Outdoor Sports Field Guidelines

All sports fields done by Lodha need to be world class and reflective of the standards that a high quality sports focused private development would have.

This document covers the following sports which are commonly played in India:

a. Football (Soccer)
b. Cricket
c. Tennis
d. Basketball
e. Volleyball

See appendix A for requirement details of each sport.

Some of the key areas to focus on during design are:

a. Changing room(s) & toilet(s) for the players, along with
    a. Viewing deck / bench (if a team sport)
b. Field boundaries / enclosure (including marking and edge demarcation) as per international norms
c. High quality natural/ artificial turf material
d. Drainage of the field
e. Viewing facilities (eg. Stands), along with
    a. Toilet facilities for the visitors
    b. Some F&B (non-cooking) stand
f. Parking for the visitors (if visitors are expected from outside the development)
g. Controlled access into the facility ('facility' include ground and its linked facilities)
h. Night lighting – this is not compulsory but can be considered on case to case basis in discussion with HOD-Design / Director-Design. For detailed guidelines, please see http://www.abacuslighting.com/guide-to-sports-lighting-levels.asp
i. Seating for players / referees – appropriate provision for player
j. Scoreboard – can be manual or electronic, but gives the feel of a more complete facility.

Attention also needs to be paid:

a. Security
b. Traffic flow
c. Pedestrian flow (including during monsoons)
d. Ticketing (if external visitors are envisaged)

Sports field should be generally be planned with the longer dimension in the north-south direction (in cricket, this applies to the pitch), so that the players are shielded from the east-west glare of the sun.

If a field is planned for multipurpose use, ensure that:

a. The field is sized appropriately for the sport requiring the largest field space.
b. The 'lines' of the each sport are marked in distinctly different colours.
c. For hard courts, the area within the court 'lines' to be in a different colour from that outside – suggested colours: Red inside and Green beyond the court 'lines'.
d. The field material is suitable for use in all the planned sports.
e. The equipment for one sport does not disturb the flow/play of any other sport and if it does, it can be easily removed and placed back later.

Changing room requirements for team sports

- an entrance lobby
- appropriately sized changing rooms for each team (seating for no of players in each team + 5)
- showers and dry-off areas, ideally for each changing room
- toilets& wash hand basins
- separate match officials' accommodation (male & female)
- meeting room/social area
- pantry
- kit/equipment storage area

If multiple sports facilities are co-located, these changing rooms can be shared between different sports – such a setup may require changing rooms for 4 teams (instead of 2 normally needed). Also see 'Changing room & other sports area design' guidelines.

Players and Referee Seating:

Should be planned taking into account the need for players to rest during the games (eg. Tennis, badminton) or watch while the others play (eg. Member of the batting team in cricket) or for the referee/umpire to sit during match (only if venue is planned for competition use). Chairs/benches should be played at appropriate location, along with some element of covering (umbrella, awning, other shading device) to give reasonable comfort. It should also be ensured that these chairs/benches are appropriately fixed/chained to avoid theft.

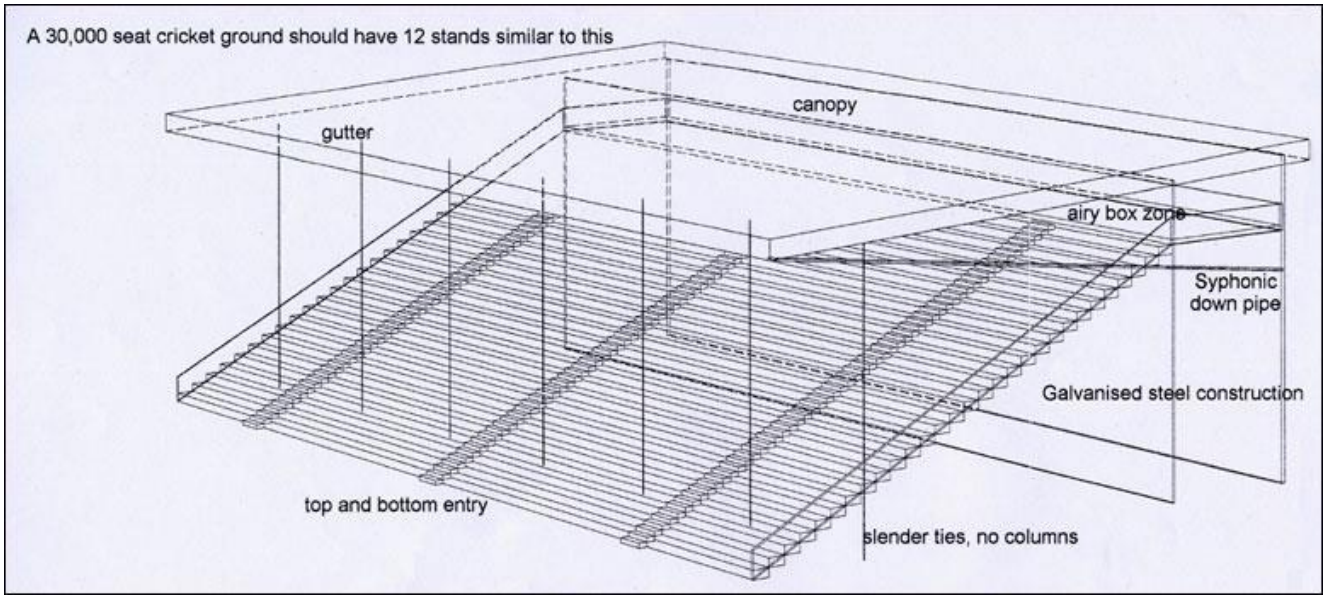
Stands/Visitor seating

Should be designed taking into account the likely usage of the field. Generally for fields which are meant to cater only to users inside a development, a maximum capacity of 200 is sufficient. For fields which are meant to cater to outsiders (or city level development like Palava), large capacities of 2000+ may be planned. The quality of seats is important to ensure spectator comfort – polypropylene chairs are the most commonly used seats and are fixed to the structure below (Scaffolding or RCC). Appropriate toilet facilities and some F&B stand(s) no cooking are also required to be provided. Security and parking access needs to be considered while finalizing the design. The viewing stands should preferably be oriented such that people are not looking at the setting sun viz. not looking west.

Reference images:









Field seating

Seating with changing room and commentator's box



For detailed guidance on any particular sport, see http://www.sportengland.org/facilities-planning.

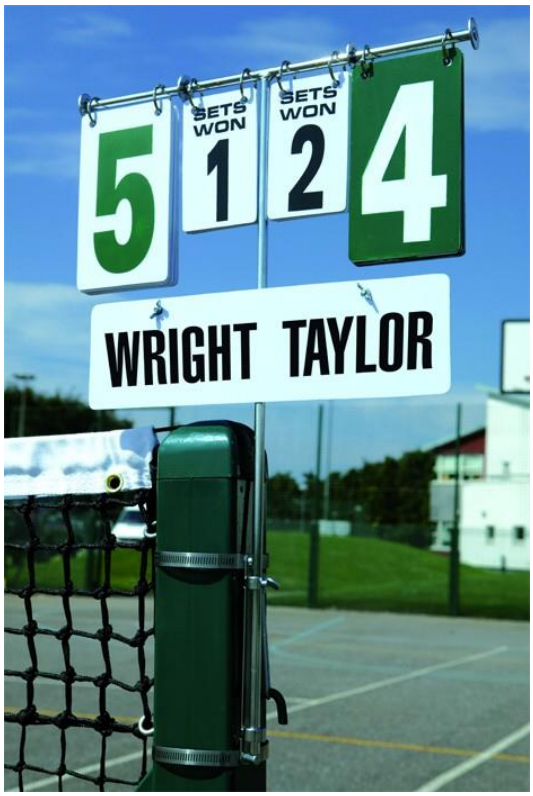
Scoreboard:

- Appropriate manual scoreboard should be placed for all venues.
- If venue has seating capacity of >250, electronic scoreboard can be considered, subject to costs. Electronic scoreboard should be mandatorily considered for venues with seating capacity > 1000.

Reference images:



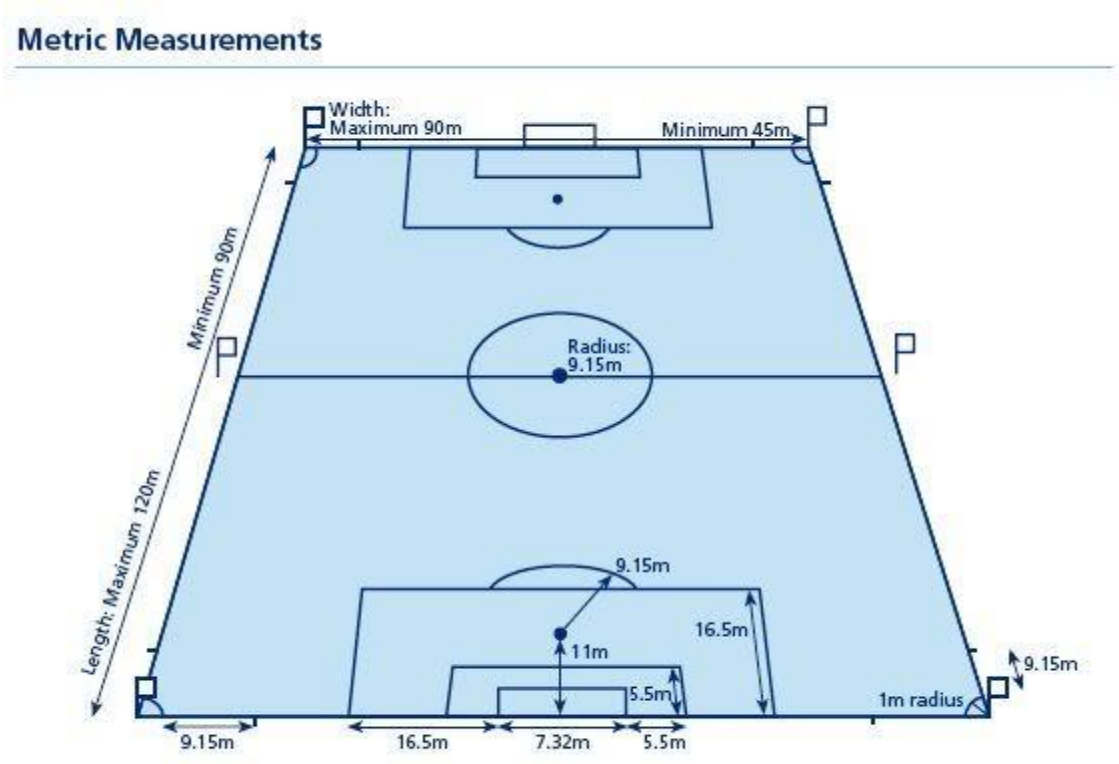
Electronic scoreboard for football





Manual scoreboard for tennis

FOOTBALL (SOCCER)



The length of the touch line must be greater than the length of the goal line.

Length (touch line):
* minimum 90 m (100 yds)
* maximum 120 m (130 yds)

Width (goal line):
* minimum 45 m (50 yds)
* maximum 90 m (100 yds)

For international standards, the width of the field should be in the range 65 to 75m and the length 100 to 110 m. This is also followed for national games in India. The preferred field size for many professional teams' stadiums is 68 m x 105 m.

All lines must be of the same width, which must be not more than 12 cm (5 ins).

Boundary



Beyond the field dimensions, the outer boundary is marked by boards (flex + frame) and seats thereafter. The outer boundary is about 3 mtrs from the field edge along the longer side and 3 mtrs along the shorter edge.

Other key equipment
Goal posts are to be provided.

Field material:

		Reqd Sub-Base	Field material	Notes
1	On Ground	For Opt 2 : Granular Sub-base/Asphalt to be done on mother earth	Opt 1: Natural grass Opt 2: Artificial Turf	
2	On Podium	Concrete Slab	Artificial Turf	

Artificial Turf: 40 mm Artificial Turf can be used for normal play and should meet the FIFA Quality Concept for Football Turf requirements. For a FIFA 1 Star pitch, 50 mm artificial turf is required and for a FIFA 2 Star pitch, 60 mm Artificial Turf is required.
For Artificial Turf (50mm) Specification Ref. Annexure A

Drainage: Slope of 1:100 or 1:120 is recommended for the Sub-Base; ie., 1% slope from the centre of the field to both sidelines with crown running along the length of the field. There is no sub-soil drainage. (Ref. Annexure G)

Irrigation: Sprinkler irrigation is not recommended. Manual watering is preferred.

Fencing:

Fencing Material	Fencing Height	Notes
High impact Nylon Net	5.5 M	• The court should be closed using net on all sides and top. To support top net necessary structural arrangement should be done. • Foam encasing to the posts should be done at height of 1.2 M from FFL (this helps to avoid injury)

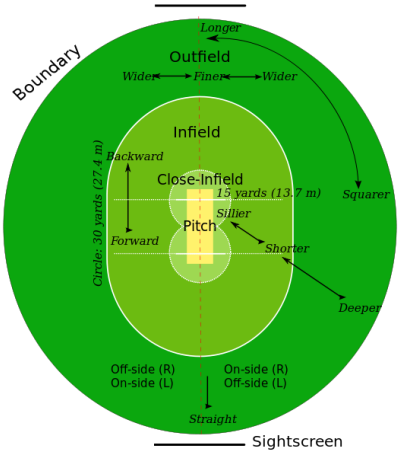




Lighting: For Class 2 or Intermediate level play (regular play), 200 lux lighting is required with a Minimum/ Average of 0.6 and a maximum Glare Rating of 50. This may be from a 4 pole or 6 pole systems.

Also see 'Football Field Preparation' guidelines

CRICKET



Ground

The playing area shall be a minimum of 150 yards (137.16 metres) from boundary to boundary square of the pitch, with the shorter of the two square boundaries being a minimum 65 yards (59.43 metres). The straight boundary at both ends of the pitch shall be a minimum of 70 yards (64.00 metres). Distances shall be measured from the centre of the pitch to be used. In all cases the aim shall be to provide the largest playing area, subject to no boundary exceeding 90 yards (82.29 meters) from the centre of the pitch to be used. (*Note: These are dimensions for a field on which an international game can be plated. Dimensions upto 20% lower (in diameter) are acceptable for development level fields.)*

In addition, the conditions require a minimum 3 yard gap between the "rope" and the surrounding fencing or advertising boards. This is to allow the players to dive without hurting themselves.

It is worth noting that based on these guidelines, a cricket field must have at least 16,000 square yards ((150+3+3)/2*(70+70+3+3-22/2)/2*pi) of grass area.

The cricket ground can vary from being almost a perfect circle, to being an extremely elongated oval. On most grounds, a rope demarcates the perimeter of the field and is known as the *boundary*.

There are two additional field markings. A painted oval is made by drawing a semicircle of 30 yards (27.4 m) radius from the centre of each wicket with respect to the breadth of the pitch and joining them with lines parallel, 30 yards (27.4 m) to the length of the pitch. This line, commonly known as the circle, divides the field into an infield and outfield. Two circles of radius 15 yards (13.7 m), centred at middle stump guard on the popping crease and often marked by dots, define the close-infield. The infield, outfield, and the close-infield are used to enforce fielding restrictions.

Pitch



Boundary



Inner boundary using rope



Outer boundary using boards (flex + frame) and seating





I
nner boundary using foam pad

Field material:

		Reqd Sub-Base	Field material	Field material for Pitch	Notes
1	On Ground	Natural Ground	Natural Grass	Natural Compacted Clay Soil	
2	On Podium	Concrete Slab	Natural Grass	Artificial Turf (15mm)	

Slope of 1:100 or 1:120 is recommended for the Sub-base (Ref. Annexure G)

For Artificial Turf (15mm) Specification Ref. Annexure B

Drainage: Subsoil drainage with PVC perforated pipes under the lawn and connected to a Periphery drain is recommended. This is not provided below the pitch.

Irrigation: The pitch should be irrigated manually. Sprinkler irrigation is preferred for the lawn.

Fencing: Fencing is provided beyond the outer boundary to keep the spectators out of the field based on site conditions.

	Fencing Material	Fencing Height	Notes
Box Cricket	High impact Nylon Net	Min. 3M	• It should be closed using net on all sides and top. To support top net necessary structural arrangement should be done. • Smaller net size should be considered so that ball can't pass through it.
Cricket Ground	High impact Nylon Net	Min. 3M	All around Cricket Ground

Lighting: For Class 2 or Intermediate level play (regular play), 500 lux is required over the pitch with a Minimum/ Average of 0.7 and 300 lux is required over the lawn with a Minimum/ Average of 0.5. The maximum Glare Rating is 50. Lighting is provided from 4 poles.

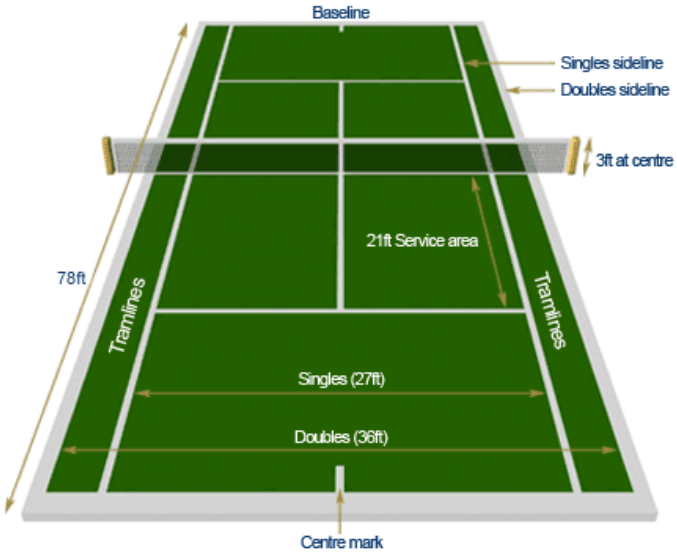
Also see 'Cricket Field Preparation' Guidelines.

Other key equipment needed

a. Pitch covers
b. Ground Roller
c. Scoreboard
d. Cricket nets

e. Bowling machine (optional)

TENNIS



78 feet x 27 feet (singles) or 78 feet x 36 feet (doubles)
In addition to the above, movement/playing space of min. 3.6 m on the longer dimension of the court (both sides) and 2m on the shorter dimension of the court (both sides) should be provided.

Field material:

		Reqd Sub-Base	Field material	Notes
1	On Ground	Asphalt to be done on mother earth	5 layers Acrylic	
2	On Podium	Concrete	Opt 1: Artificial Turf (15mm) Opt 2: Interlocking tiles	Opt 1: For Medium Bounce Opt 2: For Medium to hard Bounce

Slope of 1:100 or 1:120 is recommended for the base (Ref. Annexure G)

For 5 layers Acrylic Specification Ref. Annexure C
For interlocking tile Specification Ref. Annexure D

Fence

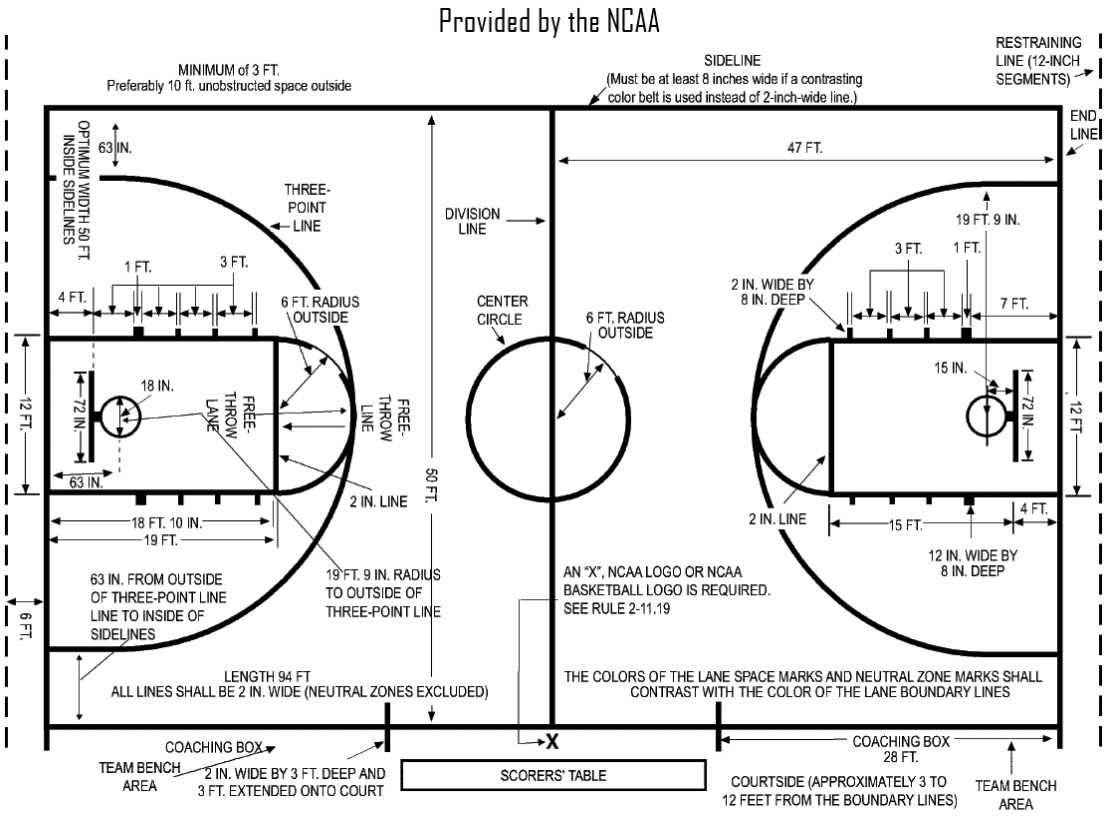
Fencing Material	Fencing Height	Notes
Hot dip galvanized steel wires with powder coating (Similar to A1 fencing)	5 M	





Lighting: For Class 2 or Intermediate level play (regular play); 300 lux is required with a Minimum/ Average of 0.7 and a maximum Glare Rating of 50.

Basketball



94 feet x 50 feet (half basketball: 47 feet x 50 feet)

In addition to the above, movement/playing space of min. 2.4 m on the longer dimension of the court (both sides) and 1.2 on the shorter dimension of the court (both sides) should be provided.

<u>Hoop</u>

Special attention to be paid to the quality of the hoop. Local Indian options are poorly designed and manufactured. Sample references below:





Field material:

		Reqd Sub-Base	Field material	Notes
1	On Ground	Asphalt to be done on mother earth	5 layers Acrylic	
2	On Podium	Concrete	Interlocking tiles	

Slope of 1:100 or 1:120 is recommended for the Sub-base (Ref. Annexure G)

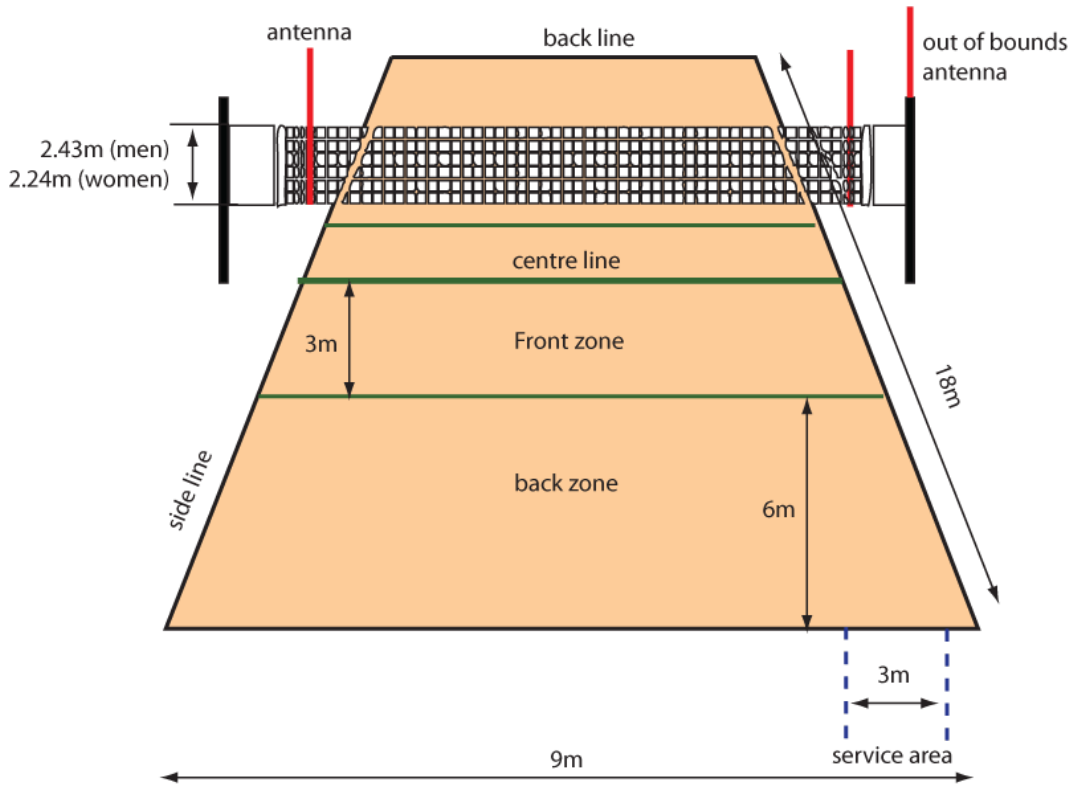
For PU flooring specification Ref. Annexure E

Fence

Fencing Material	Fencing Height	Notes
Hot dip galvanized steel wires with powder coating (Similar to A1 fencing)	5 M	

Lighting: For Class 2 or Intermediate level play (regular play), 200 lux is required with a Minimum/ Average of 0.6 and a maximum Glare Rating of 50.

Volleyball



18 m (59 feet) x 9 m (29.5 feet)

In addition to the above, movement/playing space of min. 2.4 m on the longer dimension of the court (both sides) and 1.2 on the shorter dimension of the court (both sides) should be provided.

Field material:

		Reqd Sub-Base	Field material	Notes
1	On Ground	Asphalt to be done on mother earth	5 layers Acrylic	
2	On Podium	Concrete	Artificial Turf(15mm)	

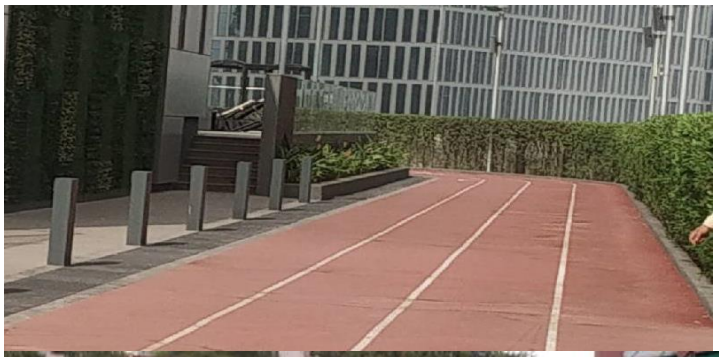
Slope of 1:100 or 1:120 is recommended for the base (Ref. Annexure G)

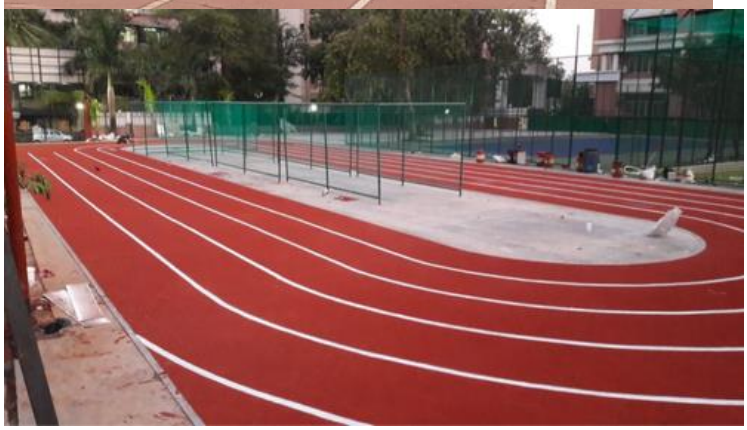
Fence

Fencing Material	Fencing Height	Notes
Hot dip galvanized steel wires with powder coating (Similar to A1 fencing)	5 M	

Lighting: For Class 2 or Intermediate level play (regular play), 200 lux is required with a Minimum/ Average of 0.6 and a maximum Glare Rating of 50.

JOGGING/WALKING TRACKS





Field material:

		Reqd Sub-Base	Field material	Notes
1	On Ground	Granular Sub-base/Asphalt to be done on mother earth for artificial sports surface	EPDM	
2	On Podium	Concrete	EPDM	

Slope of 1:100 or 1:120 is recommended for the base
For EPDM flooring specification Ref. Annexure F