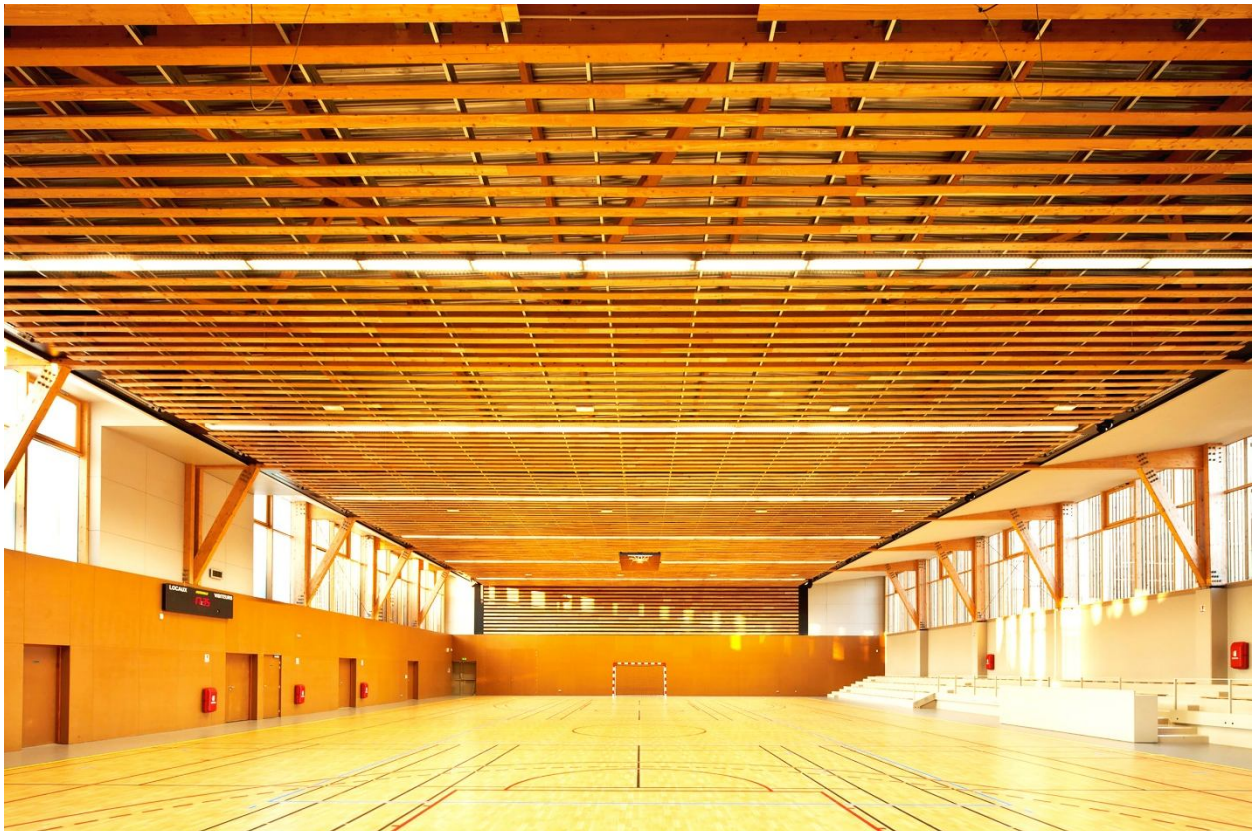
Area: 2400 sqm.

Project Year: 2012

Located at the heart of the 'Butte Rouge' garden city in the Paris suburb of Châtenay-Malabry, the Léonard de Vinci sports complex houses a multipurpose sports hall, a dojo and annexes.

The project can be divided into two main sections:

- The base of the building which emerges from the park. The low height of the base is in keeping with the existing buildings and forms an extension of the greenery that runs from the garden-city through to the green roof;
- A 'wooden lantern', which forms the bulk of the sports hall and sits on top of the large green roof. The steel cladding on the base and the perforated iron panelling protect the glass passages and provide a contrast with the wood used in the sports hall.



The sports hall combines the warmth of wood with natural sunlight. A false ceiling made of lengths of larch wood run between the Glulam beams, concealing the technical fittings, while allowing light to filter through and improving the hall's acoustics. The surrounding walls are doubled with MDF up to the height of the changing rooms. The wood and aluminium façades, which frame the majority of the glass surfaces in the complex, are protected on the eastern and western sides of the sports hall by large shutters made of retified pine, identical to the northern and southern gables.



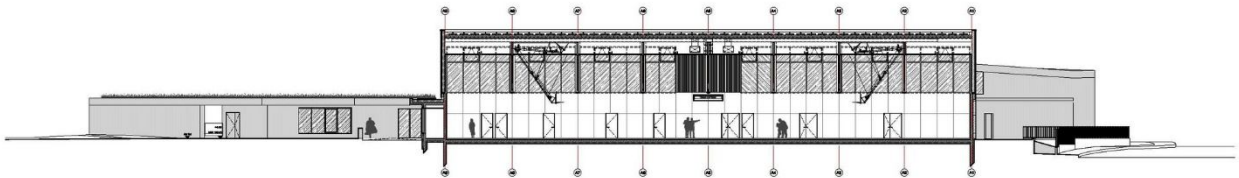
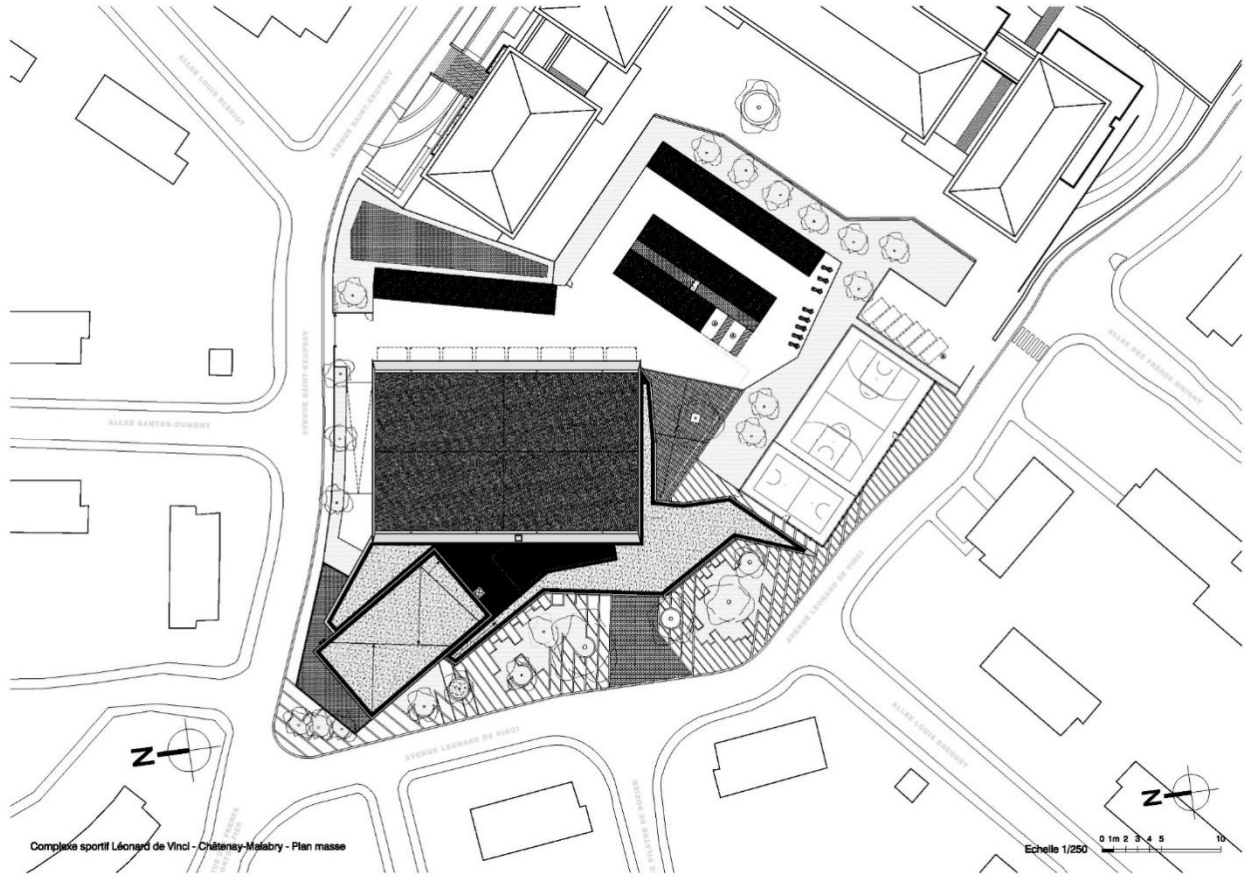
Materials

The materials used for this projects were wood, metal, brick and concrete. Metal was used mainly for framing purposes, while the interiors are made of wood. Concrete columns were used for structures while brick was used for walls.

Reason for choosing this project:

In most cases it is seen that a sports complex or sports stadium consist of high technology fabricated materials to support large span and also provide for the façade. This project however is subtler than those projects. Simple concrete, brick and wooden works with metallic framework. Even the interior work is also simple and is done by wooden work.

The simplistic use of materials supports the context of the Rangpur Sports Complex. Since, the surrounding area consists of bare grasslands to the north-east and clusters of one story tin houses in the south-east and south-west, a simplistic approach similar to this will have a better response from the site. The exterior facades have wooden panels for restricting the amount of sunlight that enters, which is also used in our local context.



4.2 Sports Complex at Neudorf



Architects: Atelier Zundel Cristea

Partners: Jost, Hagenmuller, Sedime, E3 Economie, CAP Avenir, Euro Sound Project,

François Liermann

Location: 43 Route du Rhin, 67100 Strasbourg, France

Area: 4290 sqm.

Project Year: 2014

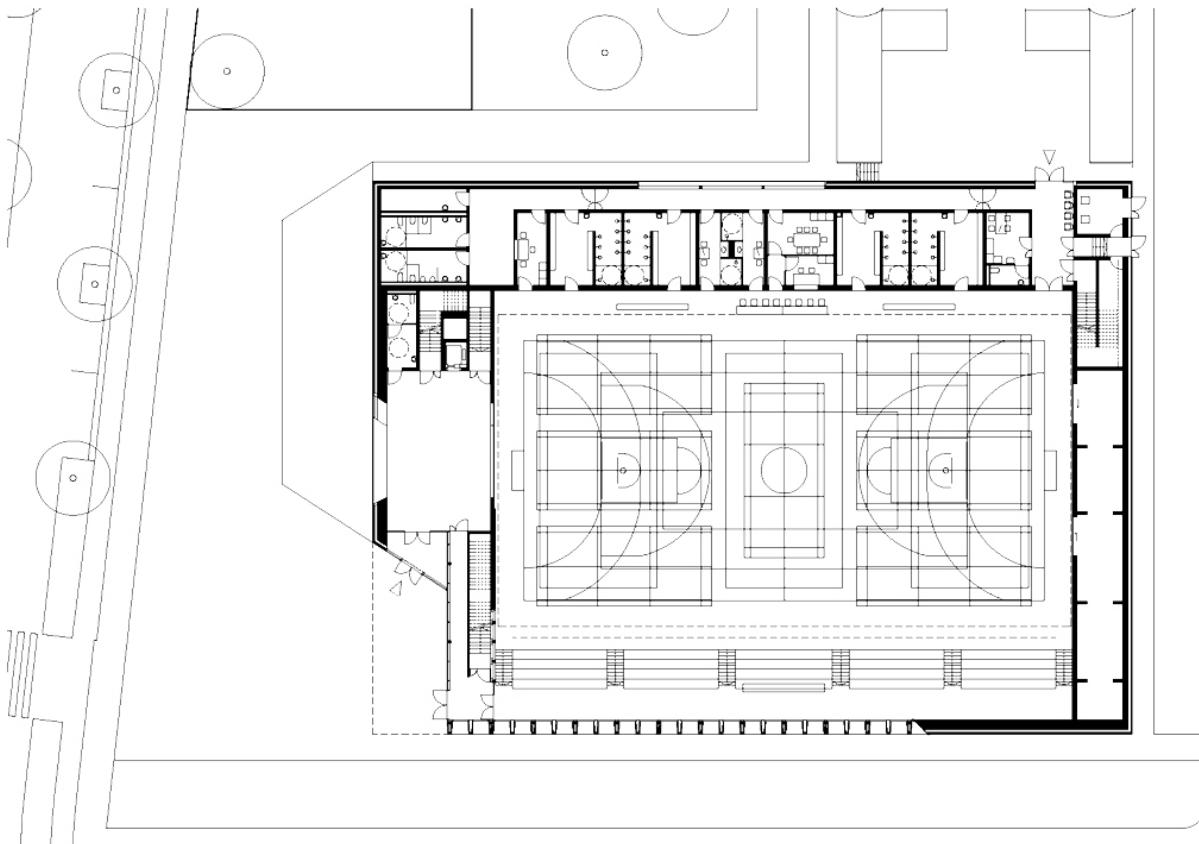
The Neudorf area of Strasbourg is going through a major program redevelopment to connect the city center from its southern neighbourhoods. This urban project particularly exploits the site's central location and the pleasant canal-side landscape, proposing densification as an alternative response to the sprawl of housing and facilities on the edges of the city.

This sports center is one of the many new major projects for the neighbourhood. Its volume and its position are completely visible from the crossroads at the Route du Rhin.

The built form meets two challenges:

- to have an ambitious, resolutely contemporary design

- to respectfully engage with its surroundings.



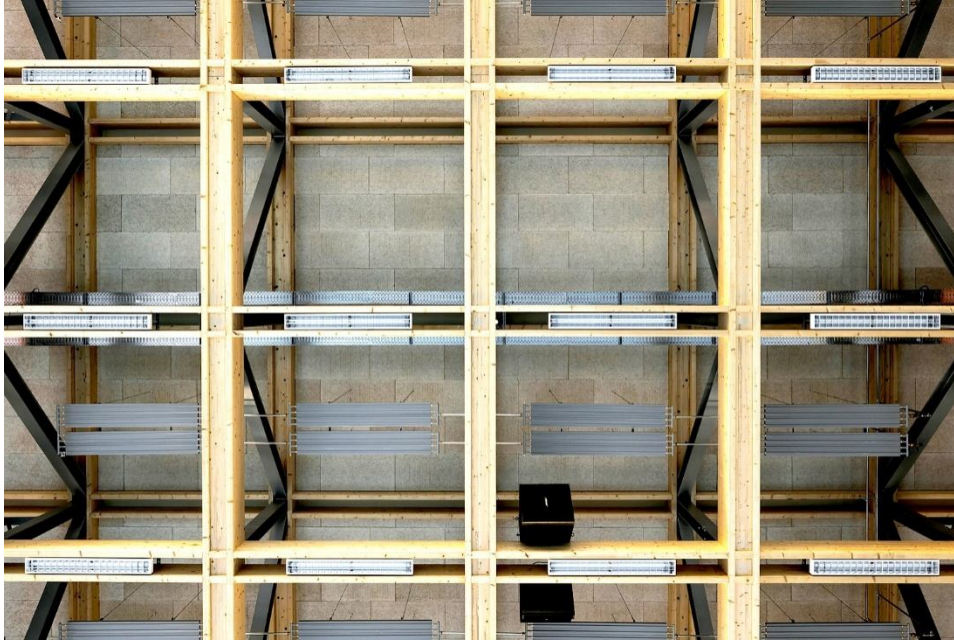
Due to the L-shape of the plot the volume and floor areas were determined through elements' dimension. Since the built area could be of 3600 sqm, the elements were shuffled repeatedly in order to get the best arrangement possible.

A sports center has specific fixed volumetric requirements that are given by the authorities and also the program dimensions. which leave little scope for complex volumes.

This sports center will provide facilities for fencing, handball, basketball, badminton and gymnastics, serving a varied public of schoolchildren and adults.



The project establishes a transparency through the building, giving transversal views in both directions. It respects the positioning dictated by urban planning rules, has a rigorous but not rigid geometry, and a contemporary design. The main sports hall is sunken 2m into the ground reducing the volume of the building and placing it favourably in relation to the public space around it.



More specifically, the project consists of a concrete plinth that accommodates the multi-sports hall, the stands, changing rooms, entrance hall and cafeteria, on top of which sits a box that houses a fencing hall with its own dedicated changing rooms. Using concrete to construct the plinth was necessary because the multi-sports hall will be heavily used by sports clubs and members of the public. The facades are made of prefabricated insulated concrete sandwich panels.

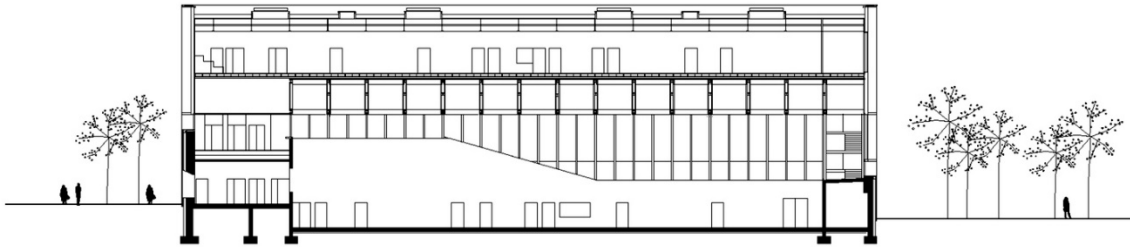


Above this concrete plinth is a steel-reinforced timber post structure. The structural columns are positioned at 1.6m intervals, defining the architecture of the facades with their regular rhythm and thickness and allowing transparency.

Between the columns, the building envelope comprises glazed panels at the lower level with insulated timber panels above, giving the sports center a significant amount of natural light from three sides.

On entering the building, the volume of the sports hall is clearly visible from the entrance, surrounded by the vertical timber members that create the look of a forest clearing.

The building has step free dual entrance. One is for the general public and visitors, while the other is for clubs, school groups, members, maintenance and ambulance. Non-step entry provided and advantage for vehicular access in case of emergency.



Reason for choosing this project:

Unlike the first project, this one is more complex. The construction techniques used is more complex and has multiple layers of metal framing and wood for structures. Despite the complexity, the project has a simple orthodox form with contemporary outlook.

Other than its complex structure, the attributes of this project is similar to the first one and hence is also a project that can be used to merge with the site rather than be a stand out.

Chapter 5: Program Development

5.1 Program Rational

For a project to be successful, it has to have programs that facilitates its purpose to full extent and provide additional facilitates if possible or required. The allotted spaces for each program has to be such that with passage of time it can adjust with the demands, such as an increase or decrease in occupancy and even be able to adjust to the addition of built forms.

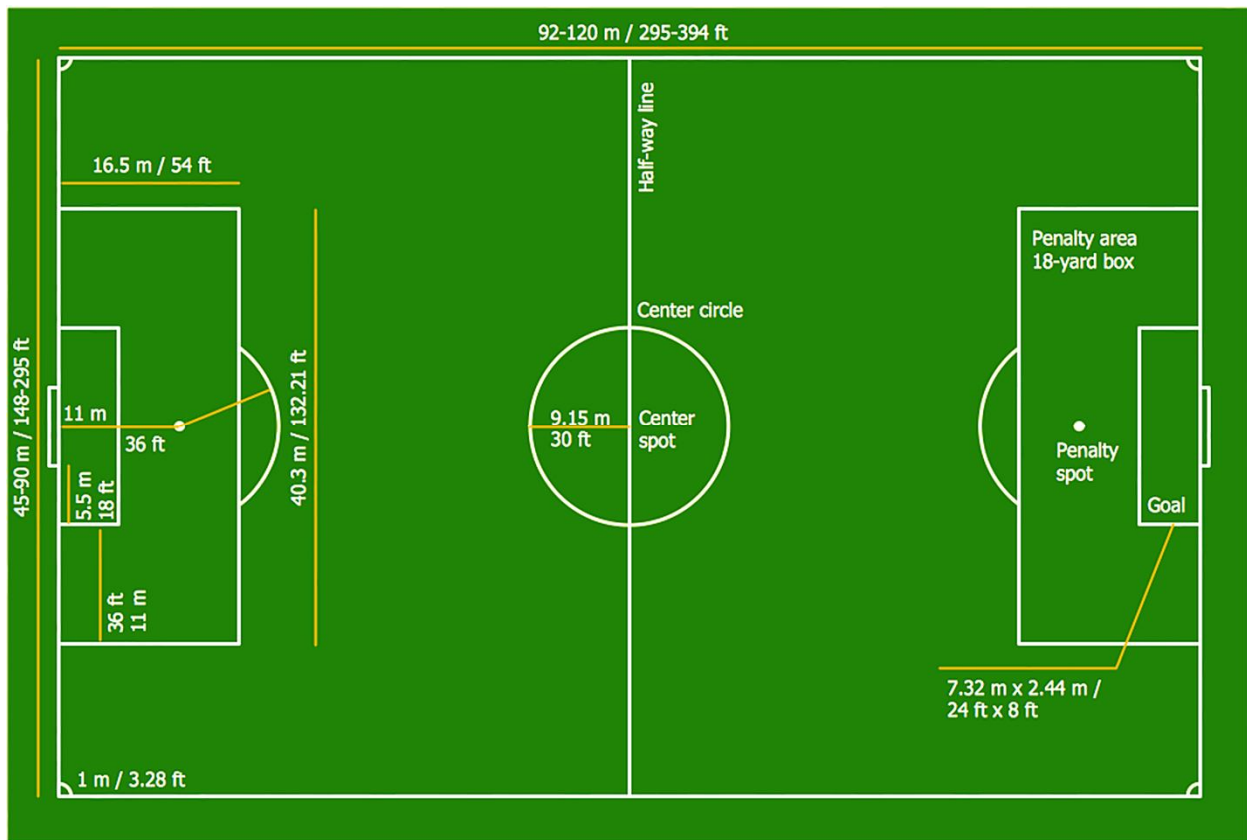
In case of this project, the major programs were briefed by the clients such that the outdoor facilities should include football field, cricket practice field and tennis and the indoor facilities should include basketball court and 8-lane swimming pool and have gymnasium for handball, volleyball, table tennis, judo, karate etc. There should also be a hostel to with a capacity of 50 people and supporting programs such as dining, kitchen and laundry and also an administration building.

Football, cricket, basketball, tennis and swimming are the major sports that will be practiced/played in the sports complex. These sport require a large amount of designated playing area, since they have they own equipment's and in most cases one field cannot hold multiple sport of this sort. For example, a football pitch and cricket field has to be different because of the footwear. The football spikes tend to damage the field during every practice session and therefore requires continues maintenance, while the cricket pitch has to be flat without potholes otherwise the ball might get stuck, especially the center pitch.

5.2 Programs

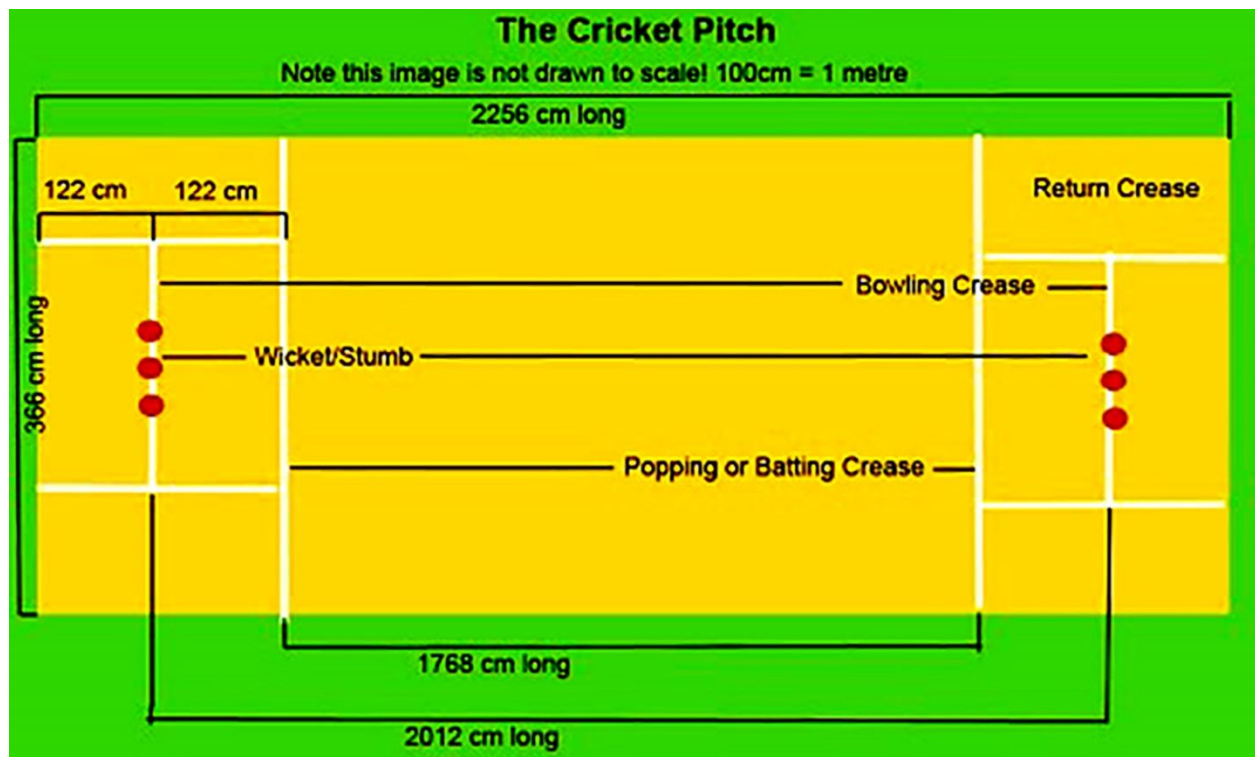
5.2.1 Football

One of the major sport that will be practiced is football. An official standard football pitch is 105m x 68m, where the center kick-off circle being of 9.15m in radius. During the practice session the field can be divided as much as into 8 sections for simultaneous parallel practice sessions.



5.2.2 Cricket

There will not be a full-fledged cricket field since there is an existing stadium. However, there will be provision for practices and practice matches in a smaller scale, as required by the client. The official cricket field itself are at least 137m in diameter, with one side being no less than 58m in distance. Since it is practice field, only the pitch shall be off the official size of 22.56m x 3.66m, while the play field can be off a considerable amount that of which is available.



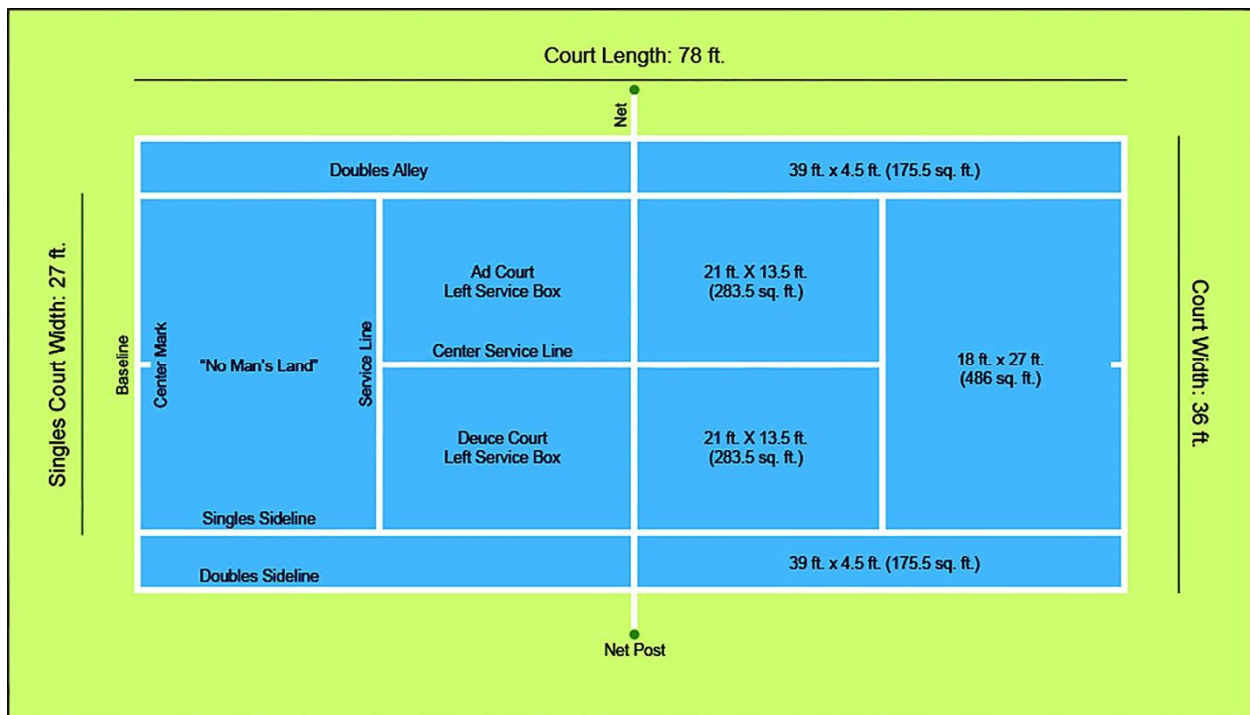
5.2.4 Swimming

There will also be a provision for indoor swimming pool. The swimming will be an 8-lane pool with a dimension of 22m x 50m, 2.5m per lane. The swimming pool shall consist of all the necessary machineries for cleaning and maintenance and will also have a separate changing rooms and toilets.



5.2.5 Tennis

The official tennis court is of 23.77m x 8.23m. The dimension is for both single and doubles since the court size remains the same with a slight difference in rules. The clearance from the baseline has to be a minimum of 2.44m while at the side a minimum of 1.53m.



5.2.6 Gymnasium

The indoor gymnasium is the main program under which there will be all the indoor functions. Table tennis, squash, handball, volleyball etc. The proposed area of gymnasium is 182' x 142' (55.47m x 43.28m), which can be subject to change if programs are altered. The gymnasium will also have provisions for changing rooms, toilets, lockers etc. for all the appointed programs.

5.2.7 Hostel

A hostel will be made with a provision for 50 people to stay with the capacity to expand in the future if required. The hostel shall have supporting programs such as dining, kitchen store etc. facilities that it requires.

5.2.8 Administration

The administration will consist of director as the main head. While supporting staff will comprise of assistants, coaches and grounds men. There will be office room for the director assistants and coaches and staff room for the staffs.

5.3 Program Area

Outdoor Space:

Football field 105m x 68m = 7140sq.m. (76854.32sq.ft.)

Tennis x223.77m x 8.23m x2 = 391.25sq.m. (4211.38sq.ft.)

Cricket (Pitch only) x4 20.12m x 3.05mx4 = 245.46sq.m. (2642sq.ft.)

Basketball x2 29m x 15m x2 = 870sq.m. (9364.6sq.ft.)

Total Outdoor coverage: 8646.71sq.m. = 93072.4sq.ft.

(excluding circulation and services)

Indoor Programs:

Swimming pool (8-lane) 22m x 25m = 550sq.m. (5920.15sq.ft.)

Basketball 29m x 15m = 435sq.m. (4682.3sq.ft.)

Table Tennis x49m x 5m x4= 180sq.m. (1937.5sq.ft.)

Volleyball 18m x 9m = 162sq.m. (1743.75sq.ft.)

Handball 40m x 20m = 800sq.m. (8611.13sq.ft.)

Badminton x313.4m x 6.1m x3= 245.22sq.m. (2639.53sq.ft.)

Total indoor area coverage: 2372.22 sq.m. = 25534.36sq.ft.

(excluding circulation and services)

Hostel	3251.6sq.m. = 35000sq.ft.
Administration	836.12sq.m. = 9000sq.ft.
Services (hostel only)	424.38sq.m. = 4568sq.ft.
Total built area	15,531.03sq.m.=1,67,174.62sq.ft.

Chapter 6: Design Development

6.1 Concept

Rangpur is a very much under-developed city, with new recent constructions of infrastructure just being started. Most of the area is agricultural crop land while a small city center has been subjected to development till date. After the year 2010, the declaration of Rangpur as the eighth division has invoked further infrastructures development decisions. Since then, the government has been preparing a proper urban planning and structural development. The Sports complex, as mentioned before, is a part of the city development project.

A sports complex, by its name and functional requirements, comprises of majorly large uninterrupted spaces where sports can be played. The indoor arena comprises of playing space that can be used for multiple sports. As a result, the built form generally tends to be a very large block of building. The basic and foremost primary concern for this project was to have a functional design with a form that seems to merge with the surrounding, so that it can create a relationship with the adjacent river and also have spaces for social interaction in the form of informal discussions.

6.2 Site Survey

Site during first visit (June)



Site during second visit (September)

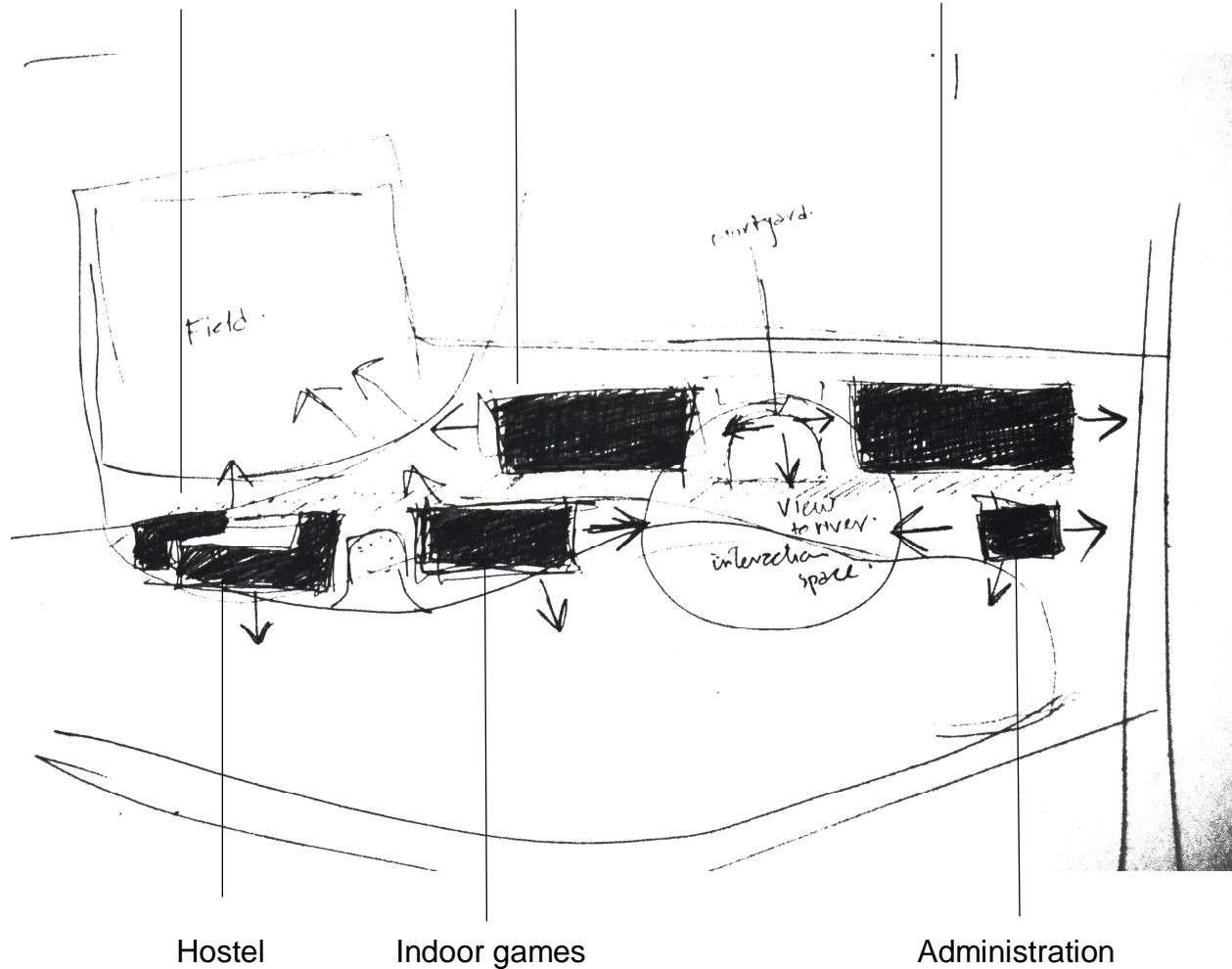


6.3 Formation

Dining and Laundry

Indoor Stadium

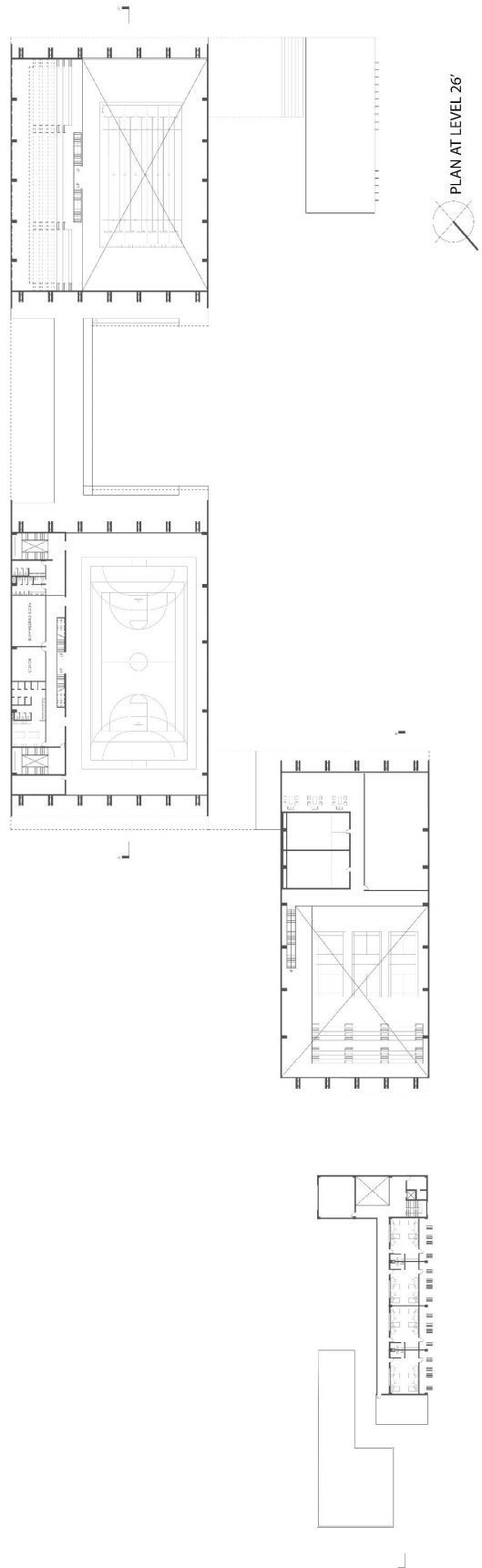
Indoor Swimming Pool

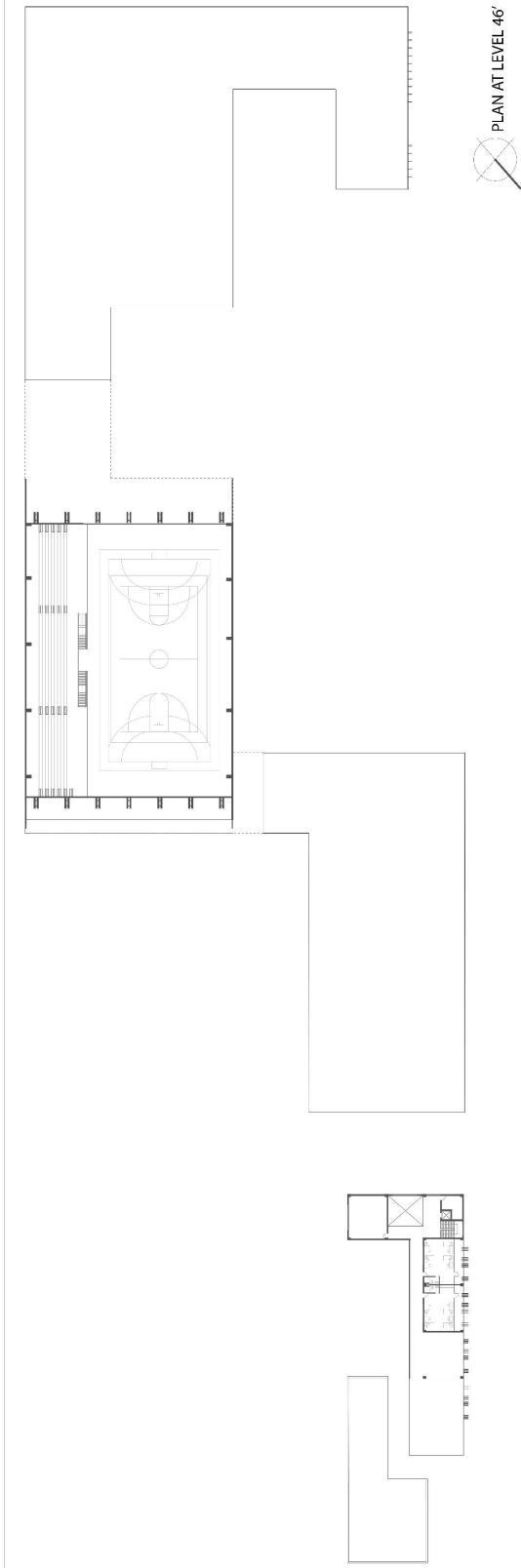


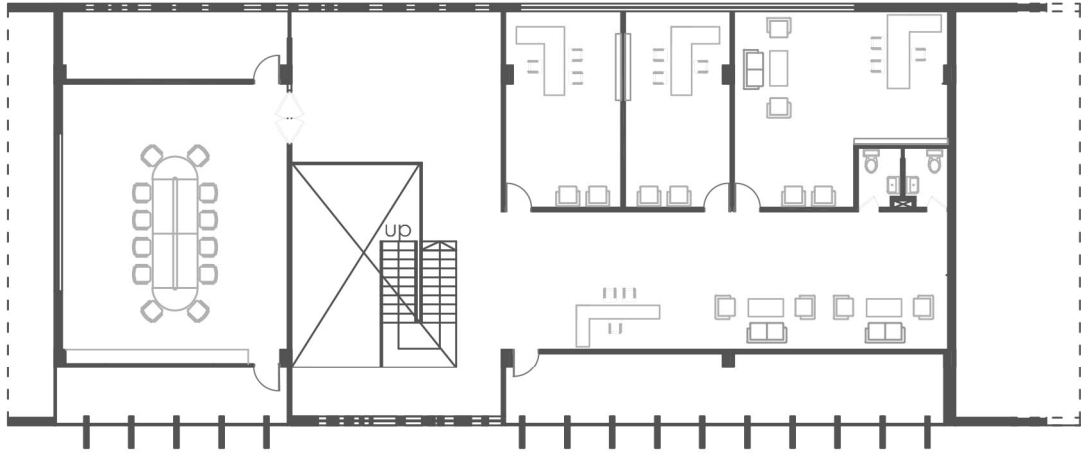
The basic idea was to generate a space between the indoor blocks that could create a courtyard like space which will have the river as its view. The block on the extreme left is the hostel block. The courtyard gap between the indoor games block and hostel creates a buffer zone to segregate public and private spaces.

6.4 Drawings

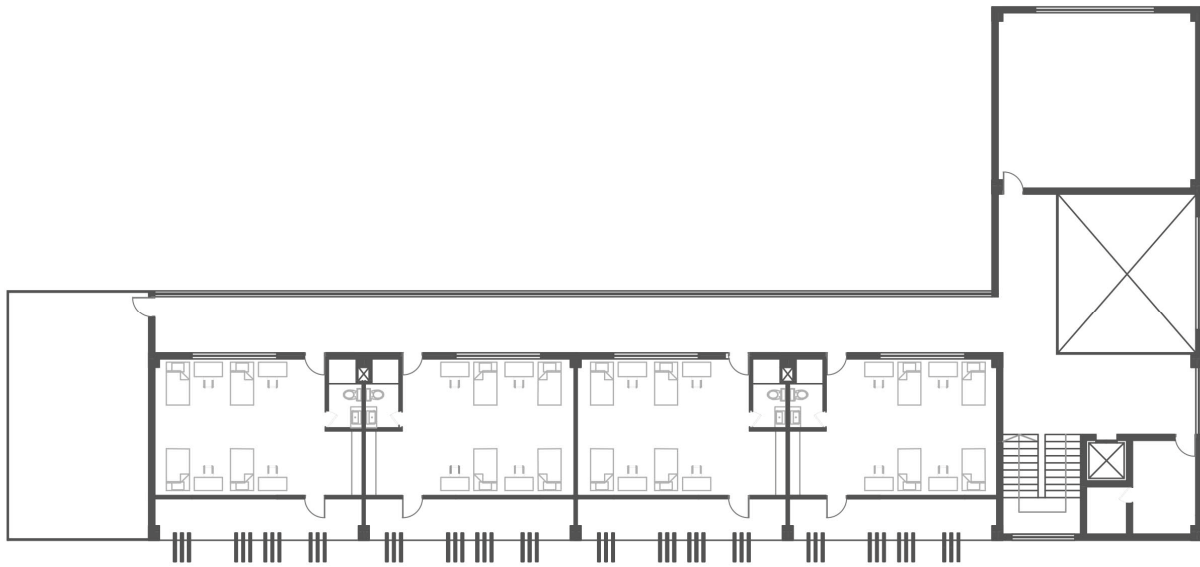








ADMINISTRATION 1ST FLOOR PLAN



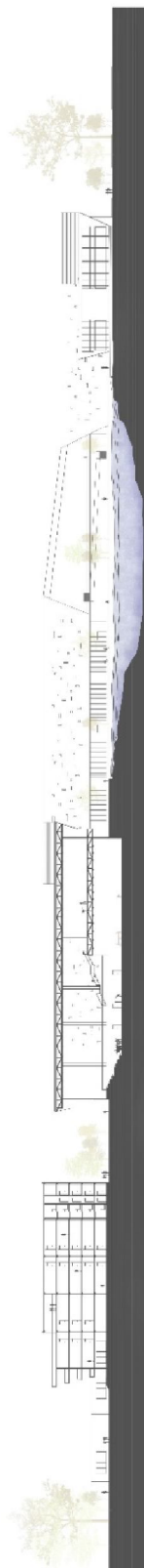
HOSTEL PLAN 1ST, 2ND & 3RD FLOOR



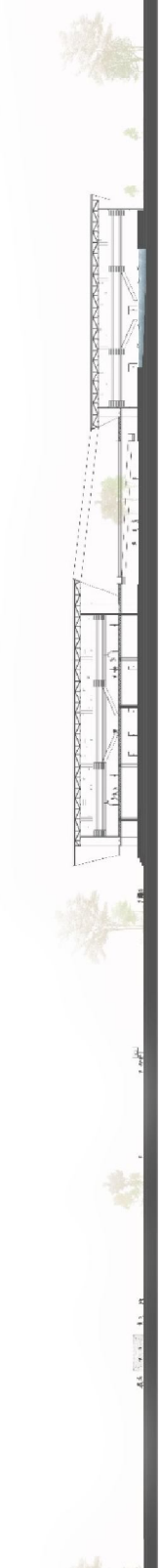
SOUTH WEST ELEVATION



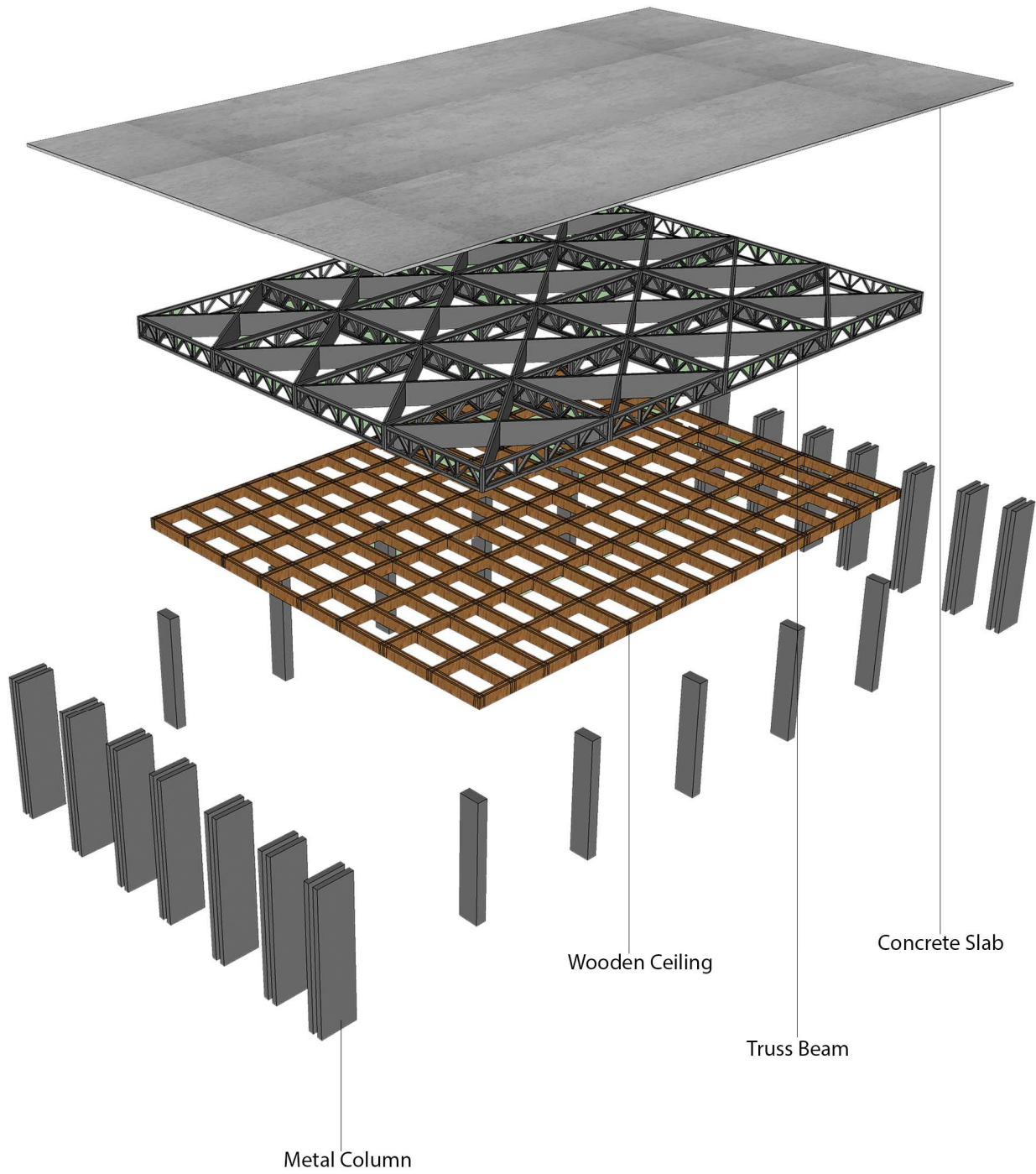
NORTH WEST ELEVATION

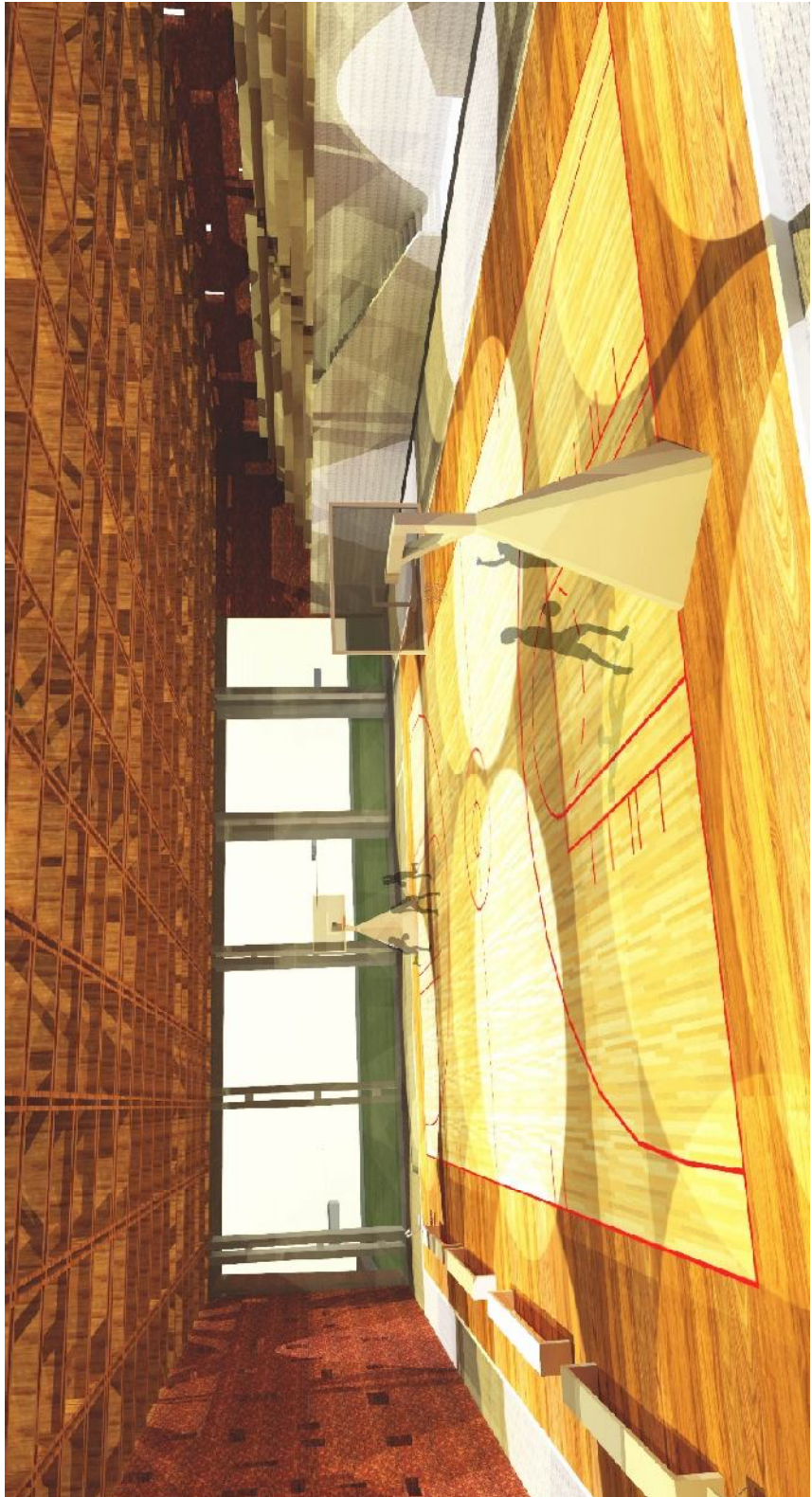


SECTION BB'

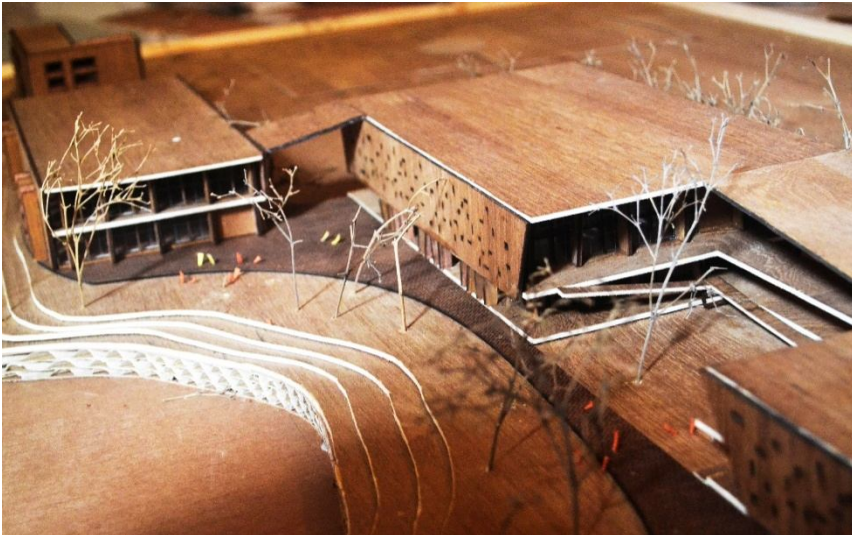
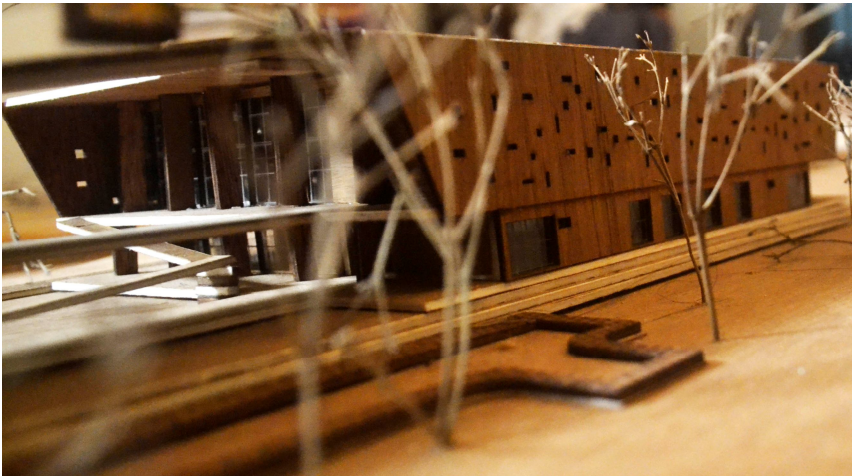


SECTION AA'





6.5 Pictures of Model



Chapter 7: Conclusion

7.1 Conclusion

No matter where it stands, a sports complex serves its community, formal or informal. The idea is to have a platform where people, regardless of age, gender and financial background etc. can come together to share a moment of social interaction as a by-product, while they keep themselves physically active and mentally happy. This study shows that physical fitness in the form of sports has helped various people in different countries attain a better lifestyle and also contribute to the reduction of crime.

Women's Sports Complex, centers around women who want to be physically active and also those who want to play sports to their liking. Success and improvement in sports can boost a person's confidence in other occupations. Especially in a country like Bangladesh, where women are subjected to child marriage and domestic violence. This designed platform shall help them attain a certain level of confidence to progress in life.

While the outside spaces and formation are subjected to the local typology of living, where people have their regular activities in courtyard and riverside. The form itself creates a courtyard like feeling, that which is found in the surrounding residences. The idea of materials namely brick, wood, metal, concrete comes from the architectural context of this country and also in a hope to direct the further development of the surrounding area with a more contextual meaning, rather than in a haphazard way that has been going on.

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