

100 YEARS FIFA 1904 – 2004

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2007

Football Stadiums

Technical recommendations and requirements







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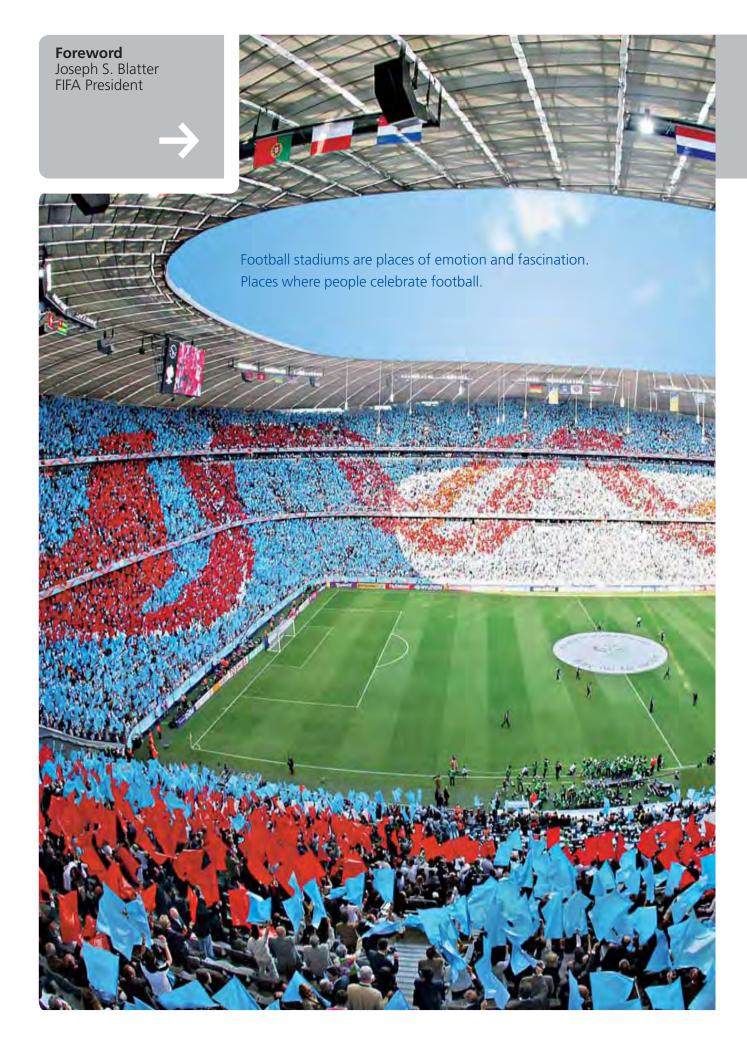
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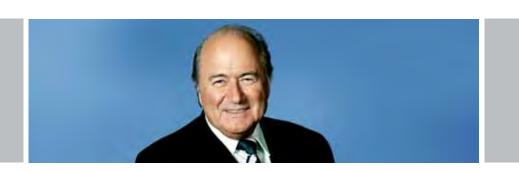
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A word from the FIFA President

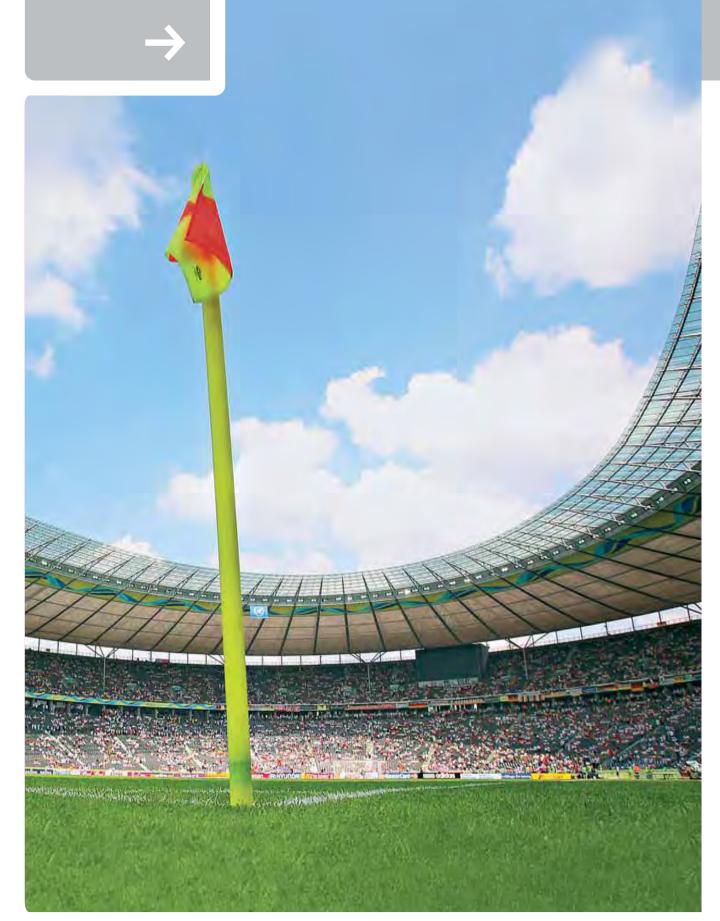
In every aspect of life, progress is constantly being made. This is also true in the construction and renovation of football stadiums, some of which have become modern day urban landmarks. Stadiums do not offer unrestricted space, though. These buildings, where every week, month and year thousands of people congregate, must fulfil particularly stringent criteria in terms of comfort, safety and security.

Ever since the dark days of the 1980s, FIFA has taken up the question of safety in stadiums time and again in its quest to continuously improve the standards of football's modern arenas. One major conclusion is more valid than ever: crowd safety and comfort are directly connected. Improved amenities lead to increased safety. Comfort means more space for each spectator, shorter routes to the exits, more entrance gates and exits, areas to gather in and areas for refreshments as well as public conveniences. Once all these factors have been taken into account, when there are no more fences and when most of the stadiums provide protection from the scorching sun or the pelting rain, when spectators can sit in peace instead of standing for hours, that is when we can expect to witness the desirable elements of a sports event, namely, a relaxed atmosphere, electrifying and exciting, but never hectic and aggressive.

It is these principles that are yet again put forward in this Football Stadiums: Technical recommendations and requirements publication. A group of renowned experts from sport and the construction industry has successfully taken up the mission to not only make a mere "update" to the previous edition of this very important publication but to also provide a manual for a state-of-the-art approach in this area.

I wish to thank them sincerely for their important contribution. They are making sure that the beautiful game is played in beautiful, comfortable and safe stadiums.







A word from the FIFA General Secretary

The first great age of football stadium construction was between the 1890s and the 1930s, when football grew into a mass spectator sport in many parts of the world. Some of those early stadiums, now more than a century old, are still in operation.

The second great age of stadium design arguably began in the late 1980s, as the realisation dawned on the football world that many old stadiums were simply unfit for use. Unfortunately, a key factor in that waking-up process was a series of appalling tragedies which resulted in the deaths of many football supporters.

Less than 20 years later, football supporters have evolved from simply being loyal followers into demanding customers, with high expectations of a visit to a stadium. They expect to find their seat easily, to watch the game in comfort, to be able to enjoy some refreshments at half time and to visit the toilet without an ordeal. Football fans of the future are likely to be even more demanding. Stadium owners, developers and architects have been responding to the challenge, creating stadiums that go beyond meeting supporters' needs: they have built stadiums whose breathtaking design has made them a source of pride for local communities or even whole cities. Where this has happened, many fans who were lost to the game have returned and many new supporters – including an increasing number of women and children – have been persuaded to give it a try. But much more work needs to be done.

This book provides a blueprint for the football stadium of the twenty-first century. In its scope, it responds to the demands of players, fans, VIP guests, the media and local communities. In its detail, it aims to be a useful, practical tool for all those involved in the design, construction and management of stadiums.

Throughout the book, one message should ring loud and clear: no aspect of the football stadium experience can ever take precedence over the safety of those using the facility.

FIFA General Secretary







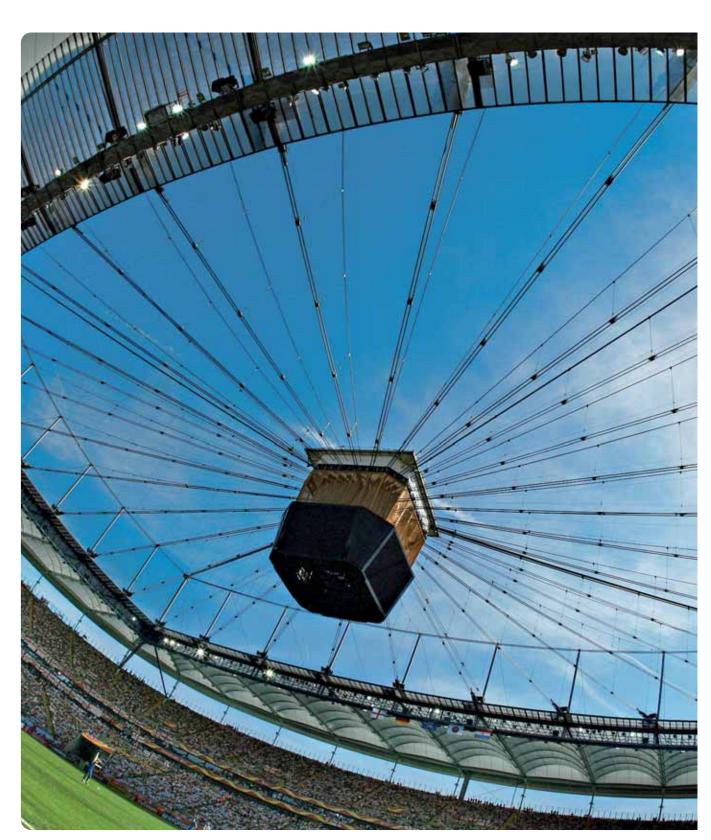






The working group (from left to right)

Jim Brown · FIFA
Ron DelMont · FIFA
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Ruben Reddy · South Africa
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Foreword from the working group

This is the fourth edition of *Football Stadiums: Technical recommendations and requirements* and the most ambitious, with extensive new material on event lighting, power supply, communications systems, natural grass and artificial turf playing fields, hospitality facilities, the impact of new stadiums on the environment and the FIFA Green GoalTM programme on environmental sustainability.

As with previous editions, the book is based on the most up-to-date research available, provided by the world's leading experts in stadium design. Such is the pace of change, that no publication on the design of football stadiums could ever be entirely future proof. It is the desire of the working group, however, that this book will have a long shelf life.

The measurements which are provided in the main text of the book and in the accompanying diagrams are applicable to all new football stadiums. The book also contains, in the FIFA World CupTM Space Requirements, a new and comprehensive breakdown of the space required for hosting matches in the FIFA World CupTM. The relevant requirements for each area are provided at the end of each chapter and a complete breakdown is provided in an appendix. This information will be invaluable for developers who want their facility to host FIFA World CupTM matches.

The increase in the amount of information and in the depth of detail provided required a radical re-think about the way the book was designed. The new layout is intended to make the book as easy to navigate as possible. Despite these changes in the new edition, the objective of the book remains the same: to help everyone involved in the design, construction and management of a football stadium to create a facility in which people can watch football in safety and comfort.

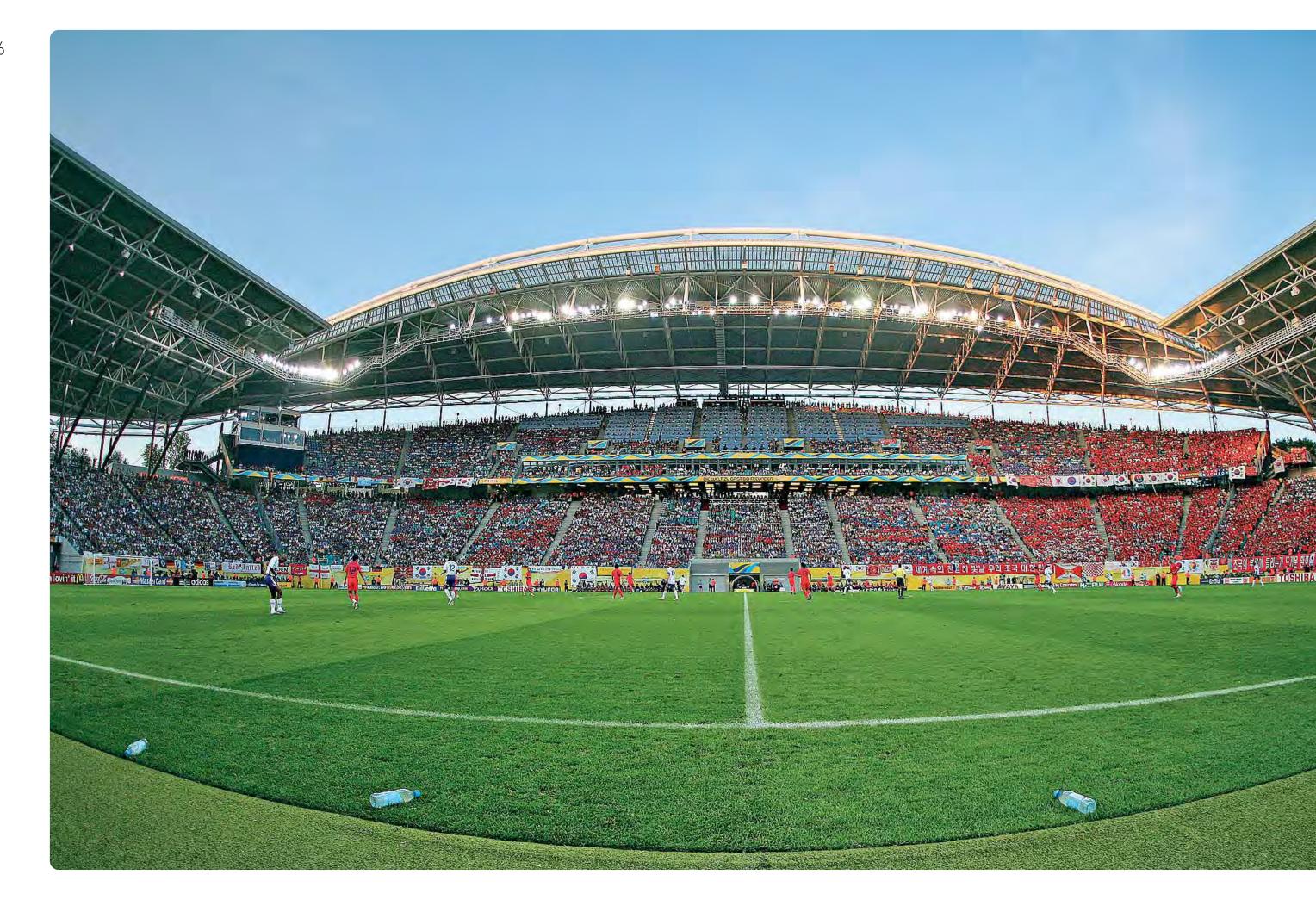


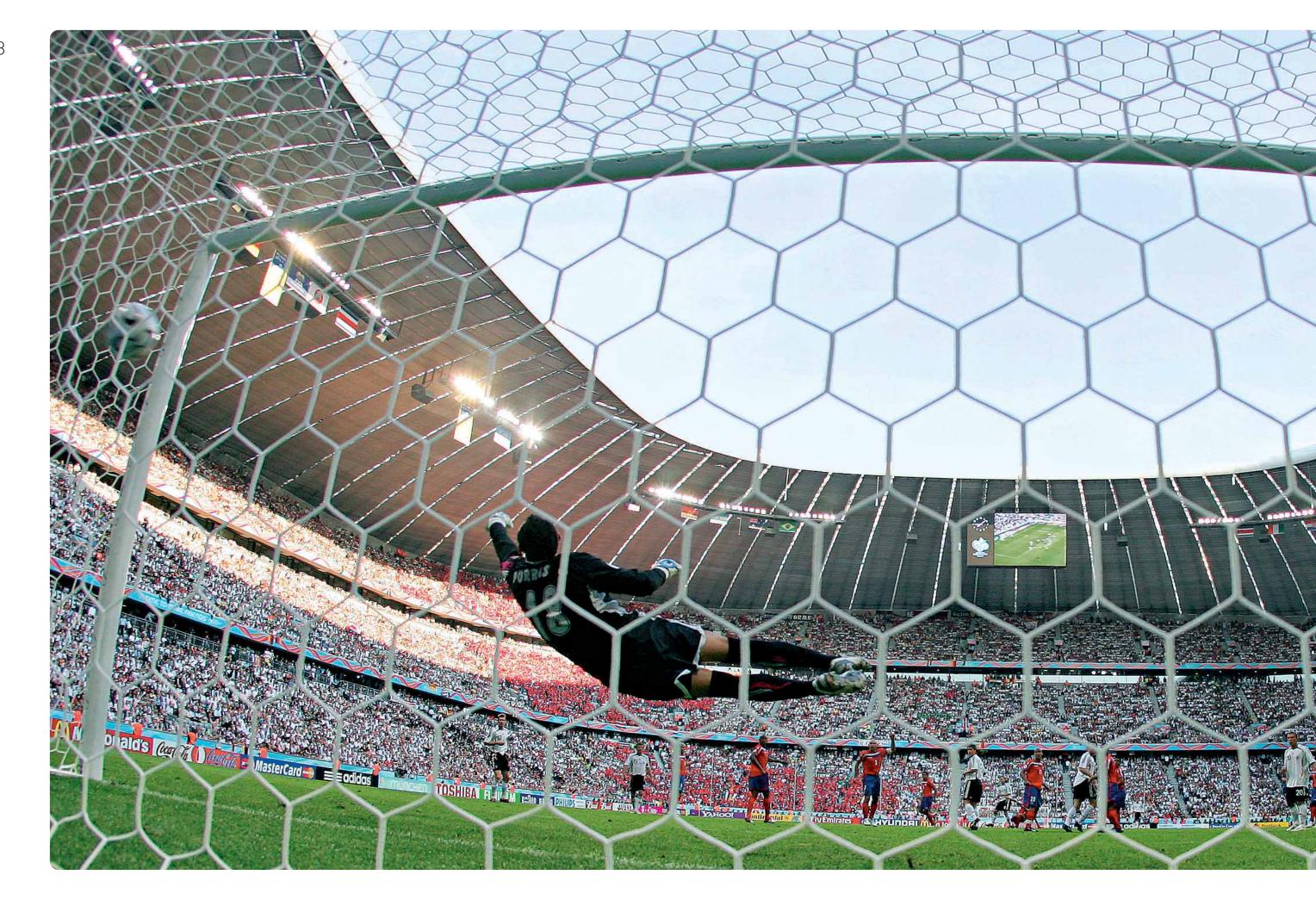
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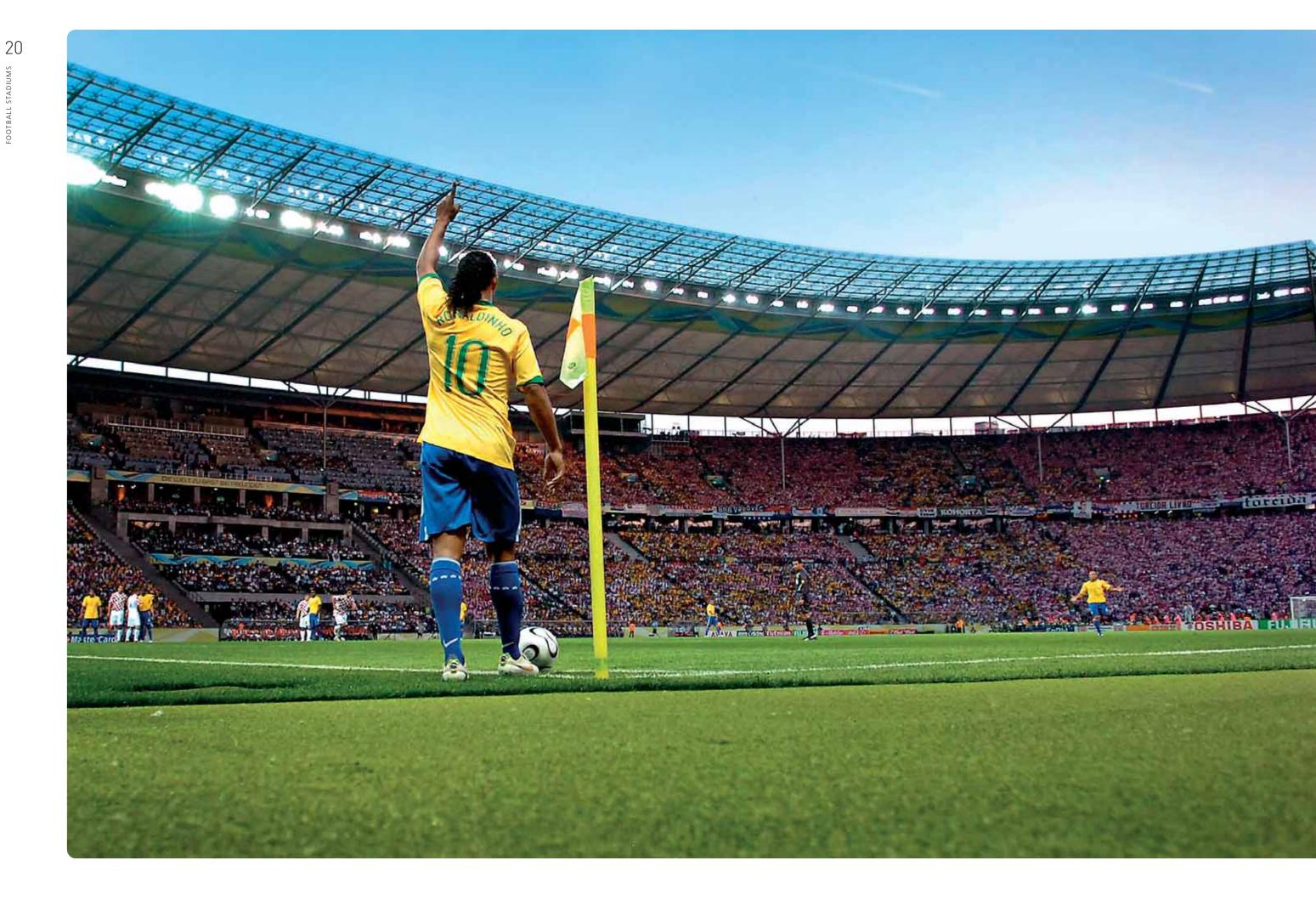
Football Stadiums

Where people celebrate football. All over the world.













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Strategic pre-construction decisions

The size and level of comfort of a new stadium will always be governed by the financial resources available. Nevertheless, when planning a stadium, developers should always ask certain basic questions at the outset.

Funding

Is sufficient funding available to achieve what is necessary? It is pointless and wasteful to build a stadium which is so limited in terms of capacity and comfort that it cannot serve the purpose for which it was originally conceived.

Adapting a basic stadium

Where funding is limited, it may be possible to build a very basic stadium which could serve an interim purpose. However, care should be taken to ensure that the structure is capable of future conversion and improvement in a cost-effective manner, to render it more acceptable to an increasingly demanding market.

Where a basic stadium is planned, the following questions should be asked:

- will standing terraces (which are not recommended and which are not allowed at FIFA World CupTM matches) be capable of future conversion to seated areas without destroying good sight-lines and without requiring major reconstruction work?
- can new seating tribunes and premium seating products (such as private suites), all with good sight-lines, access and adjacent customer services, be added in future?
- is it possible to add large video screens later?
- in an unroofed stadium, will the exterior walls and adjacent areas be capable of having a roof fitted at a later date?
- will a stadium whose roof covers only the spectator areas be capable of having a retractable roof installed which can cover the whole arena?
- can other technical improvements be made later, including the introduction of air conditioning in enclosed areas?

Capacity

What should the capacity be? Should the stadium be built to accommodate only the domestic needs of the club(s) who will use it? Or should it attempt to attract matches at a higher level? It is not unusual for clubs to find that the provision of a bright, new, clean and comfortable stadium brings with it a dramatic increase in attendance levels. In such circumstances, a club which normally attracts an attendance of around 20,000 and is thinking of building a new stadium with a capacity of 30,000 might find it preferable to think in terms of nearer 40,000.

The capacity of each stadium will depend on whatever is required locally but if developers hope that the stadium will be used occasionally for major international football events, minimum capacities of 30,000 will need to be provided. To stage

For major international matches a stadium should seat at least 30,000 people major international matches like FIFA Confederations Cup finals, for example, 50,000 and upwards could be required, with the final of the FIFA World CupTM needing in excess of 60,000 seats.

Obviously, those places that can sustain a stadium with a capacity of 80,000 or more find themselves in an advantageous position when it comes to the allocation of big football events. However, even the biggest stadium is of little use for major international matches if the city concerned does not have a hotel infrastructure and international airport facilities – bearing in mind that the bulk of the audience may be travelling from abroad – as well as the organisational ability and experience to stage such an event.

There are, of course, no known formulas for determining a stadium's optimum capacity. It is very much a choice for those in charge of its development.

Market knowledge

Attracting VIPs, or customers who are willing to pay much more than the average ticket price, is essential to the financial success of a modern stadium. What these customers want varies significantly from country to country and even from city to city, so significant local research should be conducted as early as possible into the appropriate type of seating products and VIP services that are best for each facility.

Maintenance

When designing a stadium, care should be taken to ensure that its future maintenance, cleaning, operation and management can be carried out effectively in as simple, straightforward and cost-effective a manner as possible.

Pace of change

The pace of technological development and the rapidly increasing insistence of spectators that they are provided with more comfortable and luxurious facilities could lead to the average life span of a modern stadium falling to 30 years or even less.

In the future, spectators may no longer be prepared to pay to sit outdoors in sub-zero temperatures or swelter unprotected in the glare of the sun. This accelerating obsolescence presents a significant challenge to the developers of stadiums. Therefore, before stadium owners and designers invest millions in a new stadium, they should question whether or not the facility which they are proposing can seriously expect to satisfy spectators' demands in the future. Simply to repeat what has been built in the past, even in the recent past, could turn out to be a bad investment.

For more information on premium seating products, see Chapter 7.

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Stadium location

A stadium should be situated in a location which is sufficiently large to provide spacious and safe external public circulation/activity areas and marshalling space for service vehicles and functions. While it is normal for the arrival of spectators at the stadium to be spread over a sufficiently lengthy period to prevent undue congestion near the turnstiles, the majority of spectators will seek to leave the stadium at the same time, resulting in significant space requirements.

The availability of sufficient external space will also allow for future extension or redevelopment. Many famous stadiums around the world are in heavily developed locations with roads, buildings and canals immediately adjacent on all sides. Their renovation and redevelopment possibilities are restricted by their limited site size and this is not a desirable situation.

Large sites reduce the probability that the site may have to be abandoned in the long term, or even in the short term, because of its inability to accommodate some unforeseen development requirement. Larger sites also increase the possibility of providing adequate on-site parking areas – a requirement which will probably remain for the foreseeable future.

As a site becomes more suburban and isolated from public transport, it will have to become larger to accommodate the required additional parking. In this situation, convenient and multiple access to major roads and motorways is essential.

In an ideal world, the ultimate location would probably be a large city-centre site with good access to public transport, major roads and motorways and parking that can be used by others when games are not being played. This reduces the possibility that large parking areas will be used for as little as 100 to 200 hours per year. A stadium with ambitions to host international events is more attractive to event holders if it is within comfortable reach of hotels and active commercial environments and at least one international airport.

A large site improves a new stadium's chances of being further developed in the future.

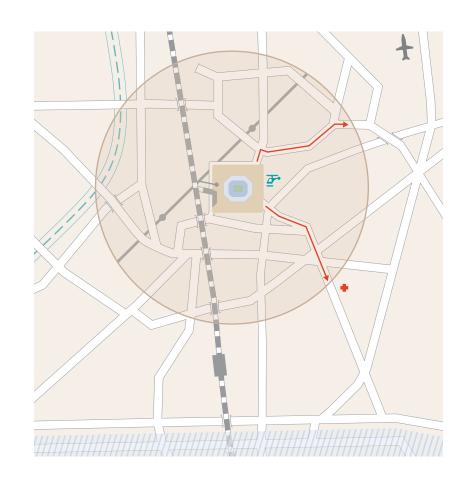


Diagram 1a: Location of the stadium



Area around the stadium



Parking area



Railway/Underground station

→ Emergency exit

Hospital

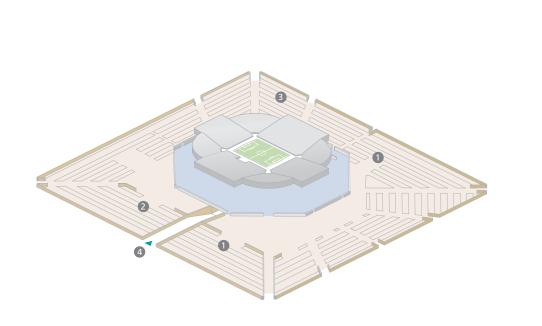
→ Airport

Helipad

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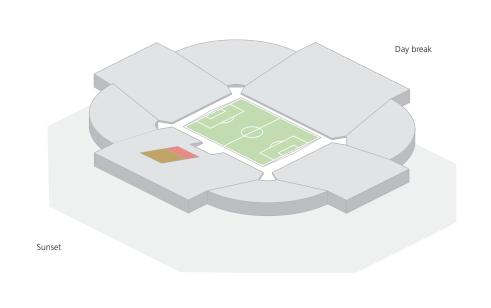
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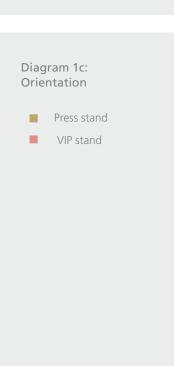


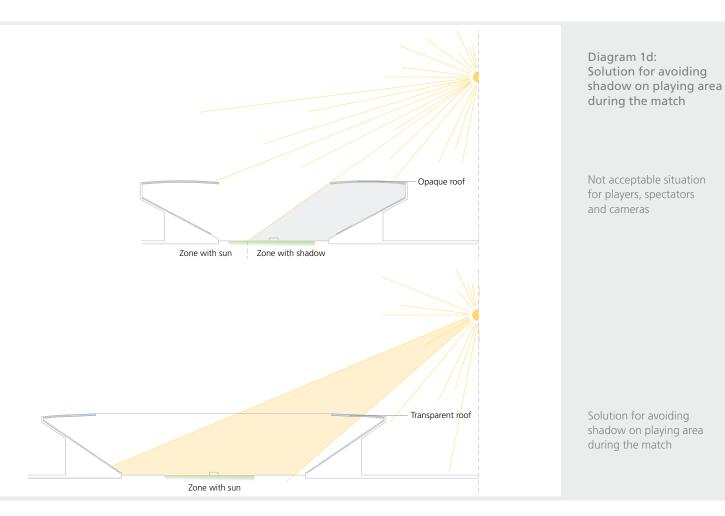












$1.3 \rightarrow Playing field orientation$

Great care must be taken regarding the angle of the playing field in relation to the sun and the prevailing weather conditions. Match participants, spectators and media representatives must be protected as much as possible from the glare of the sun. However, the effect of a stadium's roof on the playing field must also be considered. When there is a natural grass pitch, it is critical that there is enough light and air movement to sustain the healthy growth of grass. All sides of the playing field must receive a reasonable amount of direct sunlight.

A north-south field orientation is often considered ideal but more sophisticated analysis has led stadium designers to choose an angle equal to the average direction of the sun at half time in an afternoon game.

For more information on the playing field, see Chapter 4.

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1.4 → Green Goal™

FIFA has embarked upon an initiative to address environmental sustainability through the Green GoalTM programme – an initiative which FIFA fully expects its partners to embrace.

The principal goals of the programme are: the reduction in the consumption of potable water, the avoidance and/or reduction of waste, the creation of a more efficient energy system and an increase in the use of public transport to FIFA events.

These goals should contribute to the establishment of a neutral climate as far as greenhouse gas emissions are concerned. The programme, which began during the preparations for the 2006 FIFA World CupTM in Germany, is one that will form part of FIFA's legacy of the 2006 FIFA World CupTM and should be extended to other FIFA events, especially future FIFA World CupsTM.

Water

A more responsible use of potable water for purposes of irrigation should be examined. Green GoalTM suggests the storage of rainwater to support the water cycle. Further potential savings could be made through the installation of water-saving technology in sanitary fittings during the construction phase.

Waste

A major cost of stadium management is the removal of waste. To limit the amount of waste generated, Green GoalTM proposes the re-use of beverage containers, recycling through the separation of waste collection and the introduction of packaging-free food and merchandising products.

Energy

Energy-saving activities should be exploited in the design and construction of stadiums. Potential energy-saving areas include: the use of photovoltaic energy sources, the insulation and protection of glass on the outside of the building in order to reduce the use of air conditioning, and the use of centrally controlled building control systems to better manage energy during periods of peak demand.

Transport

An important area of stadium and event management is the transport of spectators to the facility. Green GoalTM encourages the avoidance of unnecessary transport and the use of public transport systems such as buses and trains, which should be designed to optimise engine and fuel systems.



Diagram 1e: Possible solution for reducing impact on surrounding areas

Bad example: noise impact on surrounding areas

Good example: possible solution for reducing noise impact on surrounding areas

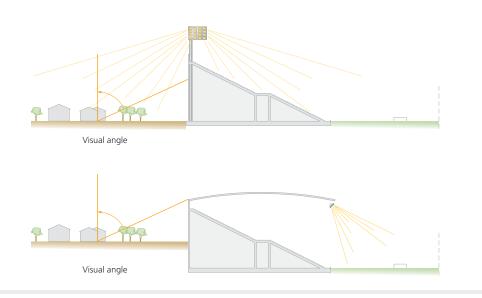


Diagram 1f: Possible solution for reducing environmental impact

Construction impact on residential buildings

Possible solution for reducing environmental impact

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Environmental compatibility of stadium site

Environmental compatibility is a prime consideration when selecting a site for a stadium. It is a changing, complex and politically charged subject that must be analysed carefully. For example, most of us would be very upset if we were suddenly confronted with the prospect of having our homes overshadowed by the walls of a large new football stadium. Proximity to existing residential areas is the most sensitive issue in the development of a new stadium and if possible this should be avoided.

Typical environmental issues and concerns about the development of a new stadium include the following:

- increased vehicular traffic;
- large numbers of noisy and often aggressive fans/pedestrians;
- noise from events;
- bright building and event lighting;
- overshadowing of adjacent properties;
- lack of activity around the stadium at non-event times;
- inappropriate scale of the project in relation to its surroundings.

With good analysis, design and operational controls, most of the above problems can be mitigated to satisfy neighbours. Examples include: game-time traffic and crowdmanagement plans, restricted-access zones, noise and lighting control baffles, building the stadium into the ground to lower its height and introducing uses into the project that generate activity at non-event times.

Extensive landscaping, with the planting of bushes, trees and flower beds in and around the project, can produce a huge visual benefit to those who use the stadium and to the local community. The greening of a stadium site enhances the perception and the reality that the facility respects the environment and its neighbours. The impact of nearby rivers and lakes on the stadium site's water table and, therefore, the playing field drainage capability, should also be considered.

Community relations

In choosing the location and design of a stadium, it is vital that early contact and consultation is established with local community representatives, environmental groups and local and national football authorities. With proper communication, the prospect of a new stadium becoming part of the environment should be a positive experience.

A new stadium provides many benefits for the local community.

The local benefits of a new stadium are considerable. They include:

- convenient access to quality sport and entertainment events;
- jobs in the construction of the facility and its operation;
- new visitors who will enhance the financial viability of the local economy, including visitors to shops, restaurants and hotels;
- often the stadium includes facilities such as a gymnasium, fitness rooms, a swimming pool, a crèche, function suites, meeting rooms, shops and other cultural and social centres that are used primarily by locals;
- if the field has artificial turf, it can be made available for local recreational
- the promotion of stadium events generates significant increased exposure and profile for the community;
- stadiums deliver increased community pride because of the special nature of their structure and their events.

All of the above should enhance the quality of life of those living in the area, ensure that the stadium is integrated into the day-to-day life of its community and provide additional financial stability for the facility.

Because of the special nature of stadiums, their development often fosters negative rumours and fear-mongering in the media. It is essential, therefore, that direct communication with the local community and with the media is maintained throughout the development period and during the operational life of the stadium.

Pre-construction decisions

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Multi-purpose stadiums

Designing stadiums so that they can host other sporting and entertainment events will increase their utilisation and improve their financial viability. The use of artificial turf makes this easier, as it allows the pitch to be used and/or covered for an unlimited number of days without negatively affecting the playing surface.

There has been a rapid increase in the use of football pitches for additional football matches during the week. They are also increasingly used to host other sports, such as rugby, cricket and American football. Sometimes these activities are for spectator events. More often, they are of a recreational or community nature. Without artificial turf, these activities would damage the pitch, preventing it from being in good condition for the stadium's main football matches.

Football stadiums can also host entertainment events including concerts, festivals, theatrical extravaganzas and trade/consumer shows. Some of these events can occur on natural turf which is covered for a short period of time, but artificial turf allows faster and less costly conversions from football mode and back again.

Some of the key factors to be taken into consideration when deciding if other uses can be accommodated include: ease of access to the field for the vehicles, materials and machinery required for the conversion, additional dressing rooms for athletes and performers and additional field-level storage. Adequate infrastructural services, including additional power supply and water reticulation, further enhance the possibilities of multiple use.

To accommodate these different uses, it is important not to change the stadium to an extent that has a negative impact on its primary purpose for football. For example, making the pitch considerably larger for another sport or adding a running track around the field can result in football spectators being much further from the playing field and removed from the action. This reduces their sense of involvement and engagement with the game and diminishes their excitement.

Pressure is often put on stadium developers to increase the field size or to include a running track. Occasionally, such requirements are unavoidable. Unfortunately, this will result in a much less successful facility than a football stadium that is specifically built around the football field's dimensions.

Various attempts to provide a running track without destroying the stadium's football ambience have been proposed and built, including retractable seating along the sidelines, an example of which can be found in the Stade de France in Paris. Most are very expensive to build and operate and/or have resulted in compromised sight-lines for one or both sports, even when the rake or angle of the seating has been made as steep as possible.



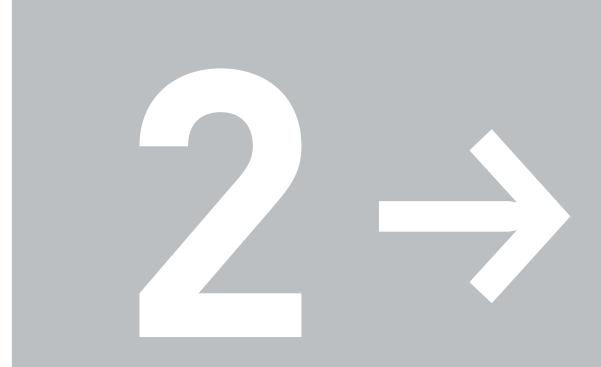
Diagram 1g: Distances of spectators from the field of play

— Maximal distance

Optimal distance

Spectators' areas

Perhaps the largest cities of the world, with very large budgets and the objective of hosting the Olympic Games one day, might be capable of satisfying the needs of football and athletics. For most, however, surrounding a football field with a running track in a modern stadium should be avoided.



Safety

The safety of all those using a football stadium must take priority over all other considerations in the design and management of the stadium, regardless of the level of funding available.



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$2.1 \rightarrow Safe stadiums: the fundamental requirement$

The degree of luxury and comfort which can be built into a stadium will depend on the amount of money available but the fundamental requirement which must be met, regardless of available funding levels, is that the stadium must be a safe and secure facility for all those who use it, whether they are spectators, match participants, officials, media personnel, staff or others.

Even before the basic planning begins, it should be clearly understood by the prospective owners and by those concerned in the planning, designing, construction and management processes that human safety will be the first and foremost priority. It will be a condition that may not, under any circumstances, be put aside or circumvented in order to accommodate other requirements.

For other key planning decisions, see Chapter 1

$2.2 \rightarrow Specific safety requirements$

All parts of the stadium, including entrances, exits, stairways, doors, escape routes, roofs and all public and private areas and rooms must comply with the safety standards of the appropriate local authorities.

Public passageways and stairways in the spectator areas should be clearly marked, as should all gates leading from the spectator areas into the playing area and all exit doors and gates leading out of the stadium. All public passageways, corridors, stairs, doors and gates must be kept free of any obstructions that could impede the free flow of spectators.

Exit doors and gates in the stadium and all gates leading from the spectator areas into the playing area must open outwards, away from the spectators. They must remain unlocked while spectators are in the stadium. However, to prevent illegal entry or intrusion on non-match days, they may be fitted with a locking device which can be operated simply and quickly by anyone inside.

Each of these doors and gates must be attended at all times by a specially appointed steward, to guard against abuse and to ensure immediate escape routes in the event of an emergency evacuation. Under no circumstances must they be locked with a key during the time that spectators are in the stadium.

Exit gates should never be locked with a key when spectators are in the stadium.

$2.3 \rightarrow Structural safety$

Every aspect of the stadium's structure must be approved and certified by the local building and safety authorities. Building and safety standards and requirements vary from country to country but it is essential that, within the relevant framework, the most stringent safety standards are applied.

$2.4 \rightarrow \text{Fire prevention}$

The fire-fighting facilities available within the stadium and the fire precautions must be approved and certified by the local fire authorities, as must the fire safety standards of all parts of the stadium.

$2.5 \rightarrow Stadium control room$

Each stadium must have a control room which has an overall view of the inside of the stadium and which must be equipped with public address facilities and television surveillance monitor screens. The size, configuration and furnishing of the control room should be agreed upon in consultation with the local police.

Each stadium must have a control room equipped with television surveillance monitor screens.

The stadium commander should have the capability of overriding and cutting into the public address system whenever necessary. The system governing the arrest, detention and indictment of offenders may differ from country to country, or even from city to city, so stadium designers should consult the local police and civic authorities to determine whether it is necessary to include facilities such as a police muster room, a charge room and detention cells for male and female prisoners within the stadium itself.

A second control room and emergency command centre is desirable. It should have a location which is convenient for arriving emergency personnel and their vehicles.



1.1	Safe stadiums: the fundamental requirement	40
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2.7	First aid rooms for the public	42



Television surveillance system

A modern stadium should be equipped inside and outside with public surveillance colour television cameras, mounted in fixed positions with pan and tilt facilities. These cameras should monitor all of the stadium's approaches and all of the public areas inside and outside the stadium.

The television surveillance system should have its own independent power supply and private circuit. It should be operated and controlled from the stadium control room where the monitor screens should be situated. It should be capable of taking still photographs both inside and outside the stadium.

First aid rooms for the public

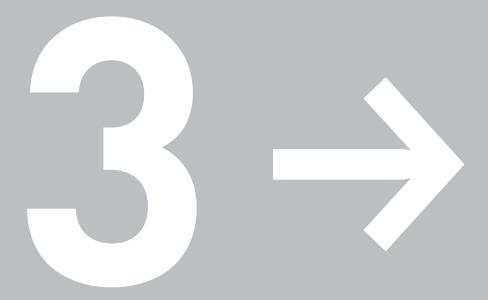
Every stadium should be equipped with a first aid room, or rooms, to care for spectators. Ideally, there should be two first aid rooms, one on either side of the stadium, but the number, size and location of these rooms should be agreed in consultation with the local health authorities. There should be space for the secure deposit of defibrillators in easily accessible locations, evenly distributed around the stadium. Scenarios for dealing with a mass catastrophe are a joint venture of the local authorities and the stadium management.

First aid rooms should:

- be located in a position which allows easy access from both inside and outside the stadium for spectators and emergency vehicles;
- have doors and passageways leading to them which are wide enough to allow access for a stretcher or a wheelchair;
- have bright lighting, good ventilation, heating, air conditioning, electric sockets, hot and cold water, drinking water and toilet facilities for both sexes;
- have walls and floors (non-slip) constructed of smooth and easily cleanable material;
- have a glass cabinet for medicines;
- have storage space for stretchers, blankets, pillows and first aid materials;
- have a telephone allowing internal and external communication;
- be clearly signposted inside and outside the stadium.

First aid rooms should be easily accessible for spectators and emergency vehicles.





Orientation and parking

Stadiums must be designed to allow for the smooth and efficient arrival, circulation and departure of thousands of people and vehicles in a short space of time.







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Orientation and parking
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3.3 Parkin 3.4 Hospit	access and egress ig for spectators tality parking	47 49 49	
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Signposting and directions on tickets

All direction signs inside and outside the stadium should be presented in internationally understandable signage. Many users of the stadium may not understand the local language.

Clear, comprehensive signposting should be provided at the stadium approaches, around the stadium and throughout the stadium in order to show the routes to the different sectors. Prominent, clearly visible signage that guides spectators to toilets, concessions, retail outlets, exits and other customer services should be provided.

Tickets should clearly identify the location of the seats for which they have been issued. Information on the tickets should correlate with the information provided on signposts, both outside and inside the stadium. Colour-coding of tickets will assist the entry process. Retained ticket stubs should contain information which will guide spectators once they are inside. Large-scale wall maps should be provided for the guidance of spectators.

For the benefit of new and visiting spectators, each sector of the stadium should have a customer service and information desk situated in the external circulation area.

For more on seat identification, see Chapter 6.

Public access and egress

A modern stadium should be surrounded by an outer perimeter fence situated some distance from the stadium. At this outer fence the first security checks and, where necessary, body searches will be made. The second checks will be made at the stadium turnstiles. There should be sufficient space between the outer perimeter fence and the stadium turnstiles to permit the free movement of spectators. The space dimensions are determined by the local authority.

It must be borne in mind that while the entry process may be spread over an hour or more, everyone will want to leave more or less at the same time. The circulation space available immediately outside the exit gates must be sufficient to guarantee that spectators are not at risk of being crushed in the event of a stampede and are able to leave the event in comfort.

At every event, it must be possible to completely evacuate the stadium within a maximum time agreed with the local safety authorities. Preventive measures must be taken to avoid crushing at the public entrances. This may be accomplished by a system of barriers designed to funnel spectators individually toward the entry points.

Public amenities such as toilets and refreshment bars, inside and outside the stadium, should not be situated close to the turnstiles or to the entrance and exit routes. Clear and unmistakable signs must point spectators to their sector, row and seat.

During the entry mode, all major points of access should be used for entry and a couple of small designated points should be clearly marked for exiting. The opposite is required in the exit mode and a combination of the two modes is required during the match itself.

It may take more than an hour for all the spectators to enter the stadium but everyone wants to leave at the same time.

For more on safety, see Chapter 2.

Public amenities should not be situated close to the turnstiles.

Orientation and parking

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3.3	Parking for spectators	49	
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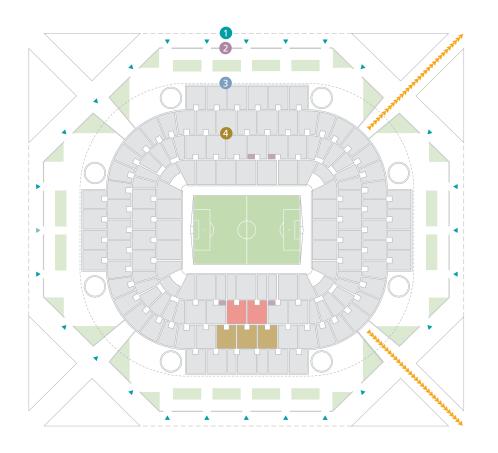


Diagram 3a: Public access and egress

- Preliminary check
- First ticket check, body search
- Second check
- Third check
- VIP stand
- Stands for spectators with disabilities
- Stands for 100,000 spectators
- Media stand
- Emergency exits for ambulances, fire engines and police vehicles

First check Second check Third check

Diagram 3b: Stadium checks

Parking for spectators

All parking places should be on-site, affording spectators direct entrance to the stadium. The car parks around the stadium must be brightly lit and clearly signposted, with numbered or lettered sectors. They must be guarded against illegal intrusion.

For a stadium with a capacity of 60,000, parking places should be provided for 10,000 cars. Separate parking places for buses should be provided. For a 60,000-seater stadium, parking should be provided for approximately 500 buses.

It is essential to ensure that car park access and egress is rapid and smooth flowing and that direct routes to the nearest motorways are provided. The location of the car parks and bus parks should make it possible for the supporters of both teams to have separate parking facilities. Where sufficient on-site public parking is not possible, parking should be provided no further than 1,500 metres from the stadium.

Supporters of rival teams should have separate parking facilities.

It is essential to discuss the public parking strategy with the competent local authorities, bearing in mind the public transport systems and the possible provision of multistorey car parks in the immediate vicinity of the stadium.

Hospitality parking

Hospitality parking is a particularly important component of the marketing programme. Sufficient parking near to the stadium to accommodate the number of VIP ticketholders who have been allocated tickets is of the utmost importance.

For more on hospitality, see Chapter 7.

Near the VIP entrance, and separate from the public car parks, there should be sufficient parking space for the buses and cars used by VIPs. Preferably, these vehicles should be parked inside the stadium.

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FOOTBALL STADIUMS

Orientation parking	ar

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Parking for teams, match officials and stadium staff

Parking space for at least two buses and eight cars should be available. This should be inside the stadium, immediately outside the dressing rooms and isolated from the public. The players and match officials should be able to disembark from their transport and make direct entry to their dressing rooms without coming into contact with the public. Sufficient parking space should be provided for all vehicles used by staff engaged in providing services, such as security and safety personnel, doormen, stewards and caterers.

Access and parking for the media

There should be a specific media entrance at the stadium perimeter with a reception desk or room where late accreditation/media information packs can be collected. This should have an area of not more than 30m².

Special consideration should be given to photographers who arrive with heavy camera equipment. Parking spaces should be reserved for them as close to the access point as possible and/or a drop-off point should be designated where they can unload equipment from vehicles. There should be easy circulation between the various media working areas, such as the media working room, the press box, the press conference room, TV and radio commentary positions, the mixed zone and the field of play.

Consideration must be given to the choice of surface material so that media equipment can be transported easily between the various media areas. Car parking, separate from the public parking area, should be provided as near as possible to the media working area for all media representatives.

In consultation with qualified TV personnel, an area should be designated for outside broadcast (OB) vans. This should offer ample parking space for the trucks used by TV companies to undertake their outside broadcasts. For a major final, this could require between 3,000m² and 5,000m² of space. It should be adjacent to the stadium to avoid cabling problems. The OB van area should be secure or easily secured and should be equipped with a power supply with back-up.

An area should be reserved for satellite uplink vehicles (transportable earth stations). This should be in the open, adjacent to the OB van area and have an unobstructed view of the southern horizon in the northern hemisphere and of the northern horizon in the southern hemisphere. This area should be supplied with electrical power from the same source as the OB van area.

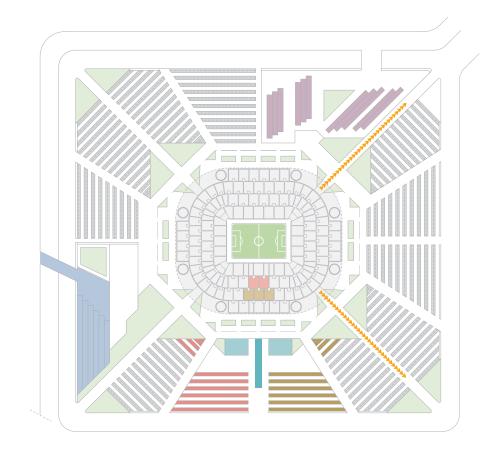


Diagram 3c: Parking areas

An example of a stadium with stands increasing up to 100,000 seats

- Playing field
- VIP stands
- Press stands
- Fence for preliminary check
- Garden area
- TV and media parking area
- VIP parking area
- Parking for 50,000 spectators
- Team passage
- Training pitch
- Railway/Underground station for 25,000 spectators
- Bus parking for 25,000 spectators
- Emergency exits for ambulances, fire engines and police vehicles

Orientation and parking

 $3 \rightarrow$

3.8	Helipad	52	
3.7	The emergency services and disabled spectators	52	
3.6	Access and parking for the media	50	
3.5	Parking for teams, match officials and stadium staff	50	
3.4	Hospitality parking	49	
3.3	Parking for spectators	49	
3.2	Public access and egress	47	
3.1	Signposting and directions on tickets	46	

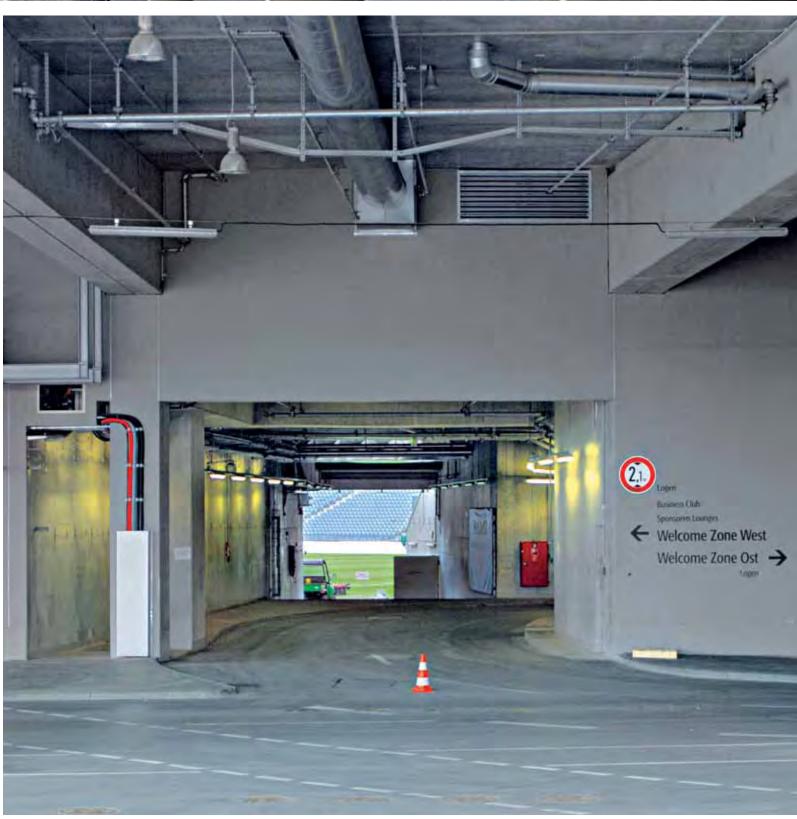


$3.7 \rightarrow \text{The emergency services and disabled spectators}$

Parking facilities immediately adjacent to, or inside, the stadium must be provided for police vehicles, fire engines, ambulances and other vehicles of the emergency services and for the vehicles of disabled spectators. These parking places must be situated in such a fashion that they provide a direct, unrestricted route to and from the stadium which is separate from the public-access routes.

$3.8 \rightarrow Helipad$

There should be a sufficiently large clear area near the stadium which could serve as a helicopter landing pad.



Orientation and	
parking	

3.1	Signposting and directions on tickets	48	
3.2	Public access and egress	49	
3.3	Parking for spectators	51	
3.4	Hospitality parking	51	
3.5	Parking for teams, match officials and stadium staff	52	
3.6	Access and parking for the media	52	
3.7	The emergency services and disabled spectators	54	
3.8	Helipad	54	

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FIFA World Cup™ space requirements

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25 Parkin	g facilities		/	/		/					
25.01	Team coach drop-off	2			2	Competitions	Main stand	Under or adjacent to main stand close to the mixed zone	4.8m min. height	•	•
25.02	Team car parking	2			2	Competitions	Main stand	Under or adjacent to main stand close to the mixed zone	Car parking for eight	•	•
25.03	VIP drop-off	2			2	Competitions	Main stand	Under or adjacent to main stand close to the mixed zone		•	•
25.04	VVIP drop-off	1			5	Protocol	Main stand on grade	At main entrance	Dedicated drop-off with direct access route to VIP lounge by dedicated lift/stairs	•	•
25.05	VIP cars – group matches	150			5	Protocol	Main stand on grade			•	•
25.06	VIP cars – opening match and finals	200			5	Protocol	Main stand on grade			•	•
25.07	VIP buses – group matches	200			5	Protocol	Main stand on grade			•	•
25.08	VIP buses – opening match and finals	300			5	Protocol	Main stand on grade			•	•
25.09	Commercial affiliate – quarter-final	100 ⊜ 80 □			9	Hospitality	Close to main stand entrance			•	•
25.10	Commercial affiliate – host	100 ⊆ 80 ≡			9	Hospitality	Close to main stand entrance			•	•
25.11	Commercial affiliate – semi-finals	100 ⊆ 80 ⊑			9	Hospitality	Close to main stand entrance			•	•
25.12	Commercial affiliate – opening match and final	200 ⊆ 200 ⊑			9	Hospitality	Close to main stand entrance			•	•
25.13	Commercial hospitality – quarter-finals	400 ⊆ 5 ≡			9	Hospitality	Close to main stand entrance			•	•
25.14	Commercial hospitality – host	800 ⊆ 15 ⊑			9	Hospitality	Close to main stand entrance			•	•
25.15	Commercial hospitality – semi-finals	800 ⊆ 15 □			9	Hospitality	Close to main stand entrance			•	•
25.16	Commercial hospitality – opening match and final	1,000 ⊜ 20 ⊜			9	Hospitality	Close to main stand entrance			•	•

¹ Area ² Drawing reference number ³ FIFA room designation ⁴ Quantity of spaces required ⁵ Anticipated occupants ⁶ Area dimensions ⁷ Sum of area dimensions ⁸ FIFA accreditation zone (see key on page 236) ⁹ Space owner/planner ¹⁰ Placement within stadium ¹¹ Affinity to other rooms/activities

TBD = To be determined, negotiated between FIFA and the local organiser

¹² Type of structure required ¹³ The space is dedicated to one function or shared with another ¹⁴ Requires heating, ventilation and air conditioning

Requires telecom connectivity
 Requires internet connectivity
 Requires uninterrupted power supply

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3.1	Signposting and directions on tickets	48	
3.2	Public access and egress	49	
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3.5	Parking for teams, match officials and stadium staff	52	
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3.7	The emergency services and disabled spectators	54	
3.8	Helipad	54	

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25 Parkin 25.17		TBD		9	Marketing	Close to main					
						stand entrance					
25.18	Partner operations – group matches	25		9	Hospitality	Close to main stand entrance			•	•	
25.19	Partner operations – quarter-finals	30		9	Hospitality	Close to main stand entrance			•	•	
25.20	Partner operations – host nation, group	40		9	Hospitality	Close to main stand entrance			•	•	
25.21	Partner operations – semi-finals	40		9	Hospitality	Close to main stand entrance			•	•	
25.22	Partner operations – opening match and final	50		9	Hospitality				•	•	
25.23	FIFA parking	50		4	LOC	Within stadium	Within stadium close to the main entrance		•	•	
25.24	LOC parking	50		4	LOC	Within stadium	Within stadium close to the main entrance		•	•	
25.25	TV broadcasting parking – opening match, semi-finals and final	250		ТВ	D Marketing/TV			Outside broadcasting area	•	•	
25.26	TV broadcasting parking – other	170		ТВ	O Marketing/TV			Outside broadcasting area	•	•	
25.27	Media parking – final	200		ТВ	O Media			Photographers' drop-off in front of stadium media centre	•	•	
25.28	Media parking – other	150		ТВ	O Media			Photographers' drop-off in front of stadium media centre	•	•	
25.29	Media drop-off	1		ТВ	O Media		Closest to media tribune entrance or stadium media centre entrance		•	•	

¹ Area ² Drawing reference number ³ FIFA room designation ⁴ Quantity of spaces required ⁵ Anticipated occupants ⁶ Area dimensions ⁷ Sum of area dimensions ⁸ FIFA accreditation zone (see key on page 236) ⁹ Space owner/planner ¹⁰ Placement within stadium ¹¹ Affinity to other rooms/activities

TBD = To be determined, negotiated between FIFA and the local organiser

¹² Type of structure required ¹³ The space is dedicated to one function or shared with another ¹⁴ Requires heating, ventilation and air conditioning

¹⁵ Requires telecom connectivity16 Requires internet connectivity17 Requires uninterrupted power supply





4.1	Recommended dimensions	60
4.2	Playing field quality	64
4.3	Natural grass playing fields	65
4.4	Artificial turf playing fields	69
4.5	Substitutes' benches	79
4.6	Advertising boards around playing area	79
4.7	Access to playing area	81
4.8	Exclusion of spectators from playing area	81



Recommended dimensions

Playing field: length: 105m, width: 68m

For all matches at the top professional level and where major international and domestic games are played, the playing field should have dimensions of 105m x 68m. These dimensions are obligatory for the FIFA World CupTM and the final competitions in the confederations' championships. The playing field should have the precise markings illustrated.

Other matches can be played on a playing field with different dimensions and the Laws of the Game stipulate the maximum and minimum dimensions. However it is strongly recommended that new stadiums have a $105 \mathrm{m} \times 68 \mathrm{m}$ playing field.

Auxiliary area

Additional flat areas are required beside the playing field, ideally behind each goal line, where players can warm up. This area should also allow for the circulation of assistant referees, ball boys and girls, medical staff, security staff and the media. It is recommended that this be a minimum of 8.5m on the sides and 10m on the ends.

This results in an overall playing field and auxiliary area dimension of: length: 125m, width: 85m.

Grass area

In this area, a minimum of 5m on the sides or touch lines and 5m behind the goal lines, reducing at an angle to 3m near the corner flags (see diagram 4c on page 62), must be of the same surface material as the playing field (grass or artificial turf).

The remainder of the auxiliary area can be either of the same surface material as the playing field or it can be a concrete-type surface material which facilitates the movement of service and security vehicles and ambulances. Any part of this additional auxiliary area that will be used as a warm-up area should have the same surface as the playing field. However, with grass fields, artificial turf of the highest quality could be used.

For all top-level matches, the pitch should be 105m long and 68m wide.

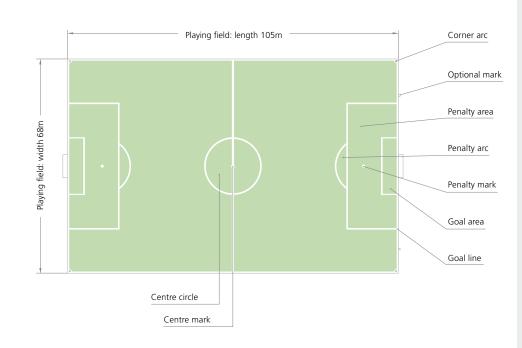
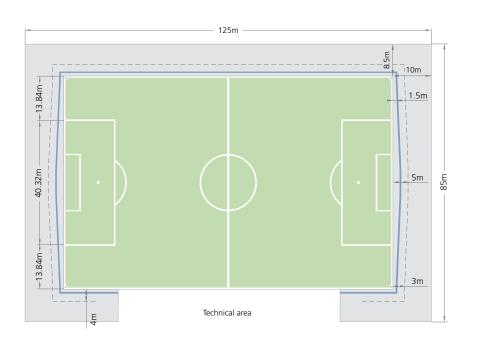


Diagram 4a: Playing field dimensions





4.1 Recommended dimensions	60		45
4.2 Playing field quality	64	60	3
4.3 Natural grass playing fields	65		S
4.4 Artificial turf playing fields	69		5 -
4.5 Substitutes' benches	79		A Z
4.6 Advertising boards around playing area	79		S
4.7 Access to playing area	81		8 AE
4.8 Exclusion of spectators from playing area	81	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
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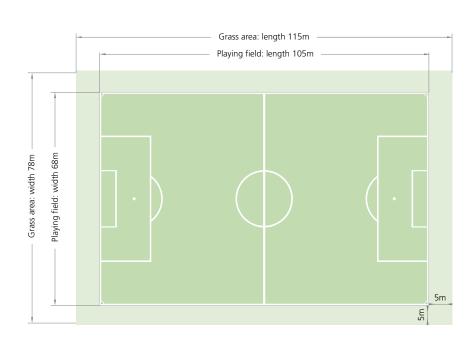


Diagram 4c: Grass area

Grass area:
minimum distances from
the playing field boundary
lines to the retaining wall
or moat, advertising boards
included

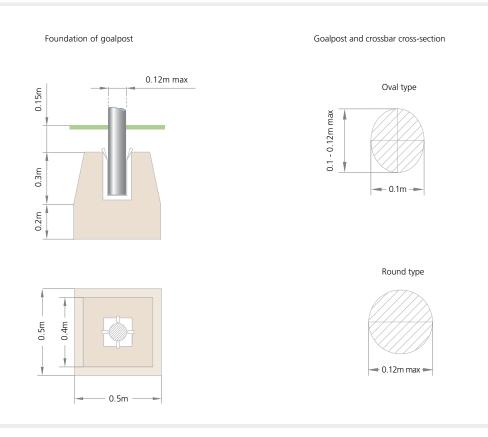
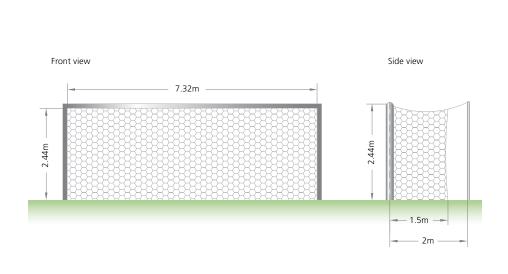


Diagram 4e: Goalposts





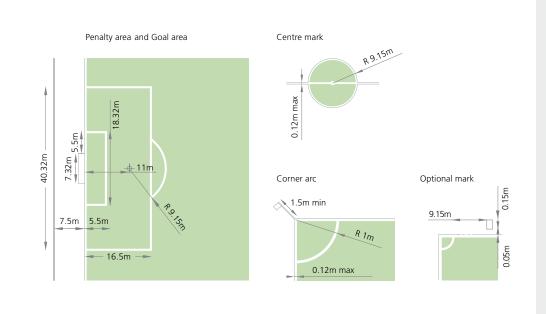


Diagram 4f: Playing field details

4.1	Recommended dimensions	60	
4.2	Playing field quality	64	*
4.3	Natural grass playing fields	65	-
4.4	Artificial turf playing fields	69	4
4.5	Substitutes' benches	79	3
4.6	Advertising boards around playing area	79	2
4.7	Access to playing area	81	1
4.8	Exclusion of spectators from playing area	81	1
			j.

$4.2 \rightarrow Playing field quality$

The playing field must be absolutely smooth and level. It should be of natural grass or artificial turf and in perfect condition. With natural grass, it should have an efficient watering system for use in dry weather. In cold climates, the playing field should be equipped with an underground heating system to prevent it from freezing in extreme winter conditions.

The primary characteristics of a good playing field should include proper underground and surface drainage to allow play during rain and to rid the surface of water during extremely wet conditions. This is to maintain the quality of the football match and to avoid spectator frustration which could lead to loss of revenue. The playing surface should be even and level to allow the players the confidence of movement that would not contribute in any way to injury or unexpected falls. The grass should be uniform, properly rooted and demonstrate vigorous growth. There should be no patches of water logging and/or ponding.

When constructing a new playing field it is vitally important to use experts who have successful experience in laying fields in a particular locality. These specialists should be familiar with the conditions of the climate, the specifics of the chosen site, the various soil conditions and their success with the chosen grasses. The preparation of the base needs careful planning and choices of layer works that would support a well-established root zone. The correct laying or planting of the field and the right choice of grasses or seeds, together with modern irrigation and adequate drainage, will result in a successful playing surface.

Keeping the field in peak condition at all times requires a proper maintenance plan and resources that include trained personnel, mechanical equipment, fertilisers and testing equipment.

Dangers and obstructions

The playing field and auxiliary area should be free of any impediment or obstruction (e.g. sprinkler heads, field marking material, etc.) that would constitute a danger to players or others whose purpose takes them on to the area described.

Particular attention should be paid to the four corners of the playing field, to ensure that players have enough space to take corner kicks without having their run-up unduly restricted.

Goal nets should not be suspended by any kind of metal frame or "elbow" but should be suspended by the method illustrated (see diagram 4d on page 62), as this does not constitute a danger to players. If pins of any kind are used to fasten the nets to the ground they must not protrude above ground level.

$4.3 \rightarrow \text{Natural grass playing fields}$

Development

Football has traditionally been played on natural grass, which has a series of needs, as it is a living plant and changes with the seasons. Climatic conditions also vary in different parts of the world. For example, there are some environments in which grass grows all year round and others in which the seasons affect its condition. Natural grass requires light and nutrients; it must be tended and maintained and it also needs time. Particularly in stadiums, today's playing surfaces are no longer sown but are laid with instant turf. Although this saves time, the needs of the grass remain the same.

Natural grass also struggles with modern stadium architecture, which deprives it of light and air. The grass also has to contend with the other purposes for which the stadium is used. With natural grass, the laws of nature cannot be circumvented.

Sports turf is now extensively cultivated and delivered as rolled or flat sod. The transplanted turf must be compatible with the substrate and the growth time must be monitored. The grass is susceptible to disease, wear and tear and regeneration times. Having qualified staff to take care of the grass is therefore of great importance, otherwise nature will take its own course.

Specialist area

Natural turf in stadiums poses a challenge to both architects and stadium builders, who require specialists with knowledge and an understanding of sports turf. Planning must be based on local conditions.

Errors in planning and execution are often the cause of defective growth of sports turf. Construction errors can be easily avoided through focusing attention on the grass and soil, which is the prerequisite for healthy green natural grass.

I Systems

The nutrients in the available soil must be examined, as the results will determine to what extent the soil will be used, enriched or removed. When no usable soil is available, an underlay will be selected. The composition of this ready-made, freshly manufactured and readily installable layer will depend on geographical location, shear strength and permeability.

The enhanced and nutrient-bearing underlay will then be sown or planted. Locally available types of grass are used for the sowing, but instant turf can also be used on this growth medium.

4.1	Recommended dimensions	60	
4.2	Playing field quality	64	
4.3	Natural grass playing fields	65	
4.4	Artificial turf playing fields	69	
4.5	Substitutes' benches	79	
4.6	Advertising boards around playing area	79	
4.7	Access to playing area	81	
4.8	Exclusion of spectators from playing area	81	

Instant turf is extensively cultivated and transported to the building site in lorries and is laid with suitable machinery. The turf must have the same soil value as the underlay and be laid at the appropriate moment. Watering is necessary for germination and growth, so automatic or manual watering is therefore essential.

The laying of turf of different densities is usual practice these days, as it facilitates use in a shorter period of time and means that the grass is already green from the start. There is also a combination of natural grass and long, artificial grass fibres, which mainly serves to strengthen the turf (shear strength).

II Planning

Substructure

In addition to testing the soil for its nutrient value, the solidity and stability of the ground must be checked. The treatment of the existing soil requires great care and depends on the weather conditions. The foundations for the sports facilities should be installed first.

Drainage

Local conditions must be taken into account for calculating the drainage, which consists of a system of pipes laid in trenches and clad in permeable, round gravel. The pipes are laid at an incline and enclosed in shafts (system monitor).

Edging

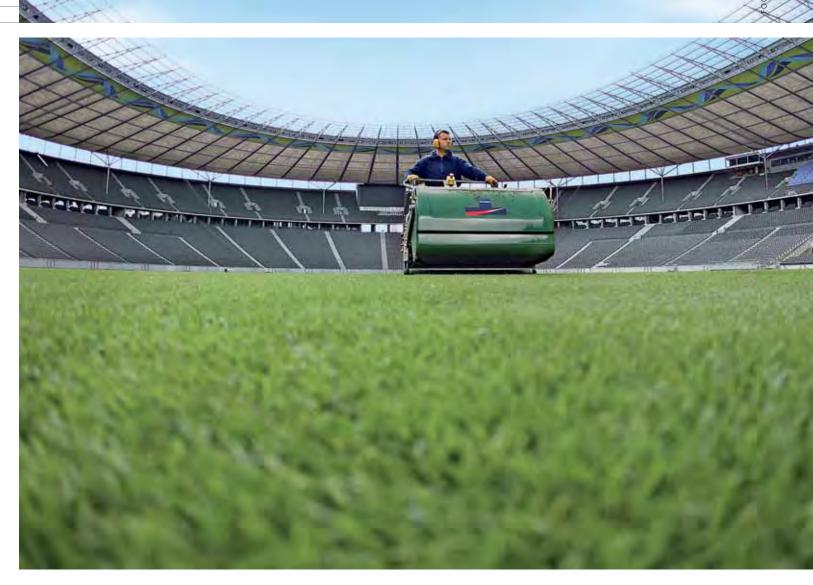
Depending on the terrain, kerbstones or drainage trenches are used particularly when there is an adjoining running track that needs to be drained. The transition from grass to running track must be even (for corners).

Seed

The choice of seed or seedling for the natural turf depends to a large degree on the location.

Watering

As a rule, electronically controlled watering apparatus is installed in the stadiums. Watering can be reduced in environments with favourable climatic conditions. The sprinklers must be installed outside the playing surface.



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III Tender

Projects

Experience in this area shows that the scope for error is significant. It is therefore very important to award the work only to qualified, experienced firms. It is worth considering local experts on account of their natural understanding of local soil and plants.



4.1	Recommended dimensions	60
4.2	Playing field quality	64
4.3	Natural grass playing fields	65
4.4	Artificial turf playing fields	69
4.5	Substitutes' benches	79
4.6	Advertising boards around playing area	79
4.7	Access to playing area	81
4.8	Exclusion of spectators from playing area	81



IV Execution

The most important prerequisites are the weather conditions and the season. Failure to adhere to this rule immediately leads to damage or damaging after-effects. The laying of the sports turf should take place at the end of the general work or after the installation of the underlay and should not be interrupted. The watering and drainage work must be completed and tested. Shafts or sprinklers on the playing surface are not permitted.

The work requires suitable machinery and access to it must be guaranteed. This task includes activities such as the monitoring of the different layers (density, grading), onthe-spot testing (permeability, evenness) and stopping the work due to a breach of duty-of-care obligations.

V Equipment

The pitch markings should be made with suitable products and replaced as necessary. The goals, corner flags, substitutes' benches and the referees' bench (technical area) should not be installed until the end, and their measurements should be checked. This equipment is costly. It is recommended that mowing machines and grass collecting devices and fertiliser trucks/vehicles be included on the list of equipment for sports turf maintenance for the stadium. Special firms can be contracted for major jobs like breaking up the earth.

VI Certification

This work includes checking the pitch measurements, the thickness of grass fibres, the uniformity of the turf, evenness, etc. The foundations are inspected during the construction process (for drainage and solidity).

VII Care and maintenance

This determines the success or failure of a natural grass pitch. Only guidelines can be given to the staff, as the maintenance depends on the use and condition of the turf. The maintenance requires a great deal of knowledge and understanding, so trained specialists should be used for the care and maintenance of the natural turf.

$4.4 \rightarrow$ Artificial turf playing fields

Artificial turf today

Artificial turf has become an acceptable playing surface for football as its development has produced a turf carpet that is especially designed for the sport. Artificial playing surfaces are now available that enable footballers to play both dynamically and safely.

The advantages of an artificial turf playing surface are numerous. Artificial turf makes it possible to always have a green playing surface. Playing on an artificial turf carpet requires players to adapt to the surface but the evenness of the playing surface makes for a quick, precise game in which both technical and physical players stand an equal chance.

For more information on the needs of players, see Chapter 5.

In addition, artificial turf pitches can be used much more than natural pitches, increasing utilisation of both the pitch and the facility. Artificial turf pitches do not suffer damage due to inclement weather (e.g. rain, snow), whereas these elements can significantly affect the use of natural pitches. Regular maintenance, which is critical to keep artificial turf pitches in top shape, is less expensive than maintaining a quality natural turf pitch.

For these reasons, artificial turf is a viable and attractive alternative to a natural turf pitch. To make the right decision regarding artificial turf, the following conditions should be taken into consideration:

Specialist area

Building regulations and local conditions must be fully respected, and architects or engineers with experience of building sporting facilities should be consulted when planning football pitches. Manufacturers of artificial turf systems can play a supporting and informative role with regard to the choice of a suitable turf carpet. The work should only be awarded to firms with specialist and local knowledge and specialist equipment. Supervision of the building work by the planner and monitoring by external inspection bodies are crucial to the successful completion of such projects.

I Pitch surface

Products

The choice of artificial turf depends on the compatibility of the product with the intended site and the builder's requirements.

The carpets available have either fibrillated or monofilament fibres, providing a carpet of a greater or lesser thickness, depending on the number of fibres. Polyethylene (PE) and polyamide (PA) are two of the materials used.

Playing a	rea
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4.1	Recommended dimensions	60
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4.7	Access to playing area	81
4.8	Exclusion of spectators from playing area	81

FIFA Quality Concept

It is advisable to submit the products to a laboratory test (this is a FIFA Goal Programme requirement). This serves to identify the product and ensure that the client is offered a product that conforms to market requirements.

The testing methods and requirements for artificial turf are described in the FIFA Quality Concept handbook, in which a distinction is made between 1* (one-star) and 2** (two-star) quality. It is largely because of this concept that the market has a range of artificial turfs of good enough quality for football. Several artificial turf suppliers are FIFA licensees.

II Planning

Substructure

In the event that geological information is not already available from the planning of the stadium, soil-drilling tests should be conducted as it is the only way to determine how to build the substructure. A sports pitch is a type of construction and it needs a stable substructure.

Specific characteristics of the site, such as sub-soil water (drainage) and unstable ground (stability), must be checked prior to the feasibility study. The choice of materials depends on the site and the construction can also be determined by the building materials available. It is inadvisable to have too many sub-layers. A great deal of precision (flatness, etc.) is required.

The layers of foundations are divided into loose underlay (mixtures of gravel and sand) and bound underlay (bitumen). Building machinery is required for the installation of these layers. The substructure should be tested before the artificial turf is laid and tests (solidity) should also be conducted during the building work.

Drainage

Local conditions are of decisive importance to the calculation of the drainage system. The dimensions of the drainage system can vary, depending on the amount of rainfall and climatic conditions.



Two levels are to be considered for the drainage: the artificial turf (above ground) and the substructure. Water collected in the surrounding area should also be taken into account. The vertical drainage of the artificial turf is determined by the permeability of the perforation (per m²) in the underlying fabric.

The water on the artificial turf drains horizontally into a gutter, which in turn drains into a system of pipes in the substructure that link into the sewerage system. Shafts should be built in order to monitor the drainage.

7
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Playing a	rea	
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.1	Recommended dimensions	60
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.6	Advertising boards around playing area	79
.7	Access to playing area	81
.8	Exclusion of spectators from playing area	81

Edging

The boundary of the pitch and the surrounding area is of vital importance for the choice of edging. In the case of a "roof gradient" (on two sides), there should be a drainage gutter for surface water (pitch and surroundings) along the length of the pitch and kerbstones along its width. In the case of a "tented roof gradient" (four sides with 2x2 different slopes), a gutter must be built all around the pitch.

In addition to the gradient, the amount of rainfall should be taken into account. In locations with low rainfall, the gutter can be dispensed with, except where the anticipated volume is large and can fall in a short period of time. If the pitch is surrounded by a running track, a gutter with two openings (pitch and running track) can be built. It is advisable to make the surfaces of the running track and the football pitch flush, particularly for corner kicks. Edging is an important factor in the coordination of the project. The drains can be built on site or installed ready-made.

As a rule, the substructure is slightly deeper in the ground than the edging, the height of which is determined at the beginning of the project by the thickness of the turf, the elastic layer, embankment, etc.

Artificial turf is usually laid on a substructure with a maximum gradient of one per cent. It is useful if the earth formation already has this gradient as this makes it easier to achieve flatness. Shafts within the artificial turf surface are to be avoided.

However, the substructure for the goals, nets (outside the safety area) and corner flags should be installed before the artificial turf is laid. If possible, the artificial turf should be laid after the work has been completed (soiling).

Watering

Watering is essential in conditions with consistently high temperatures and is generally advisable. Artificial turf and infill granules absorb heat and for the players' comfort, it is advisable to cool down a warm playing surface.

In order to keep water consumption to a minimum on grounds of cost, automatic sprinklers are advisable even if they are only used occasionally. Sprinklers should be placed outside the playing field or artificial turf surface. It is also possible to install a portable sprinkler in addition to the automatic one.

Cable ducts

Any underground ducts (for television, etc.) should be installed outside the playing surface.



III Tender

Public projects

The work should only be awarded to firms that specialise in sports pitch construction. If no such firms are available, then local engineering firms suitable for carrying out underground work should be contracted. If possible, a general contractor should be used. This can be done by a local firm with the artificial turf suppliers as subcontractors, or vice versa. It is important that a single party is responsible for guaranteeing both the substructure and the artificial turf.

FIFA Goal projects

For these projects, the requirements of the FIFA Quality Concept for Artificial Turf or the International Artificial Turf Standard label must be met. Often, this is where the artificial turf supplier, as the licensee, takes over responsibility as general contractor. The licensee works in conjunction with a local contractor for the substructure. The local contractor executes the work in accordance with the general contractor's instructions and provides support as a sub-contractor. These projects are financed by FIFA.

IV Installation

The materials required for artificial turf are voluminous and it is therefore necessary to ensure that there is an access road to the building site and storage space. Laying artificial turf depends on the weather and requires a building programme that is adapted to local and climatic conditions. The weather should be dry, the temperature should be neither too high nor too low and humidity should be low.

Interruptions to the building work should be avoided. The artificial turf should be laid by qualified staff. The building site should be locked and cleared for play. The building management must check whether the materials selected for the substructure and the artificial turf coincide with the plans and are installed by specialists.



1.1	Recommended dimensions	60
1.2	Playing field quality	64
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1.7	Access to playing area	81
1.8	Exclusion of spectators from playing area	81



V Equipment

The markings can be tufted onto the turf during the manufacturing process or affixed to the turf on site. The markings are an important permanent feature of the artificial turf. The markings (max. width 12cm) are governed by the Laws of the Game and must always conform to the regulation size (105m x 68m).

The sporting equipment must comply with all relevant safety regulations and guidelines; this applies to goals, corner flags, substitutes' benches and the referees' bench. The artificial turf supplier is obliged to provide machines and equipment for the care and maintenance of the artificial turf.

VI Certification

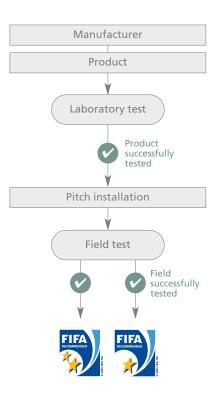
If an artificial turf pitch is to host international football matches, the artificial turf surface must be certified. This is in compliance with the Laws of the Game, which include the requirements of the FIFA Quality Concept for Artificial Turf. For an artificial turf pitch to be certified, both the product and the final installation must pass a series of stringent laboratory and field tests.

Laboratory tests

Products used in artificial turf pitches must first pass laboratory tests to determine their composition and then must be tested for durability, joint strength, climatic resistance, player-to-surface interaction and ball-to-surface interaction. If the surface passes all these tests, this completes the first stage of the process towards the award of the certification.

Field tests

In the second stage, every installed pitch must be tested on site. Two to three months after the pitch is completed, field testing should be carried out. First, specialised field-testing equipment measures how the ball reacts on the surface. Then the surface must be tested to see how it reacts to the actions of players. Various construction tests on the surface conclude this second stage.



If the turf pitch passes all the laboratory tests and all the field tests then it will qualify for one of the two FIFA Recommended marks. The marks will only be given to an installed pitch and not simply to the turf carpet. This is because the underlying base surface is just as important to the playability of the pitch as the turf itself.

Once an artificial turf pitch passes its certification, it can be used to host international matches for three years (for FIFA one-star pitches) or for one year (FIFA two-star pitches).

Playing area

4

4.1	Recommended dimensions	60	
4.2	Playing field quality	64	
4.3	Natural grass playing fields	65	
4.4	Artificial turf playing fields	69	
4.5	Substitutes' benches	79	
4.6	Advertising boards around playing area	79	
4.7	Access to playing area	81	
4.8	Exclusion of spectators from playing area	81	



The correct maintenance of a synthetic field ensures the optimum performance of the facility for the longest period of time. It also ensures that the pitch is cost effective during its lifetime. Maintenance on an artificial turf pitch is different but just as important as it is on a natural grass pitch. Lack of maintenance will significantly reduce the lifespan of an artificial field and will undermine the playing characteristics of the field. The ball can become faster over the surface, roll unevenly and the bounce of the ball can vary from place to place. The players will feel uncomfortable running on an uneven surface and frustrated by the inability to control an unpredictable ball.

Therefore, proper maintenance training should be carried out by the turf manufacturer as part of the installation of the pitch. The training must be sufficient to enable the recipient to carry out regular maintenance and repair work on the field and should also provide the owner with the necessary maintenance equipment.

VII Safety and artificial turf pitches

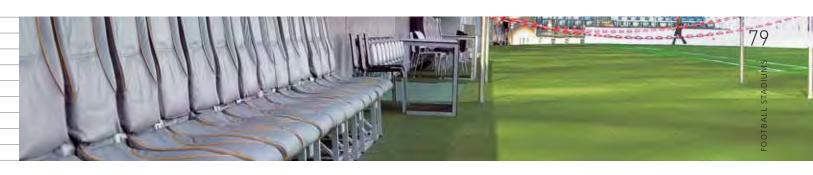
A cautionary note needs to be sounded regarding safety at a stadium with an artificial turf surface. Artificial pitches are installed using a variety of materials, some of which may be flammable under extreme conditions. Items such as firecrackers or flares are occasionally thrown onto the field during a match. These items can burn at temperatures of up to 2,000°C which is more than sufficient to ignite some synthetic materials and damage the pitch. They are easily extinguished with the use of water or sand and it is recommended that field staff be trained and on hand to ensure that a rapid response is made to extinguish these items if thrown on to the field. This will limit the amount of damage the field is exposed to.



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Playing area

	Advertising boards around playing area Access to playing area	79 81	
	Substitutes' benches	79 79	
4.4	Artificial turf playing fields	69	
4.3	Natural grass playing fields	65	
4.2	Playing field quality	64	
4.1	Recommended dimensions	60	



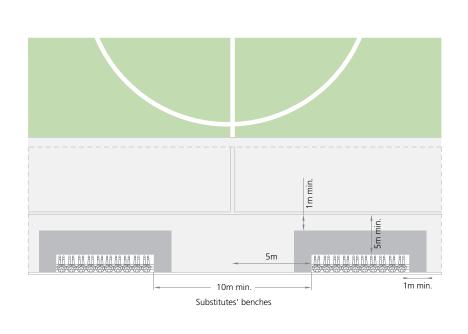


Diagram 4g: Technical area

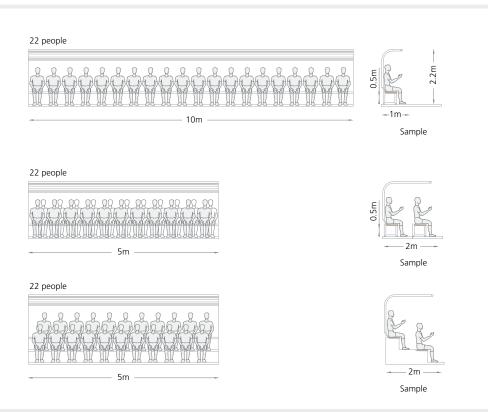


Diagram 4h: Technical area – dimensions

$4.5 \rightarrow \text{Substitutes' benches}$

There should be two substitutes' benches. They should be situated either side of the halfway line, parallel to the touch line, outside and at a distance of five metres from the playing field. The nearest point of each bench to the halfway line should be at least five metres from the point where the halfway line meets the touch line. The benches should be equidistant from the touch line and the halfway line.

Each bench should be capable of accommodating up to 22 people for international games and the FIFA World Cup^{TM} . Seats should have backrests.

Benches should be placed at ground level but they should not obstruct the view of spectators. They must be protected by a transparent PlexiglasTM-type shell against bad weather or objects thrown by spectators.

$4.6 \rightarrow Advertising boards around playing area$

When constructing a new stadium, account must be taken of the fact that the spectators' sight-lines must not be obstructed by the advertising boards which may be erected around the playing field. The main camera platform must be able to view the advertising boards constantly. The advertising boards should be connected to both normal and emergency power supply.

Advertising boards normally have a height of 90-100cm. The minimum distances between the boundary lines of the playing field and the advertising boards should be:

On the touch lines: 4-5m

Behind the goal lines: 5m, reducing at an angle to 3m near the corner flags.

Under no circumstances should advertising boards be:

- located in positions where they could constitute a danger to players, officials and others;
- erected in any fashion or be of any shape or material which could endanger players.
 For example, revolving boards or light-emitting diode (LED) boards must be powered by a voltage level which cannot cause damage to match participants;
- constructed of any surface material which could reflect light to such an extent that it could distract players, referees or spectators;
- erected in any fashion which could obstruct spectators in the event of an emergency evacuation into the playing area;
- located in such a way as to obstruct the view of those in the technical area.

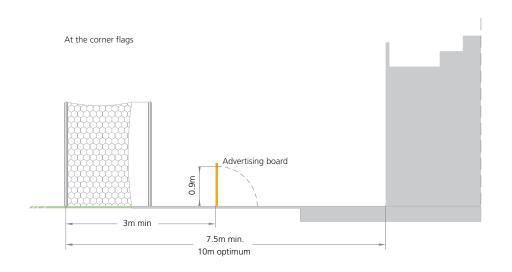
For other pre-construction decisions, see Chapter 1.

Playing	area
4	\rightarrow

Dlaving

4.8	Exclusion of spectators from playing area	81	
4.7	Access to playing area	81	
4.6	Advertising boards around playing area	79	
4.5	Substitutes' benches	79	
4.4	Artificial turf playing fields	69	
4.3	Natural grass playing fields	65	
4.2	Playing field quality	64	
4.1	Recommended dimensions	60	





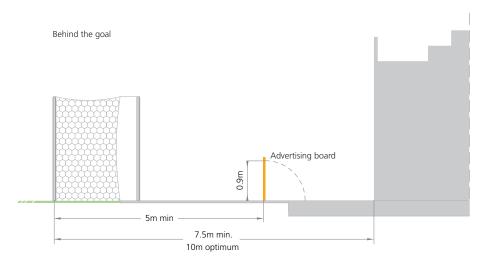


Diagram 4i: Advertising boards behind the goal line

$4.7 \rightarrow \text{Access to playing area}$

Vehicles of the emergency services, including ambulances and fire engines, must be able to gain access to the playing area. All types of ground maintenance vehicles and various other kinds of vehicle should also be able to gain access to the playing area.

For more safety information, see Chapter 2.

81

$4.8 \rightarrow \text{Exclusion of spectators from playing area}$

Ideally, the playing area of a stadium should be free of any barriers between spectators and the playing field. FIFA has decreed that its final competitions will only be played in fence-free stadiums. However, it is essential that players are protected against intrusion by spectators. This could be accomplished in a number of ways, including one or more of the following:

Security personnel

The presence of police and/or security personnel in or near the playing area is the ideal situation.

Adapted seating

A seating configuration could be employed that situates front-row spectators at a height above the arena, rendering intrusion into the playing field improbable, if not impossible. There are the obvious dangers with this method as far as the possibilities of utilising the playing area as an emergency evacuation area.

Moats

Moats of a sufficient width and depth could be used to protect the playing field. Moats have the advantage of protecting the playing area without creating the negative visual impact of fences, but there is a danger that people may fall into them. To protect against this, it is essential to erect barriers of a sufficient height on both the spectators' side and the pitch side. As these barriers could present a danger to players unless they are a safe distance from the playing field boundary lines, it means that moats are only worth considering in large, spacious arenas. In a typical football stadium with a relatively tight playing area configuration, they do not represent a realistic proposition as they increase the distance between the playing field and the spectators.

Moats should not contain water. They should have climbing obstructions or be constructed in such a way as to prevent the unlawful intrusion of spectators into the playing area.

4.8	Exclusion of spectators from playing area	81	
4.7	Access to playing area	81	
4.6	Advertising boards around playing area	79	
4.5	Substitutes' benches	79	
4.4	Artificial turf playing fields	69	
4.3	Natural grass playing fields	65	
4.2	Playing field quality	64	
4.1	Recommended dimensions	60	

7.5m min. 6m min. 10m optimum 8.5m optimum goal line touch line	Diagram 4j: Exclusion of spectators from playing area
	Raised seating Compatible with sight-lines
7.5m min. 6m min. 10m optimum 8.5m optimum goal line touch line	Moat Compatible with sight-lines
7.5m min. 6m min. 10m optimum 8.5m optimum goal line touch line	Fences or screens Compatible with sight-lines

When moats are being constructed, it should be kept in mind that at some time in the future they might be covered over if an improvement in spectator behaviour should merit it.

Mobile bridges that can be put across the moat instantly in the event of an emergency evacuation must be available in those stadiums where the playing area forms part of the emergency evacuation process.

Screens and fences

Insurmountable transparent screens or insurmountable fences could be used which could be mounted permanently or affixed in such a way that they may be removed whenever they are not necessary for a particular match.

While the removal of all perimeter fences and screens from football stadiums is desirable, it is acknowledged that there are places where local authorities insist upon the provision of such barriers.

If fences or screens are used, they must be constructed with sufficient emergency escape gates to enable spectators to reach the playing area in the event of an emergency evacuation of the seating areas. The number, size and configuration of these gates must be approved and certified by the competent safety authorities.

Spectator gates must open outwards away from the spectators, be clearly marked, be unlocked at all times and each one must be permanently attended on the inside by its own dedicated steward during the whole period that there are spectators within the stadium.

It must be repeated that FIFA is opposed to insurmountable fences and screens and rejects their deployment as a playing field protection strategy. Those who insist upon their use must be quite clear that in doing so they take upon themselves the responsibility of ensuring that they do not, under any circumstances, represent a danger to those using the stadium concerned.

FIFA is opposed to insurmountable fences and screens

Whatever form of protection against intrusion is used, it must be approved by the competent local authorities and must not represent a danger to spectators in the event of panic or an emergency evacuation.

Playing	area
4	\rightarrow

1.1	Recommended dimensions	60
1.2	Playing field quality	64
1.3	Natural grass playing fields	65
1.4	Artificial turf playing fields	69
1.5	Substitutes' benches	79
1.6	Advertising boards around playing area	79
1.7	Access to playing area	81
1.8	Exclusion of spectators from playing area	81

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FIFA World Cup™ space requirements

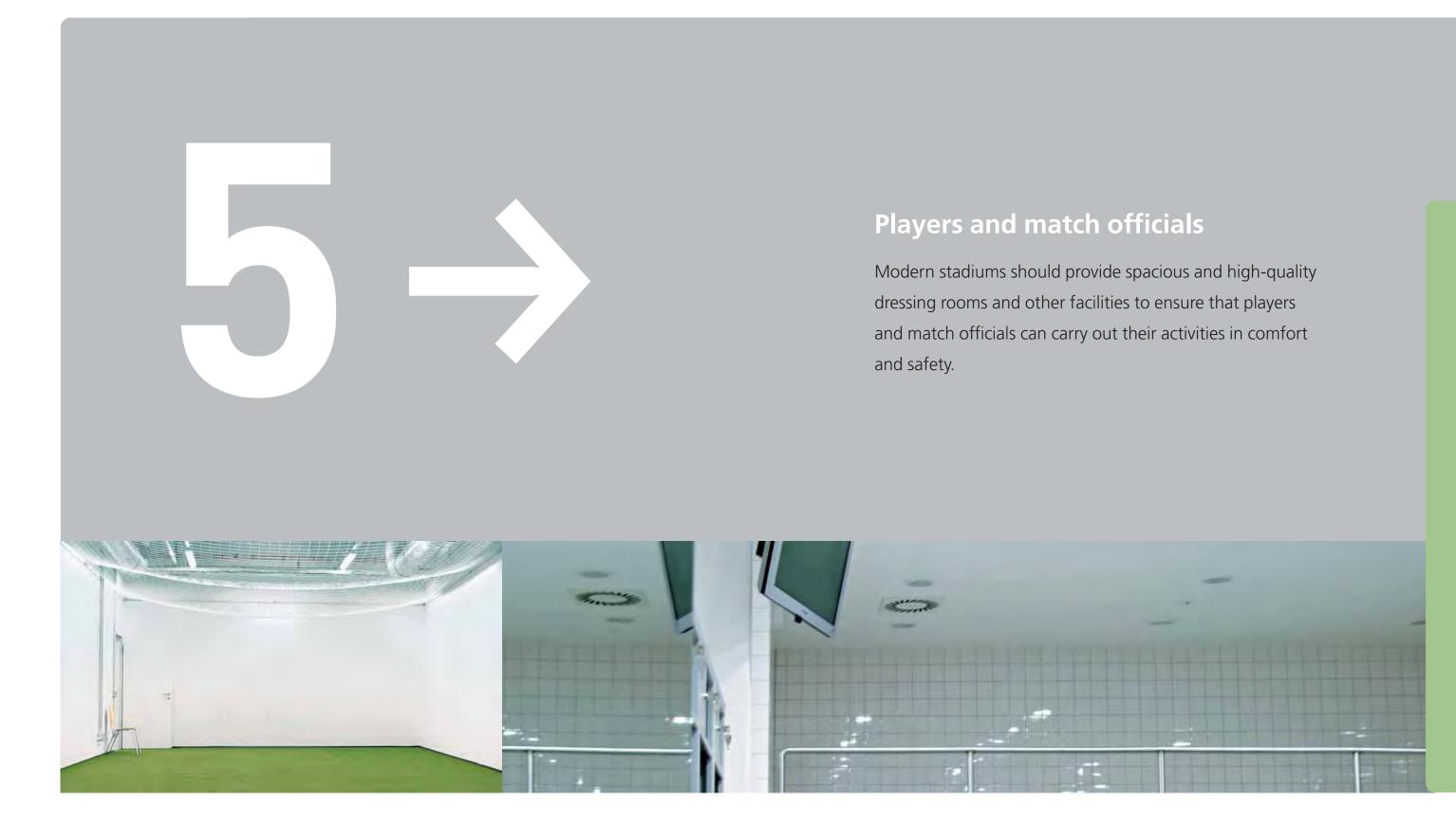
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Playing	g area															
1.01	Pitch	1	25	105 x 68	125 x 85	1	Competitions		Service tunnel, players' tunnel, FIFA offices	Area must be large enough for warm-up area behind goal lines. Grass area should reach minimum 2m from the touch line and 4m on the goal side	•		•	•	•	•
1.09	Pitch to spectator seat – goal side	2		10		1	Competitions	Goal side		Incorporate barrier or seat kills depending on distance and height of spectator seats in relation to the pitch. Min. 10m						
1.10	Pitch to spectator seat – opposite tunnel	1		6		1	Competitions	Opposite main stand		Incorporate barrier or seat kills depending on distance and height of spectator seats in relation to the pitch. Min. 10m						
1.11	Advertising board pitch perimeter	TBD				1	Marketing	Pitch		Access to field power for electronic advertising boards. Sponsor advertising boards to be $6.5m \times 0.9m$; supplier advertising boards to be $5m \times 0.9m$			•			•
1.12	Service tunnel	2				1	LOC	Main stand	Directly onto field on grade	Four tunnels are ideal to support field ventilation. Tunnel height to accomodate service vehicles (min. height 5m).	•	•		•	•	•

¹ Area ² Drawing reference number ³ FIFA room designation ⁴ Quantity of spaces required ⁵ Anticipated occupants ⁶ Area dimensions ⁷ Sum of area dimensions ⁸ FIFA accreditation zone (see key on page 236) ⁹ Space owner/planner ¹⁰ Placement within stadium ¹¹ Affinity to other rooms/activities

TBD = To be determined, negotiated between FIFA and the local organiser

¹² Type of structure required 13 The space is dedicated to one function or shared with another 14 Requires heating, ventilation and air conditioning

Requires telecom connectivity
 Requires internet connectivity
 Requires uninterrupted power supply



88	
FOOTBALL STADIUMS	

Players and match officials

5.1	Access to dressing rooms	88	
5.2	Dressing rooms, toilets and bathing areas	88	
5.3	Access from team areas to playing field	92	
5.4	First aid and treatment room	94	
5.5	Warm-up areas	95	
5.6	Match delegates' area	96	
5.7	Doping control area	96	
5.8	Dressing rooms for ball boys and ball girls	96	



Access to dressing rooms

There should be a private, protected area which can be accessed by team buses, cars and ambulances, from which the match participants can enter or leave the stadium safely, away from the public, the media and any unauthorised people.

The route between this private entrance and the dressing rooms should be designed to allow for activities such as the uninhibited transportation of an injured person on a stretcher and the delivery of kit hampers.

The route between the various dressing rooms, the emergency vehicle location and the playing area should be accessible without the obstruction of stairs, changes in level, or sudden bends or turns that would make the route difficult to navigate with a stretcher carrying an injured player.

Dressing rooms, toilets and bathing areas

It is essential that the two principal dressing rooms in a stadium are of equal size, style and comfort. Frequently, the home team dressing room is far superior to that which is provided for the visiting team. This may be acceptable at domestic football level, but it reduces the possibility of the stadium being used as a neutral venue for a competition in which the organisers must provide both teams with equal facilities. For multi-purpose stadiums it is essential to have four changing rooms of equal size and comfort. Even in stadiums which are not multi-purpose, it is advisable to have four dressing rooms of equal size and comfort, in order to accommodate events like double-header football tournaments.

Player areas

Position: the main stand.

They should provide direct, protected access to the playing area and be inaccessible to the public and the media.

Number: at least two separate team areas, but preferably four.

Minimum size: 150m².

Team areas should: be well ventilated with fresh air and be air conditioned and centrally heated, have easily cleanable floors and walls of hygienic material, have non-slip floors and be brightly lit.

Dressing rooms should have: bench seating for at least 25 people, clothes-hanging facilities or lockers for at least 25 people, a refrigerator, a tactical demonstration board, a telephone (external/internal), 1 desk, 5 chairs and 3 massage tables. The massage or treatment area should be separated from, and immediately adjacent to, the dressing space.

For more on access, see Chapter 3.

A modern stadium should have at least two, but preferably four, changing rooms of equal size and comfort.

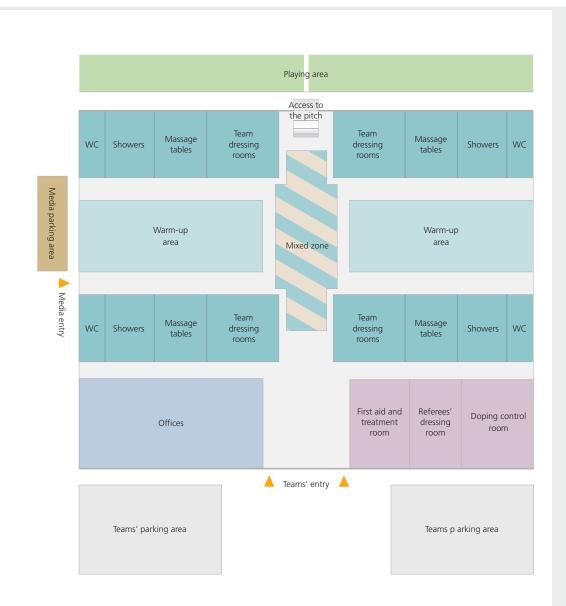
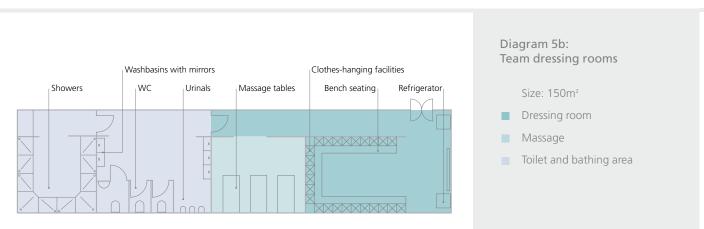


Diagram 5a: Team area

5.1	Access to dressing roon
5.2	Dressing rooms, toilets
5.3	Access from team areas
5.4	First aid and treatment
5.5	Warm-up areas
5.6	Match delegates' area
5.7	Doping control area
5.8	Dressing rooms for ball

Access to dressing rooms	88	
2 Dressing rooms, toilets and bathing areas	88	200000
Access from team areas to playing field	92	
First aid and treatment room	94	100000
Warm-up areas	95	See
Match delegates' area	96	
7 Doping control area	96	
B Dressing rooms for ball boys and ball girls	96	



Toilet and sanitary facilities: should be immediately adjacent to, and with direct private access from, the dressing room. Each room should have a minimum of: 10 showers, 5 washbasins with mirrors, 1 foot basin, 1 sink for cleaning boots, 3 urinals, 3 WCs (seats), 2 electric shaving points and 2 hair dryers.

Coaches' offices

Position: They should be adjacent to the teams' dressing rooms.

Number: Two

Minimum size: 24m².

Coaches' offices should: be well ventilated with fresh air, be air conditioned and centrally heated, have easily cleanable walls of hygienic material, have non-slip floors and be brightly lit.

Coaches' offices should have: 1 shower, 3 lockers, 1 desk, 5 chairs, a whiteboard and a telephone.

Referees' area

Position: the main stand.

It should provide direct, protected access to the playing area and be inaccessible to the public and the media. It should be separate from, but close to, the teams' dressing rooms.

Minimum size: 24m².

Referees' areas should: be well ventilated with fresh air, be air conditioned and centrally heated, have easily cleanable floors and walls of hygienic material, have non-slip floors and be brightly lit.

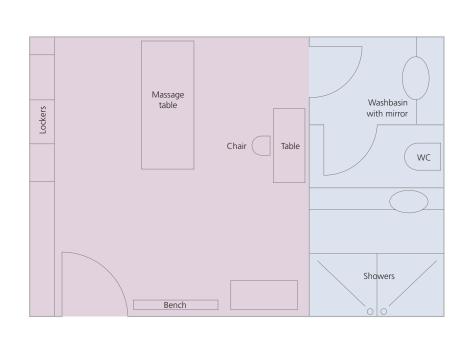


Diagram 5c: Referees' dressing room

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Size: 24m²

Dressing room

■ Toilet and bathing area

Referees' areas should have: clothes-hanging facilities or lockers for 4 people, 4 chairs or bench seating for 4 people, a table with 2 chairs, a massage table, a refrigerator, a tactical demonstration board, a telephone (external/internal) and a television set. Toilet and sanitary facilities should be immediately adjacent to, and with direct private access from, the dressing room. They should have a minimum of: 2 showers, 1 washbasin with mirror, 1 urinal, 1 WC (seat), 1 electric shaving point, 1 hair dryer and 1 sink for cleaning boots.

It is not unusual for matches to be controlled by female referees and/or assistant referees, or for the refereeing team to be comprised of both sexes. A modern stadium should provide equal, separate areas for both sexes. Therefore, one area for five referees and one area for two referees should be provided, both with the requisite washing facilities.

Signs in dressing room area

All corridors should have clear and easily understandable signs directing visiting players, referees and officials to their respective rooms, each of which should be clearly marked. For example: Home Dressing Room; Visitors' Dressing Room; Referees; Match Delegate; Doping Control.

Adequate facilities should be provided for referees of both

Players	and
match o	officials
5	\rightarrow

5.1	Access to dressing rooms	88	
5.2	Dressing rooms, toilets and bathing areas	88	
5.3	Access from team areas to playing field	92	
5.4	First aid and treatment room	94	
5.5	Warm-up areas	95	
5.6	Match delegates' area	96	
5.7	Doping control area	96	
5.8	Dressing rooms for ball boys and ball girls	96	



$5.3 \rightarrow$ Access from team areas to playing field

Each of the teams' dressing rooms and the referees' dressing room should have its own corridor or tunnel for access to the playing field. These tunnels may join up near the exit to the playing area. If only one tunnel is available, it should be wide enough to enable it to be divided by a barrier screen to ensure the separation of the teams (and the referees) when entering or leaving the field. The team areas should be located on either side of the players' tunnel. The tunnel should be a minimum of 4m wide and a minimum of 2.4m high. For the purposes of the FIFA World CupTM, 6m width is preferred; the minimum height is the same.

The point where the players and the referees enter the playing area must be protected by means of a fireproof telescopic tunnel. This should be at the halfway line and on the same side as the VIP box, press stand and administrative offices. The telescopic tunnel should extend into the playing area far enough to prevent the risk of injury to the match participants caused by objects thrown by spectators. Such telescopic tunnels should be capable of being extended or closed quickly so that they may be used during the match when a player is entering or leaving the field, without causing a lengthy viewing obstruction.

Alternatively, the entry to the playing area may be by means of an underground tunnel, the mouth of which is situated a safe distance from spectators. The surfaces of the corridors and the stairs must be made of, or covered by, a non-slip material. There should be no possibility of public interference in these corridors or security tunnels.

Close to the point where the dressing room corridor or tunnel opens into the playing area, there should be a small toilet area consisting of a WC and washbasin with mirror for those who use the playing area.

For more on safety, see Chapter 2.

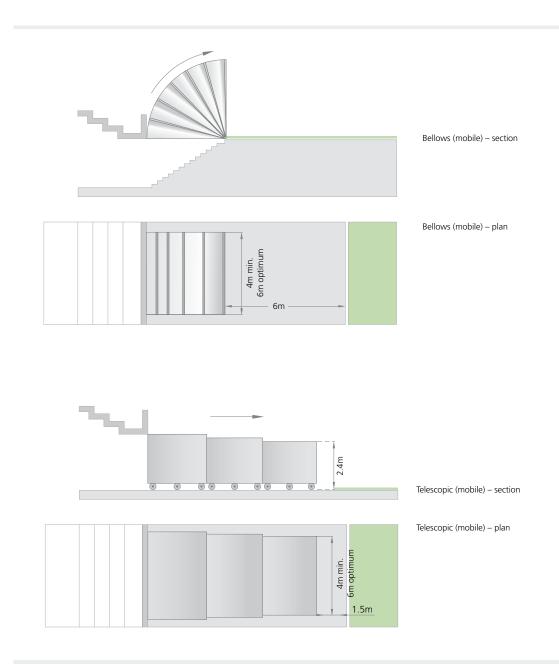


Diagram 5d: Access from team area to playing field

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Players and
match officials

5.1	Access to dressing rooms	88
5.2	Dressing rooms, toilets and bathing areas	88
5.3	Access from team areas to playing field	92
5.4	First aid and treatment room	94
5.5	Warm-up areas	95
5.6	Match delegates' area	96
5.7	Doping control area	96
5.8	Dressing rooms for ball boys and ball girls	96

First aid and treatment room

This room should be used by players, match officials, the media, VIPs and security personnel. For the FIFA World CupTM, a dedicated first aid room is required for VIPs. Position: in the dressing room area and as close to the teams' dressing rooms and the playing field as possible, with easy access to the outside entrance directly to emergency vehicles. The doors and corridors leading to this room should be wide enough to allow access for stretchers and wheelchairs.

Minimum size: 50m².

The room should have: an examination table, 2 portable stretchers (in addition to those at the pitch-side), a washbasin (hot water), a low foot basin (hot water), a glass cabinet for medicines, a lockable non-glass cabinet, a treatment table and a telephone (external/internal). The room should have walls or partitions which enable it to be divided into two when necessary. In addition, the room needs to be equipped with:

- defibrillator with rhythm and patient data recording;
- cardiac monitor;
- external cardiac pacing;
- infusion mounting and system with all equipment for injections and infusions set, including venous indwelling cannulae;
- infusion system which is designed to allow administration of fluid warmed to 37°C +/- 2°C;
- pressure infusion device, volumetric infusing device;
- central vein catheters;
- pericardial puncture set;
- drug administration equipment;
- intubation equipment;
- automatic ventilator, stationary oxygen min. 2,000 litres or portable oxygen min. 400 litres, stationary non-manual suction device with minimum negative pressure of 500mm of mercury with a minimum capacity of 1 litre, capnometer, PEEP-valve;
- thorax drainage kit;
- immobilisation equipment like vacuum mattress, spinal board, cervical collar-set.



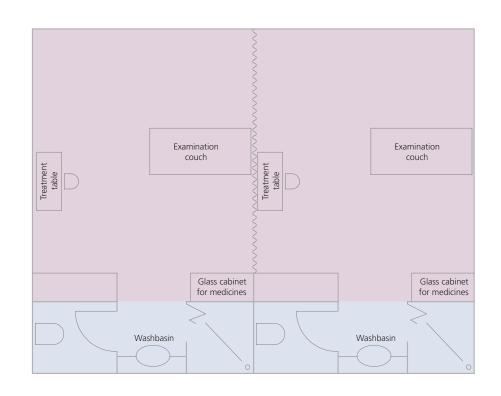


Diagram 5e: First aid and treatment room

Minimum size: 50m²

- Treatment room
- Toilet and bathing area

$5.5 \rightarrow Warm-up areas$

Outdoor

These areas should have a grass surface (artificial turf is acceptable) and be surrounded by plain walls with no protrusions. Outdoor areas should be sufficiently lit to enable their use at night.

For information on the playing area, see Chapter 4

Indoor

Position: close to the dressing rooms.

Minimum size: 100m² (each).

Each team should have an indoor warm-up area. It should be surrounded by plain walls with no protrusions. The wall surface should have shock absorbent material to prevent collision injuries and a loose net below the ceiling. Areas should be ventilated with fresh air, be air conditioned and should be brightly illuminated with lights which are protected against damage by footballs.

An indoor warm-up area of 100m² should be provided for each team

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FOOTBALL STADIUMS

Players and match officials

 5.1 Access to dressing 5.2 Dressing rooms, to 5.3 Access from team a 5.4 First aid and treatm 5.5 Warm-up areas 5.6 Match delegates' a 5.7 Doping control are 	r ball boys and ball girls	96	
5.2 Dressing rooms, to5.3 Access from team5.4 First aid and treatm5.5 Warm-up areas		96	
5.2 Dressing rooms, to5.3 Access from team a5.4 First aid and treatm	area	96	
5.2 Dressing rooms, to 5.3 Access from team a		95	
5.2 Dressing rooms, to	nent room	94	
	areas to playing field	92	
5.1 Access to dressing	ilets and bathing areas	88	
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Match delegates' area

Position: near the teams' and referees' dressing rooms, preferably with direct connecting access to the latter.

Minimum size: 16m².

The area should have: a desk or table, 3 chairs, a clothes locker, a telephone (external/internal), a fax, a photocopier and a television set. Toilet and sanitary facilities should include 1 WC and 1 washbasin with mirror.

Doping control area

Every stadium must provide a room for doping control purposes, comprising a waiting room, a working room and a washing facility, all adjoining.

Position: near the teams' and referees' dressing rooms and inaccessible to the public and the media.

Minimum size: 36m² (including toilet, working room and waiting room).

The dope-testing area should: be well ventilated with fresh air and be air conditioned and centrally heated, have easily cleanable floors and walls of hygienic material, have non-slip floors and be brightly lit.

The working room should have: a desk, 4 chairs, a washbasin and mirror, a telephone (external/internal) and a cabinet with a lock for sample bottles.

Toilet area

Position: immediately next to, with direct private access to, the working room, capable of accommodating two people. Toilet and sanitary facilities should include 1 WC, 1 washbasin and mirror and 1 shower.

Waiting room

Position: immediately adjacent to the working room.

The waiting room should have: sufficient seating for eight people, a refrigerator and a television set.

Dressing rooms for ball boys and ball girls

Minimum size: 40m² (for each sex).

Each room should have: 2 WCs, 2 washbasins and 2 showers.



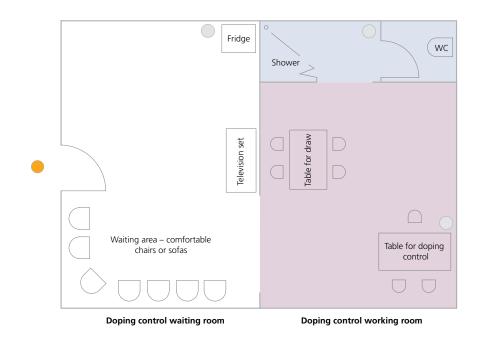


Diagram 5f: Doping control area Minimum size: 36m² ■ Working room Toilet Security person

Waste paper bin

Players and match officials

5.1	Access to dressing rooms	88
5.2	Dressing rooms, toilets and bathing areas	88
5.3	Access from team areas to playing field	92
5.4	First aid and treatment room	94
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5.7	Doping control area	96
5.8	Dressing rooms for ball boys and ball girls	96

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FIFA World Cup™ space requirements

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1 Playi	ng area	/		/	/					/						//	
1.02	Players' tunnel	1	90	Min. dimension 6 x 15	90	1	Competitions	Main stand	Dressing rooms	Tunnel protector (extendable) – width to accomodate six people	•		•		•	•	•
1.03	Pitch to spectator seats at tunnel (distance to first row of seats)					1	Competitions	Main stand		Incorporate barrier or seat kills depending on distance and height of spectator seats in relation to the pitch. Min. 8.5m.							
1.04	Substitutes' bench	2	22	22 seats x 1m	22	1	Competitions	Main stand	Main stand, players' tunnel	Incorporate heat reflecting/minimizing Plexiglas™ cover	•		•				
1.05	Fourth official's bench	1	4	4 seats x 1m	4	1	Competitions	Main stand	Between substitutes' bench	Same design as substitutes' benches. Provides seating for one referee official and three event coordinators	•		•		•	•	•
1.08	Players' outdoor warm-up area	2	6	3 x 30	90	1	Competitions	Goal side	Behind both goals and photographer positions	The warm-up area surface should be the same as the playing surface		•	•				
2 Dres	sing rooms																
2.01	Team A, dressing room	1	23	150	150	2	Competitions	Main stand	Coach drop-off, doping control, flash interview areas	Includes 23 lockers, 2-3 massage tables, flipcharts, whiteboard and clocks	•		•	•	•	•	•
2.02	Showers	1	11	8 x 1.5m	12	2	Competitions	Main stand			•	•					
2.03	Kit manager's room, Team A	1	3	25	25	2	Competitions	Main stand	Players' dressing rooms and, if provided, indoor warm-up area		•		•	•	•	•	
2.04	Team technician	1	2	20	20	2	Competitions	Main stand	Players' dressing room		•		•	•	•	•	
2.05	Team B, dressing room	1	23	150	150	2	Competitions	Main stand	Coach drop-off, doping control, flash interview areas	23 lockers, 2-3 massage tables, flipcharts, whiteboard and clocks	•		•	•	•	•	•
2.06	Showers	1	11	8 x 1.5m	12	2	Competitions	Main stand			•	•					
2.07	Kit manager's room, Team B	1	3	25	25	2	Competitions	Main stand	Players' dressing room		•		•	•	•	•	
2.08	Team technician	1	2	20	20	2	Competitions	Main stand	Players' dressing room		•		•	•	•	•	
2.09	Referees 1	1	5	24	24	2	Competitions	Main stand		Provide five lockers	•		•	•	•	•	
2.10	Referees 2	1	2	16	16	2	Competitions	Main stand		Provide two lockers	•		•	•	•	•	
2.11	Referees' showers 1	1	3	3 x 1.5m	5	2	Competitions	Main stand		Provide three showers and one toilet	•	•	•				
2.12	Referees' showers 2	1	2	2 x 1.5m	3	2	Competitions	Main stand		Provide one shower and one toilet	•	•	•				
2.13	Coaches and technical, Team A	1	5	24	24	2	Competitions	Main stand	Next to players' dressing rooms or in mixed zone	Provide two lockers, chairs, one toilet and one shower	•	•	•	•	•	•	
2.14	Coaches and technical, Team B	1	5	24	24	2	Competitions	Main stand	Next to players' dressing rooms or in mixed zone	Provide two lockers, chairs, one toilet and one shower	•	•	•	•	•	•	
2.16	Players' indoor warm-up area	2	23	100	200	2	Competitions	Main stand	Next to players' dressing rooms		•	•	•	•			

¹ Area ² Drawing reference number ³ FIFA room designation ⁴ Quantity of spaces required ⁵ Anticipated occupants ⁶ Area dimensions ⁷ Sum of area dimensions ⁸ FIFA accreditation zone (see key on page 236) ⁹ Space owner/planner ¹⁰ Placement within stadium ¹¹ Affinity to other rooms/activities

TBD = To be determined, negotiated between FIFA and the local organiser

¹² Type of structure required ¹³ The space is dedicated to one function or shared with another ¹⁴ Requires heating, ventilation and air conditioning

<sup>Requires telecom connectivity
Requires internet connectivity
Requires uninterrupted power supply</sup>

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5.1	Access to dressing rooms	88	
5.2	Dressing rooms, toilets and bathing areas	88	
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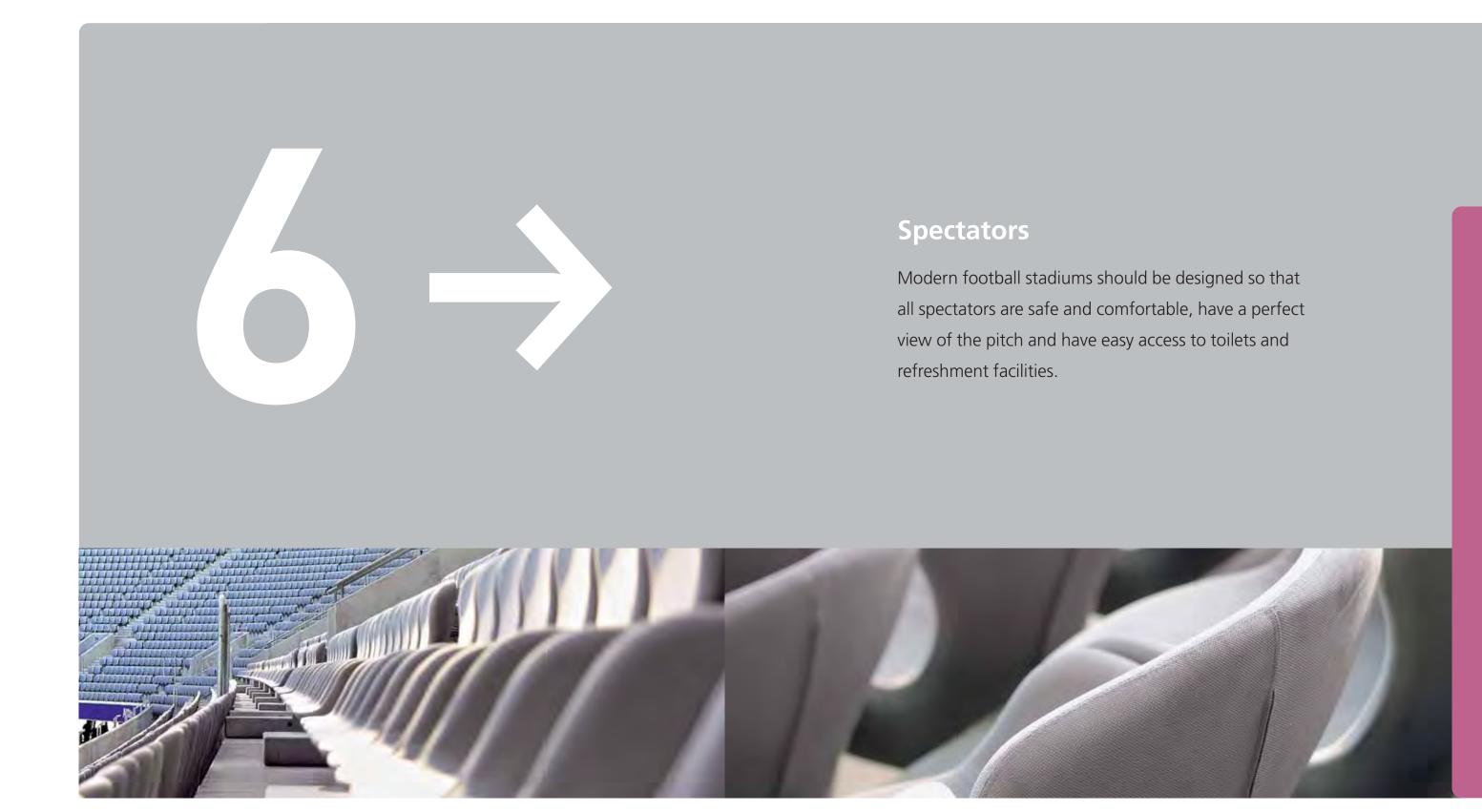
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3 Medio	cal facilities																
3.01	Stretcher bearers and medical team area	2	6	8	16	1	LOC	Main stand	Close to players' tunnel, Emergency Services and adjacent to substitutes' benches			•	•				
3.02	First aid and treatment room	1	4	50	50	2	Competitions	Main stand	Used for players, match officials, media and security personnel		•		•	•	•	•	
3.03	Medical officer's room	1	2	incl 3.02		2	LOC	Main stand			•		•	•	•	•	
4 Dopir	ng control															_	
4.01	Waiting room	1	8	20	20	2	Competitions	Main stand	Close to players' dressing rooms	Doping control room is connected to waiting room and medical office	•		•	•			
4.02	Medical office	1	4	12	12	2	Competitions	Main stand	Close to players' dressing rooms		•		•	•	•	•	
4.03	WC	1	2	4	4	2	Competitions	Main stand	Close to players' dressing rooms		•		•				

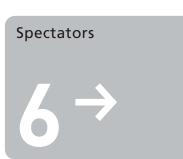
¹ Area ² Drawing reference number ³ FIFA room designation ⁴ Quantity of spaces required ⁵ Anticipated occupants ⁶ Area dimensions ⁷ Sum of area dimensions ⁸ FIFA accreditation zone (see key on page 236) ⁹ Space owner/planner ¹⁰ Placement within stadium ¹¹ Affinity to other rooms/activities

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.1	General standards of comfort	104	
.2	Spectator areas	111	
.3	Communication with the public	112	
.4	Spectators with disabilities	114	
.5	Merchandise concession stands	116	
.6	Ticketing and electronic access control	116	



$6.1 \rightarrow General standards of comfort$

Over the past 25 years, stadiums have improved significantly in the level of comfort that they provide for spectators. These improvements have been for people in all areas, from those purchasing the least expensive tickets to VIPs. This trend is likely to continue. Stadiums should not be built, therefore, with only the needs of the next few years in mind but rather in the hope that the facility will serve the requirements of the generations to come, or at least that it may be adapted to do so relatively easily.

A modern stadium should be capable of providing the following facilities:

Cover for spectators

A roof over all spectators is particularly desirable in cold, wet climates. In those parts of the world where relatively constant sunshine is normal, the shade provided by a roof should be made available to all spectators for at least a certain period of the game.

It is possible that spectators will become reluctant to sit in freezing temperatures or in sweltering humid conditions to watch sporting events held in stadiums. In an age when our homes, workplaces, cars and many sporting and entertainment facilities are comfortably heated and air conditioned, it seems likely that more spectators will ask for similar conditions in their stadiums.

There is already a trend towards building stadiums that can be completely covered over by a retractable roof which may be left open whenever weather conditions make it desirable to do so.

The challenge with this kind of roof, even when it provides a substantial roof opening, is that it is proving extremely difficult to maintain grass pitches in acceptable condition. With the necessary supply of sunlight and wind (for ventilation) severely reduced by the roof, it is almost impossible to keep the turf alive and well.

An innovative solution has been achieved at the Gelredome Stadium in Arnhem (the Netherlands) and Schalke's stadium in Gelsenkirchen (Germany) where the entire playing area slides out under one end of the stands to allow the grass to grow in an open environment. It seems to be working well but it is expensive and may be beyond the reach of most facilities.

A football stadium should be covered to protect spectators from the rain and from the glare of strong sunlight.

For more about artificial turf and natural grass, see Chapter 4.

Seating accommodation

All spectators should be seated. Seats must be individual, affixed to the structure and comfortably shaped, with backrests of a minimum height of 30cm to provide support. To ensure a minimum level of comfort, "tractor-style" seats, with only a tiny flange purporting to represent a backrest, are not acceptable. The provision of backrests also helps to prevent the highly dangerous forward surge of spectators which frequently took place on the old standing terraces whenever a goal was scored and which still happens today in some stadiums where the seats have no backrests. Standing viewing areas and benches of any kind are not acceptable under any circumstances for the FIFA World CupTM.

Seats should be unbreakable, fireproof and capable of withstanding the rigours of the prevailing climate without undue deterioration or loss of colour. Seats for VIPs should be wider and more comfortable and should be located at the centre of the field and separated from the rest of the seating areas. Great care should be taken when choosing the type of seats to be installed.

Building and safety standards vary from country to country, so it is inappropriate to prescribe absolute dimensions for the width of seats, the space between them, the space between the seat rows or the maximum number of seats between aisles. However, the safety and comfort of spectators must be paramount and the configuration and style of seating areas is fundamental to both issues.

There should be sufficient leg-room between the rows of seats to ensure that spectators' knees do not touch the seat or spectator in the row in front and to make it relatively easy for spectators to move in and out of the rows even when they are full. This is an important safety factor which has not always been taken into consideration. In many stadiums, it is almost impossible to move along the row when it is occupied. This is not acceptable. Seats that tip up automatically when the occupant stands up are helpful in this respect, although they may be more susceptible to breakage if abused. To achieve reasonable leg-room, a minimum distance of 85cm from backrest to backrest is recommended.

For more on VIP facilities, see Chapter 7.

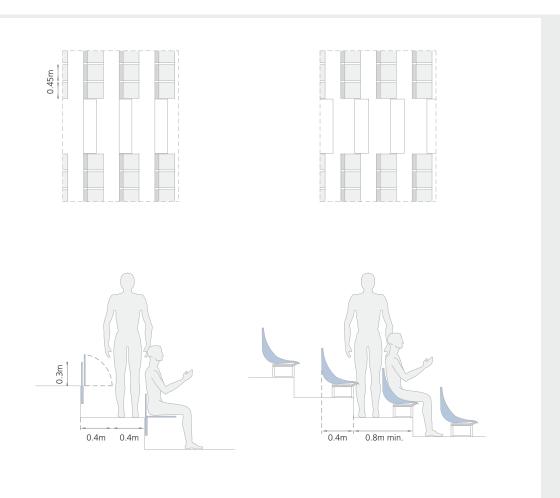
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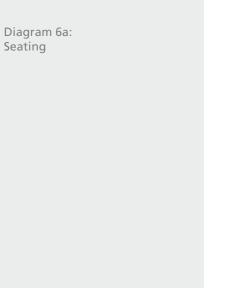
Spectators

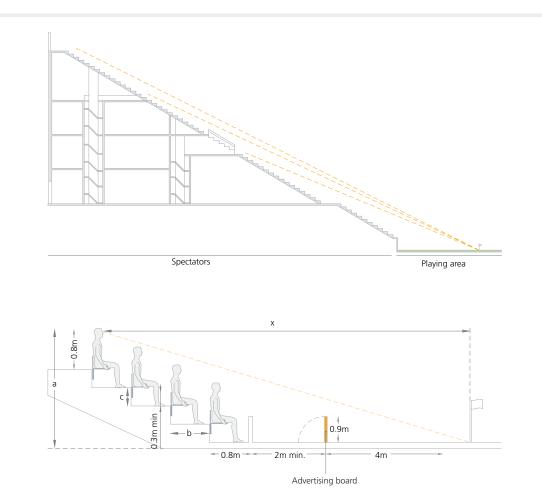
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5.1	General standards of comfort	104
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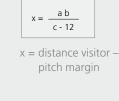












The width of the seat is critical for spectator comfort. It may be financially beneficial to maximise the number of spectators in a seating area but this may compromise safety and is grossly irresponsible. It may also reduce long-term attendance. An absolute minimum width should be 45cm while a recommended minimum is 47cm. In many countries, spectators dress in bulky clothing and this should be accounted for.

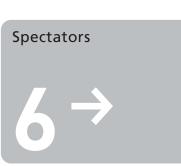
There should be a clear view of the playing field from all seats. In calculating the sight-lines it should be appreciated that advertising boards of 90 - 100cm in height may be erected around the field at a distance of four to five metres from the touch lines and five metres behind the centre of the goal lines, reducing at an angle, to three metres near the corner flags. Simplified minimum criteria should be that all spectators in the stadium can see over the head of a spectator seated two rows in front in a direct line.

Seat identification

Row identification should be clearly exhibited in the passageways or aisles in an easy-to-find location on the outside of the end seat. When arriving at an unfamiliar stadium with a ticket for, say, Sector B, Row 22, Seat 9, the spectator should find the route to the seat clearly marked and easily identifiable.

Spectators should be able to find their way easily to their seats.

All seats should be numbered in a way that makes them clearly, easily and immediately identifiable. Spectators should not have to stoop to look at obscure, faded and miniscule seat number plates while others wait behind them, impatient and frustrated. It is important that the whole entry process is not stressful or unnecessarily slow.



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FOOTBALL STAD

Sanitary facilities

Sufficient toilet facilities for both sexes and for disabled people must be provided inside the security perimeter of the stadium. These amenities should include adequate washing facilities with clean water and a plentiful supply of towels and/or hand dryers. These areas should be bright, clean and hygienic and they should be kept in that condition throughout each event.

The fact that women usually require more time in these facilities should be accounted for by providing additional fixtures. The growing number of women attending football games and other stadium events should be noted. Developers of stadiums may consider installing additional women's washrooms that can be converted to temporary use by men, with appropriate changes in signage, when a larger male audience is anticipated.

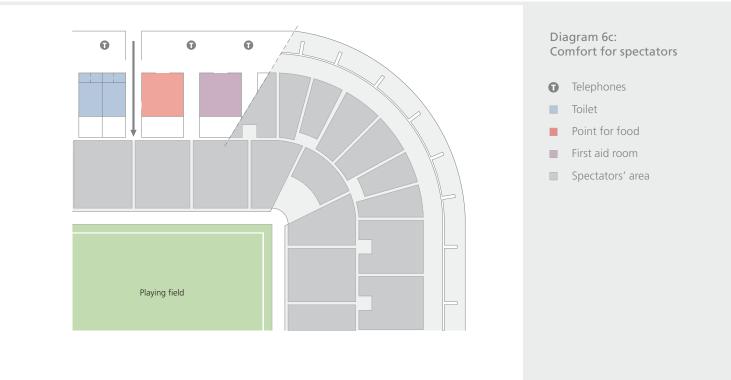
The recommended minimum number of WCs and sinks is 20 and seven respectively for every 1,000 women and 15 WCs and/or urinals (approximately one-third should be WCs and two-thirds urinals) and five sinks for every 1,000 men. The ratio should be increased in the VIP and VVIP areas. Local authority regulations apply if they require more fixtures.

To avoid overcrowding between spectators entering and leaving toilets there should be a one-way access system, or at least doors which are sufficiently wide to permit the division of the passageway into in and out channels.

Private toilet facilities consisting of a single WC and sink should be considered throughout the facility in a ratio of 1 per 5,000 spectators, for use by those requiring greater assistance, including disabled people and young children.

Stadiums must be developed as quality community facilities with appropriate customer services, including washrooms. It has been demonstrated that spectators respect well-maintained and clean facilities. Unclean facilities often foster anti-social behaviour.

For other pre-construction decisions, see Chapter 1.



Public refreshment facilities

Selling points for food and beverages should be clean, attractive and easily accessible. They must be evenly spread around the stadium so that provision is made for all sectors, bearing in mind that spectator movement from one sector to another may be difficult or impossible.

A minimum of five permanent points of sale should be provided per 1,000 spectators, with approximately 1m-1.5m of counter space for the sale. Temporary points of sale should also be anticipated to deal with additional demand. Menus need to be visible from a distance so the customer can make his or her decision before getting to the counter. Ideally, the menu boards should be light boxes. Credit cards should be accepted at the stands either via permanent or wireless systems.

It is important to design the work/staging area in a way that allows many employees to work there at once, so that products can be displayed in a tasteful way and to allow for sufficient storage (especially cold storage) at the stand. An ideal ratio of beverage product to stadium capacity is 150 per cent. An ideal storage ratio is 50 per cent of storage at the stand and 50 per cent on site or in cool houses close by.

Spectators

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Selling points for food and drink, souvenirs and match programmes should be situated in positions where queuing customers will present the minimum possible obstruction to the flow of other spectators. Stadiums frequently do not allow enough space between the concession stand and the wall of the stadium, limiting corridor space. This causes the problem of bottlenecks, especially at half-time where customers queue up to buy food and drink and there are people trying to move around the stadium. Garnish stations (ketchup, mustard, straws, etc.) should never be at the stand next to the registers. They should always be away from the queues, otherwise this will slow down the service.

The half-time surge of spectators may be reduced if large television screens are situated in public refreshment areas so that those spectators who leave their viewing positions before half-time in order to beat the rush to the food and drink counters do not miss any of the action on the pitch.

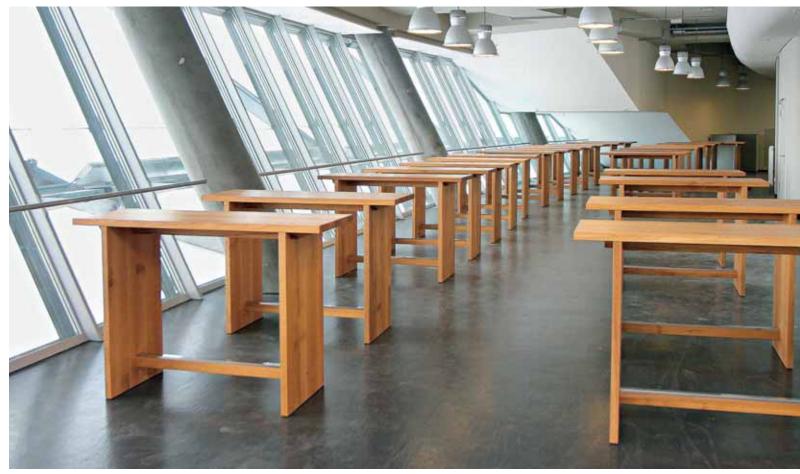
Seating in the public concourses, or a combination of seating and standing table facilities, is desirable, bearing in mind that spectators may wish to purchase food and drink before and after the match. Such cafe, bar and restaurant facilities can face outwards to the surrounding streets or overlook the pitch and seating bowl, providing another type of seating product from which to watch events.

All of these public hospitality areas must be kept as clean and tidy as possible during the entire event. An adequate number of waste bins should be provided and, where possible, separate bins should be available to facilitate recycling. Sufficient cleaning staff must be on hand while the public are in the facility.

Waste bins should be big enough and numerous enough to handle high volumes of waste material at half-time. If they are not big enough, a stadium will have to spend a lot of extra money on cleaning staff. Where a stadium has a recycling system, signage explaining the system should be clear and prominent.

Public telephones

Despite the increasing popularity of mobile phones and the reduction in the use of public telephones, an adequate number of public telephones should be provided in and around the stadium.



$6.2 \rightarrow Spectator areas$

Public areas

The stadium should be divided into at least four separate sectors, each with its own access points, refreshment and toilet facilities and other essential services, such as first aid areas, security stations and areas for stewards and marshals.

Each of these sectors may, in turn, be divided into smaller areas. It should be possible to prevent spectators from moving from one sector, or sub-sector, to another, unless it is required for the stadium's evacuation process.

The nature of the barriers which may be used to sub-divide sectors is for each stadium management to determine. Barriers should be easily dismountable by security personnel and have a collapsing load which is in accordance with local authority regulations. It must be possible to see through the barriers.

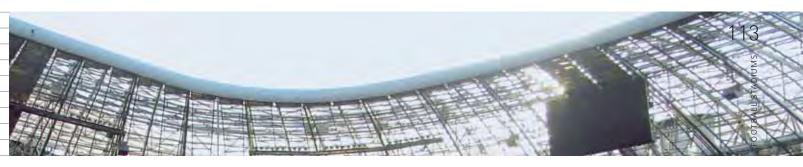
The stadium should be divided into four separate sectors, each with its own access points.

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OOTBALL STADIUMS

Spectators





$6.3 \rightarrow \text{Communication with the public}$

Public address system

It is essential that event holders and stadium safety/security authorities are capable of communicating clearly with spectators inside and outside the stadium by means of a sufficiently powerful and reliable public address system.

Such a system should:

- have its control centre located in, or immediately adjacent to, the stadium control room, in a position where the operator has a clear, unobstructed view of the whole stadium;
- be capable of addressing messages exclusively to individual sectors of the stadium, including banks of turnstiles, internal rooms, hospitality suites and blocks of seating;
- be capable of having its volume automatically increased to guarantee that messages
 will always be audible to spectators even when sudden increases in the crowd noise
 level occur, e.g. the scoring of a goal during the delivery of a safety message would
 cause the volume level of the system to instantly and automatically rise above the
 surge in crowd noise levels;
- have an override which would permit the stadium controller to cut in to any separate sound in the event of an emergency;
- have an emergency, alternative power supply which would ensure that the system remained operative without interruption in the event of a power failure for a minimum period of three hours.

Where there is an adequate level of funding, stadium owners may wish to consider installing a stadium sound system as opposed to the more basic, and less expensive, public address system. A sound system is much more effective for relaying music and speech, and with proper overrides it has recently been able to replace the public address system, resulting in clearer and more intelligible announcements.

A sound system may also help attract concerts by lesser-known artists but most major international acts prefer to provide their own state-of-the-art equipment. A public address system is generally less sophisticated than a sound system and is only effective for relatively short and straightforward messages.

Scoreboards and video screens

Most modern stadiums have some kind of electronic communication with spectators. This could be a relatively basic scoreboard, which records in written form the match result and goalscorers and provides short and simple public messages. Or it could be a much more sophisticated and expensive giant video screen, which can provide instant action replays or other televised/video entertainment. These screens are often an additional source of income when used for advertising. Video screen communication is more expensive but it is preferred by the public.

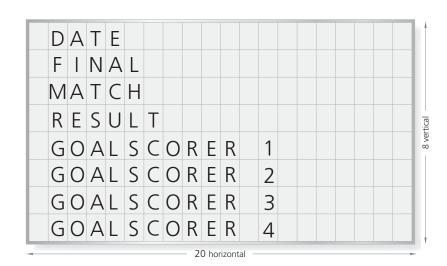


Diagram 6d: Scoreboard





D = Maximum distance from spectators to scoreboard

The location of these screens within the stadium is an important issue which must be addressed at an early stage of the design process. Generally, at least two screens are used to provide spectators in all areas with an acceptable, relatively direct view. They are large and can result in seat loss both in new stadiums and when introduced as an addition to an existing stadium.

The favoured positions for them are in two diagonally opposite corners or one behind each of the goals. They can be positioned to fill in open corner spaces between side and end grandstands. They can also be situated on top of, or suspended from, a grandstand roof.

The principal determining factors when deciding the best position for the screens are:

- to provide optimal viewing for all spectators;
- to eliminate or to lessen capacity reduction caused by seat loss;
- to be placed in a location where the screens do not represent any risk to spectators and where there is no possibility of spectator interference with them.

Spectators

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	General standards of comfort Spectator areas Communication with the public Spectators with disabilities Merchandise concession stands Ticketing and electronic access control	Spectator areas 111 Communication with the public 112 Spectators with disabilities 114 Merchandise concession stands 116

Although there are some controls by football and stadium authorities on the extent of instant replays of the events during a match, there is a strong public demand for as many replays as possible. This is a primary reason why any stadium which aspires to be classed as a modern, upmarket venue must equip itself with the latest and most sophisticated means of electronic video communication with the public. The design of electronic communication systems is changing rapidly and so is the cost. Larger and clearer video screens, individual armrest monitors and personal handheld television/video screens are some of the new products that should be considered in the years ahead.

Portions of the scoreboards and video screens can be used for displaying messages during emergencies and should be connected to electrical systems with a three-hour standby power supply in the event of a normal power outage.

$6.4 \rightarrow Spectators$ with disabilities

Proper provision should be made at all stadiums to accommodate spectators with disabilities in safety and comfort. This should include the provision of good, unobstructed viewing facilities and ramps for wheelchairs, toilet facilities and support services.

The quality of seating positions and ticket options should be varied to allow disabled people the same opportunities as non-disabled spectators. It should be possible for wheelchair-users to gain entry to the stadium at all the entrances – including the VIP, VVIP, media, broadcasting and player facilities – and to their viewing positions, without undue inconvenience either to themselves or to other spectators.

Disabled spectators should have their own dedicated entrance gate from which they may have direct wheelchair access to their viewing area. Disabled spectators should not be accommodated in any position within the stadium where their inability to move quickly would present a hazard to themselves or to other spectators in the event of an emergency.

Disabled people should be protected from the elements. The traditional custom of providing space in the open, close to the pitch, is not acceptable.

The viewing platform for spectators who use wheelchairs should not be in a position where the occupants' view of the playing field could be obstructed by other spectators jumping to their feet or by flags or banners hanging in front of them. Similarly, the position of disabled spectators should not hinder the view of spectators seated behind them.

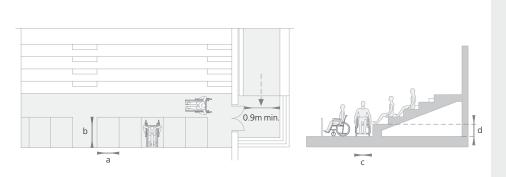


Diagram 6e: Dimensions of viewing area for wheelchair users

a = 0.90 m min.

b = 1.40 m min.

c = 0.90m min

d = 0.60m min

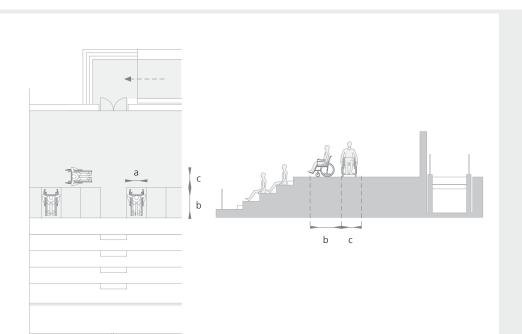


Diagram 6f: Dimensions of viewing area for wheelchair users

a = 0.90 m min.

b = 1.40 m min

c = 0.90 m min

On these platforms there should be a seat at the side of each wheelchair position for a helper and electrical power available for assistance equipment. Toilets for disabled people should be close by and easily accessible, as should refreshment facilities.

A specialist accessibility consultant should be consulted to determine the designs of the stadium to ensure that they comply with internationally accepted standards.

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FOOTBALL STADIUMS __

Spectators

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$6.5 \rightarrow Merchandise concession stands$

Merchandise stands should be placed in a way that will attract spectators without causing congestion in the stadium concourses. They should be accessible for everybody, even at a high-risk match where the sectors are divided.

Walls and fascias should be exposed so that the concession operator can properly display the items for sale and customers can see the items from a distance and be able to make their choice in advance. Pricing information should be visible from a distance. Credit card acceptance is essential.

$6.6 \rightarrow$ Ticketing and electronic access control

The primary purpose of ticketing and access control systems is the safety and security of spectators. The ticketing plan also has to be designed to eliminate the possibility of fraud and corruption and to reduce attempts at forgery. It must be commercially viable and serve as a means of driving revenue.

It must be supported by a ticketing management plan which includes the following:

- support validation;
- reliability;
- personalisation;
- segregation;
- a failsafe system;
- capability of multi-stage emergency management plan with a fall-back solution;
- compatibility and integration with the access control system (turnstiles).

For the FIFA World Cup^{TM} , an event-wide, integrated system should be procured, as opposed to an individual stadium solution.

The ticketing service provider should be centrally procured early in the event planning and should be part of the development of the ticketing plan. The successful ticket service provider should have previous ticketing experience, should have participated in similar successful events or projects, must have full access to the necessary technologies and must have the financial solidity to undertake the project.



There are numerous systems available. FIFA encourages an open network IP system, examples of which are:

- a smart-label ticket with radio frequency identification (RFID) technology, with a single simple storage chip (the system used for the 2006 FIFA World CupTM finals in Germany);
- a wireless handheld reader with barcode technology;
- a manual printed system, over-the-counter sale of tickets, sequentially numbered, dated with seat assignment and with tear-off stub.

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FIFA World Cup™ space requirements

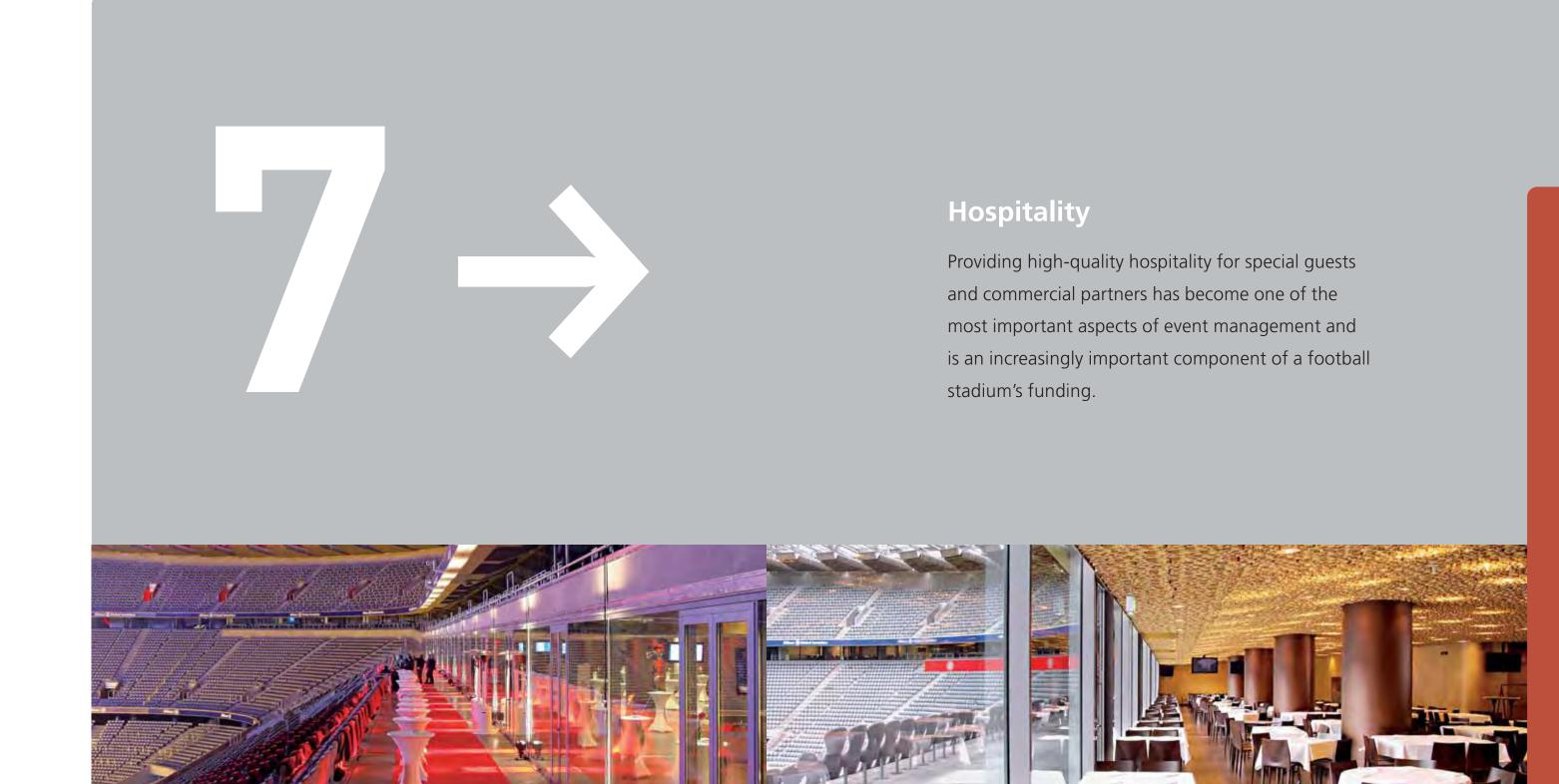
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Playing	g area															
1.13	Scoreboards/video screens	2					LOC				•	•			• •	•
Retail	shops															
8.01	Merchandise	TBD				3	Marketing	All public areas	Along all public circulation areas		•	•	•		• •	
8.02	Sponsor products	TBD				3	Marketing			1 point of sale per 250 spectators. 1–1.5m of counter space	•	•	•		• •	
Specta	tor areas															
19.01	Commercial display – partners	6	TBD	200	1,200	3	Marketing	Stadium perimeter	Between search area and turnstiles			•	•			
19.02	Commercial display – supporter	8	TBD	100	800	3	Marketing	Stadium perimeter				•	•			
19.03	Commercial display – supplier	6	TBD	50	300	3	Marketing	Stadium perimeter				•	•			
19.04	Commercial display – host city	1	TBD	100	100	3	Marketing	Stadium perimeter				•	•			
19.05	Commercial display – LOC	1	TBD	100	100	3	Marketing	Stadium perimeter				•	•			
19.06	ATM	min. 1				3	Marketing	Internal stadium perimeter	In larger stadium media centres (semi-final and final)	Depends on contract with service provider, ISDN line and normal power supply	•	•	•		• •	
19.07	Official licensed product – concessions A	6 - 10	TBD	6x3	18	3	Marketing	Internal stadium perimeter	Provide storage close to spectator areas	Size and quantity is dependent on the event hosted (opening and final matches)	•	•	•		• •	
19.08	Official licensed product – concessions B	6 - 10	TBD	10 x 5	50	3	Marketing	Internal stadium perimeter	Provide storage close to spectator areas	Size and quantity is dependent on the event hosted (i.e. opening and final matches)	•	•	•		• •	
19.09	Official licensed product – concessions C	6-10	TBD	10 x 15	150	3	Marketing	Internal stadium perimeter	Provide storage close to spectator areas	Size and quantity is dependent on the event hosted (i.e. opening and final matches)	•	•	•		• •	
Public	address systems															
22.01	Sound control room	1	3	20	20	4	LOC	VOC	Security area		•		•	•	• •	•
22.02	Security room	1	30	50	50	4	LOC	VOC	Emergency Services' area		•		•	•	• •	•
Scoreb	oards and video screens															
34.01	Scoreboards and video screens	TBD				n/a	LOC	Main and opposite stands	Must be seen from every seat in the stadium		•	•	•		• •	•

¹ Area ² Drawing reference number ³ FIFA room designation ⁴ Quantity of spaces required ⁵ Anticipated occupants ⁶ Area dimensions ⁷ Sum of area dimensions ⁸ FIFA accreditation zone (see key on page 236) ⁹ Space owner/planner ¹⁰ Placement within stadium ¹¹ Affinity to other rooms/activities

TBD = To be determined, negotiated between FIFA and the local organiser

¹² Type of structure required ¹³ The space is dedicated to one function or shared with another ¹⁴ Requires heating, ventilation and air conditioning

¹⁵ Requires telecom connectivity16 Requires internet connectivity17 Requires uninterrupted power supply



Hospitality

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Corporate hospitality facilities

To cater for VVIPs and VIPs, it is now common practice around the world to include banqueting suites capable of catering for hundreds, or even thousands of people, together with a mixture of viewing lodges, boxes and suites, each of which may hold 10 to 20 people. Guests in these areas can have refreshments and a meal before the event and then watch the proceedings from within their private entertainment area or, if preferred, from their adjacent restricted-access seating. Such facilities are normally purchased by commercial companies for the purpose of entertaining clients and are normally rented, leased or licensed on an annual or multi-year basis. Some may be sold for individual matches.

Many of the stadium's most prestigious or best-located VIP hospitality facilities are reserved or designated for the stadium's or home team's corporate sponsors. Many stadiums operate multi-tier systems of VIP or exclusive facilities. The top tier often includes private car parking, an exclusive entrance, five-star private dining and viewing facilities in centrally situated areas with a private bar, refrigerator, television and toilets. The basic concept is to provide the best possible hospitality and viewing experience in order that that the hosts may suitably entertain and impress their guests.

Other tiers include fewer benefits for a proportionate reduction in cost. These customers might not have a private entertainment area but could have access to a club or lounge area or have a reserved table in a private dining room. The number of such facilities - and their level of opulence - varies greatly from stadium to stadium and from country to country. Much will depend upon local economic conditions and the demand for these facilities has to be researched carefully before investing in them.

The pre-sale of private hospitality areas and reserved seats can be an important component in a stadium's funding. The contractual agreements between the stadium and the user of such exclusive hospitality facilities (e.g. suites, lodges, boxes, club seats, etc.) should ensure that if the stadium is used by a third-party organisation for a major international sports event such as the FIFA World CupTM, these exclusive areas are available to the third-party organisation without any obligation to its normal user.

A stadium that includes areas such as function suites for weddings, dances and dinners, meeting rooms for smaller groups and a public restaurant, should earn income on a regular basis additional to the income from the facility's core purpose of staging football matches.

Many stadiums operate multi-tier systems of VIP or exclusive facilities

The level of opulence of VIP facilities will vary greatly from country to country



Hospitality requirements: guiding principles

A major component of FIFA's space requirements is the accommodation of the hospitality facilities required to support the hosting of guests of the partners, sponsors and suppliers of FIFA as well as the FIFA family. These space requirements will form part of any football stadium design but the specific requirements will peak during the hosting of the FIFA World CupTM.

The space demands placed on stadiums during a major event like the FIFA World CupTM are far greater than the demands a stadium is ever likely to face in its normal event business. For this reason, FIFA recommends that the majority of its FIFA World CupTM space requirements are provided for in temporary facilities within the perimeter of the stadium, or in areas under the tribunes that are not used during the hosting of the World Cup, for those areas not requiring a view of the field of play.

To understand the complete space requirements for the provision of hospitality facilities, it would be prudent to use the FIFA World CupTM as the basis of establishing the norms. A stadium that is newly constructed will then be planned in a proper manner to satisfy the space requirements in the event of the venue being used to host a major international football match or tournament.

For other pre-construction decisions, see Chapter 1



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$7.3 \rightarrow \text{FIFA programme requirements}$

It is likely that FIFA will operate a three-tier programme, consisting of (i) a commercial hospitality programme, which will be sold to corporations and members of the public in a way that will not grant the hospitality clients any right to associate themselves or their products with the event; (ii) a hospitality programme in which benefits may be sold at cost to FIFA Partners, FIFA World Cup Sponsors, National Supporters and Broadcast Partners; and (iii) a VIP hospitality programme, catering for officials and members of the FIFA delegation and the LOC.

The precise details and structure of FIFA's hospitality programme will be developed in partnership with the LOC, but, in order to secure the hospitality rights, each stadium must satisfy a number of requirements. Each stadium owner and/or the LOC must:

- deliver the stadium entirely free of any prior rights of existing rights holders, such
 as the rights of stadium owners, the local football club, shareholders or debenture
 holders, commercial agents, sponsors, catering companies and customary hospitality
 clients/box holders;
- provide, free of charge to FIFA, access and usage rights in respect of all potential hospitality facilities, including restaurants, skyboxes, lounges and catering facilities;
- provide FIFA with sufficient space within the stadium premises for parking, delivery
 of materials, guest drop-off, temporary infrastructure (including infrastructure
 assembly), ground preparation and post-event clean-up services, fencing, storage
 facilities, security and access control;
- provide access at each hospitality facility within the stadium to primary networks for water, electricity and communications (including telephone, broadband internet and television);
- provide a reception room and dedicated catering services in the Tribune of Honour for FIFA and LOC VIPs.

The marketing affiliates of the FIFA World CupTM are granted certain hospitality rights. While the hospitality rights conferred on the marketing affiliates are subject to modifications and to final contract negotiations, the LOC should ensure that, in order for FIFA to comply with its contractual obligations to its marketing affiliates, the following hospitality inventory is provided at each stadium:

Skyboxes

Skyboxes are a key component of the FIFA marketing affiliates' hospitality rights. The LOC must ensure through the stadium agreements that FIFA has the unfettered right to select the skyboxes it requires to fulfil its contractual obligations. In addition, the LOC must ensure that none of the existing skyboxes can be used for other purposes without FIFA approval.

Business seats

Business seats are generally defined as being more comfortable/spacious seats (usually cushioned armchairs) allocated in the best position in main and/or facing stands. All such business seats must be allocated to the hospitality project for the purposes of the Tribune of Honour and/or for the general hospitality programme.

Hospitality seats

Hospitality seats are those stadium seats allocated for the commercial hospitality programme or the commercial affiliate hospitality programme and which are in the sector designated by FIFA as containing the best first-category seats (after the Tribune of Honour seats used for dignitaries) for each match.

Commercial hospitality packages will include: a match ticket and the right to sit in a hospitality seat to view the match; catering services; entertainment; the use of hospitality infrastructure (such as cloakrooms, welcome desks, lounges, reception areas and dining areas); parking and transportation services; match programmes, commemorative gifts; and other related services and/or products such as accommodation, transport or tourism. The exact nature of the services provided as part of the commercial hospitality package and the location of the delivery will depend upon the location and nature of the stadiums.

In order to have access to the best commercially available seating locations, each commercial affiliate will receive a certain number of complimentary hospitality seats for each of the matches.

Hospitality village

The FIFA World CupTM marketing affiliates hospitality programme aims to provide marketing affiliates with the opportunity to offer their guests personalised treatment of the highest quality during the event in an atmosphere emphasising sophistication and a passion for football. The hospitality village enables these groups to complete their own integrated marketing and hospitality programmes.

At each venue, a hospitality village for marketing affiliates will be created as an exclusive and secure area in which marketing affiliates, using tickets from their own allocation, can conduct on-site hospitality activities tailored to their needs while maintaining an excellent service at a reasonable cost. The hospitality village will offer FIFA Partners, FIFA World Cup Sponsors, National Supporters and Broadcast Partners a choice between their own private units and common hospitality in the official club. The hospitality village will be located either within the stadium, inside existing facilities, or outside the stadium premises in marquee tent structures.



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Hospitality

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$7.4 \rightarrow VVIP$ areas and VIP areas

VVIP area

Position

Next to the VIP area.

Access

The VVIP access route should be designated high security and protected from any public interference. Security vehicles should accompany the vehicles of the VIPs and should be driven under the main stand, directly to the vertical circulation drop-off area.

Seats

Seats should be numbered and separated from the VIP seats by means of a movable barrier. The seating area should be constantly staffed by security personnel.

Capacity

The total number of seats should be determined by the stadium's owner. If provided, it should include a reception area and lounge area.

Reception area

A dining room large enough for 25 diners should be provided.

TV sets should be provided

Lounge area

A private lounge of approximately $20m^2$ should be provided for use by the FIFA President to have private meetings at major international matches and the FIFA World Cup^{TM} .

Toilets

For the VVIP area, toilets should be separate from those of the VIP area.

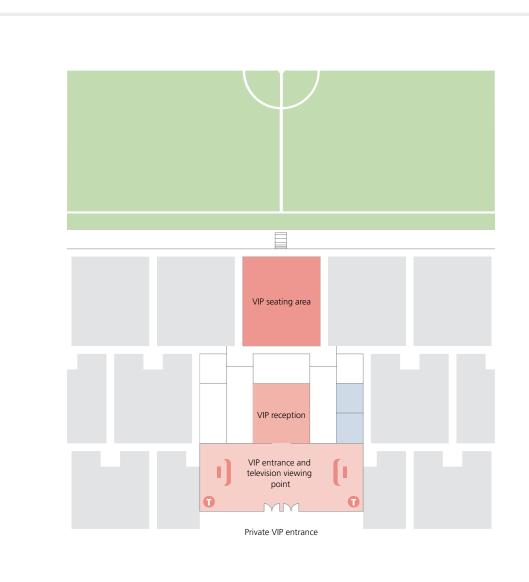


Diagram 7a: VIP seating area

- Telephone
- Toilet
- □ Spectators' area



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VIP area

Position

In the centre of the grandstand in which the players' dressing rooms are situated, in an elevated position above the playing area, partitioned off from the public seating areas. The VIP tribune should always be located in the main stand and be accessible to the dressing rooms, media facilities and administrative offices.

Access

The VIP area should have its own private entrance from outside, separate from the public entrance points, leading directly to the reception area and from there directly to the viewing area. There should be an escalator between floors which should be connected to both normal and emergency power. There should be alternative controlled access across accredited zones. People who need to go to the dressing room area (e.g. delegates, observers, etc.) must have direct and secured access from the VIP box to the dressing rooms.

Seats

Seats should be individually numbered and of good quality. They should be well upholstered, with armrests, be covered by a roof and should provide a perfect, unrestricted view of the playing area. Adequate legroom between the rows is essential to enable the occupants to enter or leave without disturbing other seated guests.

Capacity

The requirements will differ from competition to competition but a modern stadium should provide VIP area seating for at least 300 people, with the possibility of increasing this number considerably for major events.

Reception area

The reception area should be capable of providing standing refreshments for all occupants of the VIP seating area and be situated immediately behind it. It should have:

- direct private access from the VIP area;
- sufficient toilet facilities (male and female);
- television viewing points;
- telephones (external/internal);
- lounge facilities, depending upon space available.

A modern stadium should provide VIP area seating for at least 300 people.

FIFA VIP lounge

The FIFA VIP lounge should ideally be at the back of the VIP tribune. The number of seats required will depend on the scale of the event, which will be calculated by the organisers and event management. With an event like the FIFA World CupTM, there are different seating demands depending on the stage of the competition for which the venue is to be used. The flexibility of operable walls for partitioning is desirable.

$7.5 \rightarrow Commercial hospitality rights$

The FIFA World CupTM commercial hospitality programme will be granted to a special category of ticketholder who would benefit from exclusive services of the highest quality (e.g. welcome, catering, gifts and entertainment). Depending on the facilities available at or near a stadium, this hospitality programme will be conducted either inside the stadium, in specific rooms or spaces, or outside under temporary structures.

The overall space requirements must be able to accommodate all of the facilities, and the catering, technical, entertainment and public areas located within the LOC-controlled site of a stadium. The areas should be within 150 metres of the stadium seating area, with access to bulk infrastructure services (water, electricity, gas, etc.) and parking.

Existing structures either inside the stadium, such as reception rooms and restaurants, or adjacent to the stadium, such as sports centres and conference halls, could be used to minimise on-site construction and related costs. Existing storage areas and kitchens are also requested. All skyboxes and their support areas (such as kitchen and storage areas) are part of the hospitality space requirements.



Hospitality ———

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$7.6 \rightarrow Special conditions$

The proposed locations for temporary hospitality structures must satisfy the following requirements:

Feasibility

Temporary constructions must be erected if applicable permits and authorisation can be obtained.

Availability

All areas should be available to the LOC and its nominees (including FIFA), and should not be used by any other party leading up to, or during, the event.

Security

Hospitality areas will be inside the deemed security perimeter of the stadium. In addition to specific hospitality area security, the contracted stadium security will be responsible for safeguarding guests and property. Covered fences must be erected by the LOC around these areas.

For more information on safety and security, see Chapter 2.

Access

Access to the hospitality areas must be free for the organisers and vendors and must not be subject to other requests for authorisation or access fees. Sufficient parking space for service personnel must also be available, which should be as close as possible during the build-out and during the event.

Location

In order to avoid the additional costs of shuttle services, hospitality areas should be no further than 300 metres from the stadium.

Surface areas

I FIFA VIP lounge

If used for the FIFA World CupTM, the FIFA VIP lounge must be big enough to accommodate 500 guests per match at each venue and 2,000 at the venues of the opening and final matches. The minimum space requirement is 1m^2 per guest (including the kitchen area).

II Commercial affiliate hospitality village

Total surface:

5 to 5.6m² per guest

Per venue, for venue where:

The opening ceremony will take place	20,000m ²
The final will take place	35,000m ²
The biggest match will be a semi-final	20,000m ²
The biggest match will be a quarter-final	$10,000 m^2$
The biggest match will be a round of 16 match	$8,000 m^2$
The biggest match will be a group match/home team	15,000m ²
The biggest match will be a group match	$8,000m^2$

III Commercial hospitality village

Total surface:

4.6m² per guest

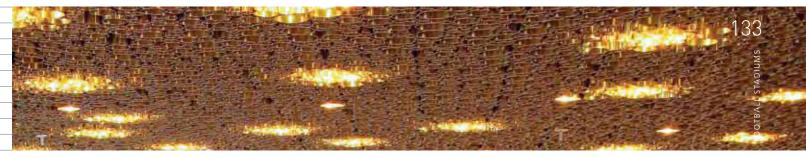
Per venue, for venue where:

The opening ceremony will take place	27,000m ²
The final will take place	50,000m ²
The biggest match will be a semi-final	$20,000m^2$
The biggest match will be a quarter-final	10,000m ²
The biggest match will be a round of 16 match	9,000m ²
The biggest match will be a group match/home team	$20,000m^2$
The biggest match will be a group match	5,000m ²

These figures will have to be reviewed in accordance with the hospitality concept, which is developed on the basis of the facilities of the venues selected.

Hospitality

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Power supply

All hospitality areas need power for lighting, kitchens and storage areas, air conditioning, service/cleaning equipment, TV/audio/multimedia systems and entertainment. This power can be supplied either by an existing network or by generators. There must be at least one main supply source per area. This and the distribution network must be customised per venue. Precise power requirements will be developed once the hospitality areas are identified and their location fixed.

Water and drainage

Water and appropriate drainage is needed in all hospitality areas, mainly for the kitchens and for the toilets.

Telecommunications

All hospitality areas will require access to telecom land lines in order to operate telephone, fax and internet services.

Facilities' ground space preparation

In the venues where the hospitality programmes use temporary structures, the site itself, as well as the access areas used by the guests, will need to be prepared (levelling, drainage and protection) before beginning construction.

Toilets

All temporary hospitality structures should be equipped with toilets. The toilets must be of a high standard and equipped with an easy-to-clean system. They should be installed close to each welcome area for the prestige area and in easy-to-access, central areas for the hospitality village. The installation must take into account the fact that trucks need to have close access in order to carry out cleaning. There should be one toilet for every 100 people. A cleaning contract must be signed with the toilet supplier.

Lighting

Lighting has to be installed everywhere, externally and internally, as all hospitality areas are covered. The ratio to be used is 80-150W per 10m². This will have to be adjusted to fit the different internal configurations.

TV/audio system

All hospitality areas should be equipped with audio and video equipment and networks. The number of television sets required is: 1 in each private area; 1 per 50 guests in the commercial affiliate hospitality village areas; 1 per 100 guests in the prestige areas; 1 per skybox.

For more information on power supply, see Chapter 9.



Temporary structures

High-quality structures, such as those usually found at major international events throughout the world, must be used.

Plans

The selected supplier will establish the plans in response to the needs formulated by FIFA.

Building permits

The LOC will be in charge of obtaining all permits required for the installing and operating of temporary structures.

Air conditioning/Heating

Air conditioning or heating will be required in all hospitality areas. The requested power is 0.2kW.

Hospita	ality	
7	\rightarrow	

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FIFA World Cup™ space requirements

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	ality areas – stadium		/		/		/	_/								//
9.01	Skyboxes/Hospitality suites	12-20	15 - 25	TBD	TBD	9	Hospitality			Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•		•	•		
9.02	VIP lounge – opening match and final	1	1,130	1,130 x 1	1,130	5	Hospitality	Main stand	Behind the VIP seats with unobstructed view of pitch	Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•	•	•	•	•
9.03	VIP lounge – semi-finals	1	1,130	1,130 x 1	1,130	5	Hospitality	Main stand	Behind the VIP seats with unobstructed view of pitch	Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•	•	•	•	•
9.04	VIP lounge – quarter-finals	1	630	630 x 1	630	5	Hospitality	Main stand	Behind the VIP seats with unobstructed view of pitch	Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•	•	•	•	•
9.05	VIP lounge – group matches	1	550	550 x 1	550	5	Hospitality	Main stand	Behind the VIP seats with unobstructed view of pitch	Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•	•	•	•	•
9.06	VVIP lounge – opening match and final	1	70	70 x 1.8	126	5	Hospitality	Main stand	Adjacent to VIP and merchandise	Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•	•	•	•	•
9.07	VVIP lounge – semi-finals	1	70	70 x 1.8	126	5	Hospitality	Main stand		Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•	•	•	•	•
9.08	VVIP lounge – quarter-finals	1	70	70 x 1.8	126	5	Hospitality	Main stand		Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•	•	•	•	•
9.09	VVIP lounge – group matches	1	50	50 x 1.8	90	5	Hospitality	Main stand		Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•	•	•	•	•
9.10	FIFA President's lounge	1	6	6x2.5	15	5	Hospitality	Main stand	Next to VVIP lounge unobstructed view of the field	Provide high-quality sofas and armchairs	•	•	•	•	•	•
9.11	LOC President's lounge	1	6	6x2.5	15	5	Hospitality	Main stand	Next to FIFA President's lounge	Provide high-quality sofas and armchairs	•	•	•	•	•	•
9.12	Security personnel/Drivers Opening match and final – 50 drivers	1	50	50 x 1	50	5	Hospitality		As close as possibe to VIP areas			•	•	•	•	•
9.13	VIP flash interview	2	4	12	24	9	Protocol/PR	Main stand	Next to VIP lounge/seat			•	•	•	•	•
9.14	VIP medical room	1		according to capacity		5	Hospitality					•	•	•	•	•

¹ Area ² Drawing reference number ³ FIFA room designation ⁴ Quantity of spaces required ⁵ Anticipated occupants ⁶ Area dimensions ⁷ Sum of area dimensions ⁸ FIFA accreditation zone (see key on page 236) ⁹ Space owner/planner ¹⁰ Placement within stadium ¹¹ Affinity to other rooms/activities

¹² Type of structure required ¹³ The space is dedicated to one function or shared with another ¹⁴ Requires heating, ventilation and air conditioning

¹⁵ Requires telecom connectivity
16 Requires internet connectivity
17 Requires uninterrupted power supply

7.1	Corporate hospitality facilities	122	
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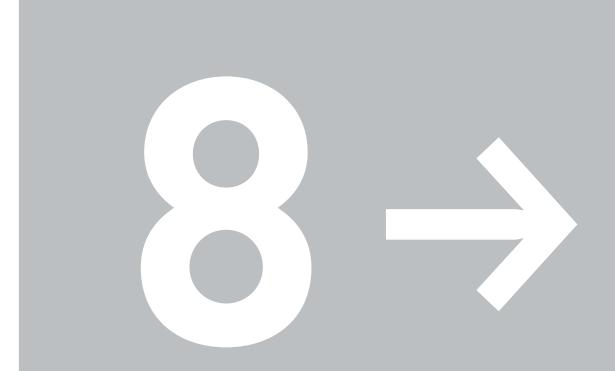
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9 Hospit 9.15	tality areas – stadium VIP kitchen	1		according to capacity		5	Hospitality				• •		•	•	•
9.16	Commercial hospitality kitchen	1	TBD	according to capacity		9	Hospitality	Adjacent to VIP lounges			• • •		•	•	•
9.17	VIP reception desk – opening match and final	1	10	40	40	5	Hospitality			Used by FIFA and LOC protocol	• • •		•	•	•
9.18	VIP reception desk – semi-finals	1	10	30	30	5	Hospitality				• •	•	•	•	•
9.19	VIP reception desk – group and round of 16 matches	1	10	20	20	5	Hospitality				• •	•	•	•	•
10 Hospit	tality areas – within stadium p	perimet	er												
10.01	Commercial affiliate village – final	1	5,000 to 7,000	5 to 5.6m² per occupancy	35,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium		•	•	•	•	•
10.02	Commercial affiliate – semi-finals	1	3,500 to 4,000	5 to 5.6m² per occupancy	20,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium		•	•	•	•	• •
10.03	Commercial affiliate – quarter-finals	1	1,800 to 2,000	5 to 5.6m² per occupancy	10,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium		•	•	•	•	• •
10.04	Commercial affiliate – group matches and round of 16	1	1,400 to 1,600	5 to 5.6m² per occupancy	8,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium		•	•	•	•	•
10.05	Commercial hospitality – final	1	10,000	4.6m² per occupancy	50,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium		•	•	•	•	• •
10.06	Commercial hospitality – semi-finals	1	4,300	4.6m² per occupancy	20,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium		•	•	•	•	• •
10.07	Commercial hospitality – quarter-finals	1	2,200	4.6m² per occupancy	10,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium		•	•	•	•	• •
10.08	Commercial hospitality – round of 16	1	1,900	4.6m² per occupancy	9,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium		•	•	•	•	• •
10.09	Commercial hospitality – group matches	1	1,100	4.6m² per occupancy	5,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium		•	•	•	•	• •

¹ Area ² Drawing reference number ³ FIFA room designation ⁴ Quantity of spaces required ⁵ Anticipated occupants ⁶ Area dimensions ⁷ Sum of area dimensions ⁸ FIFA accreditation zone (see key on page 236) ⁹ Space owner/planner ¹⁰ Placement within stadium ¹¹ Affinity to other rooms/activities

TBD = To be determined, negotiated between FIFA and the local organiser

¹² Type of structure required ¹³ The space is dedicated to one function or shared with another ¹⁴ Requires heating, ventilation and air conditioning

¹⁵ Requires telecom connectivity16 Requires internet connectivity17 Requires uninterrupted power supply



Media

Stadiums should be designed to allow for state-of-the-art facilities to bring the highest-quality media coverage of football into the homes of millions of people around the world.





3.1	Press box and commentary positions	140
3.2	Television studios	143
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Press box and commentary positions

The press box

The press box must be in a central position in the main grandstand where the players' dressing rooms and the media facilities are situated. It should be centrally located on the halfway line, in a position that provides an unobstructed view of the field of play, without the possibility of interference from spectators. Ideally, the press box should not extend beyond the 16m line towards the goals. All working places in the press box should be covered. Media representatives should be allocated places with an excellent view of the entire playing area.

There should be easy access to and from other media areas such as the media centre, the mixed zone and the press conference room. The permanent press seats should be equipped with desks large enough to accommodate a laptop computer and a notebook. There should be a power supply and phone/modem connections at each desk.

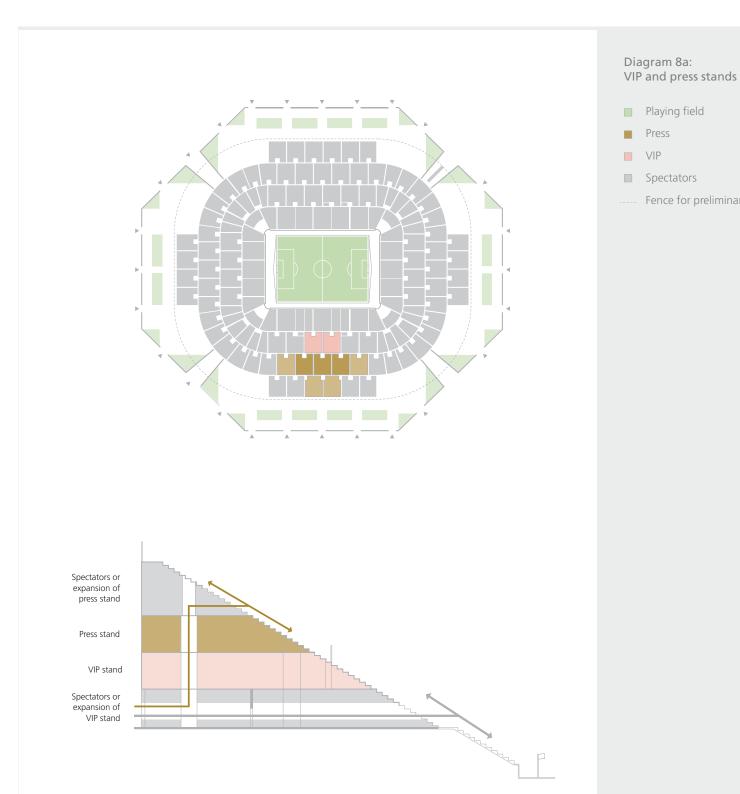
In those stadiums which will host major football matches and other major events, the press box should be designed in such a way that its capacity can be significantly increased on such occasions. If the demand is great, normal spectator seats will have to be changed into seats for the press and television reporters. A line of desktops may have to be built over a row of seats; thus every second row is used for seating. Seating for the media should be located near the main media working area. Matches generating great media interest require multiple telephone installations and outlets as well as high-speed internet connectivity.

It is not essential for all additional seats to be provided with desks. As a guideline, at least half of the positions should be provided with desks.

Television monitors are an essential means of assistance and some should be installed. One monitor per eight seats is a minimum. One monitor per four seats is adequate. Sufficient power connections should be provided for this and other purposes.

The possibility of installing the latest digital technology lines (such as a high-quality three-in-one line for fax, phone and computer) should be included in the construction plans for new stadiums. Designers should continue to update themselves on wireless communications prior to hard-wiring a stadium.

For more on pre-constructions decisions, see Chapter 1.



Media

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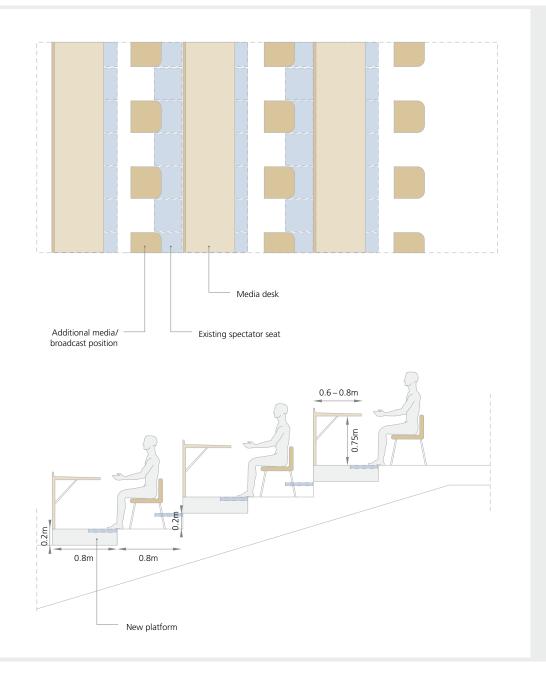


Diagram 8b: Media desk positions/ Broadcast commentary positions

Television and radio commentary positions

At least five television commentary positions and five radio commentary positions should be provided on a permanent basis. The commentary positions should be in a central position in the main grandstand on the same side as the main camera positions — under cover rather than indoors. They should include a flat surface for writing and should be well lit. A television monitor for each position should be built into the desk in a slanting position so as not to obscure the view of the pitch for the commentary team.

A stadium should have at least five television commentary positions and five radio commentary positions.

Commentary positions should be separated from spectators by PlexiglasTM or other suitable means for the purpose of acoustic separation. A telephone plug must be installed in each commentary position. Two power plugs should be provided at each position.

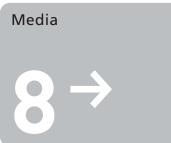
Requirements will increase dramatically for major matches. For example, at a major international club competition final, provision should be made for the installation of 50–90 commentary positions. In order to create one commentary position, as many as six seats may need to be sacrificed, depending on the design. Each position will be occupied by a minimum of three people. The media working room and press conference room should be within easy access.

Allowance should be made for the fact that media facilities vary greatly according to the type of event. A few dozen desks for a national championship match will suffice, depending on the club and the media coverage available in the region, but the working space requirements will multiply in the case of international matches. The working area for the media representatives should be under cover and located on the main stand.

$8.2 \rightarrow \text{Television studios}$

Provision should be made for at least three television studios for major matches, each of approximately 25m² and a minimum height of 4m, to allow for television sets and lighting. They should be located in such a way that players and coaches can reach them easily from the dressing rooms at the end of the match. In addition, one television studio should afford a panoramic view over the pitch. For major international events, up to four such studios may be required.

For major international matches, four separate television studios may be required in the stadium.



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$8.3 \rightarrow Stadium media centre$

The capacity of the stadium media centre should be based on the capacity of the media tribune. For example, for a match with 600 tribune press places, there should be space for around 200 in the stadium media centre. Of the 600, around 150 would typically stay and work in the tribune, around 150 would go to the mixed zone and around 100 would leave to go home or to their own editing office. This would leave 200 to work in the stadium media centre. For a stadium with a media tribune of 200, around 80 places would be needed in the stadium media centre. Toilet facilities should be provided for both sexes.

The working room should be divided into two areas: an area where buffet-style catering can be provided, and a working area with desks, power and phone/modem facilities. It might also be advisable to provide an organisational office (for travel, transport, banking, etc.) at major events.

The following spaces should be accommodated in the stadium media centre:

- welcome desk;
- rate card desk;
- press conference area;
- camera repair service;
- copy and fax service;
- cafeteria;
- pigeon holes;
- host city information desk;
- press working areas;
- photographers' working areas;
- lockers;
- two ticket desks (one for photographers, one for print journalists).

There should be sufficient space for ticket distribution, with adequate queuing space. Queues should not obstruct the entrance.

As a source of standard information, touch-screen PCs should become customary features in the future.

$8.4 \rightarrow \text{Press conference room}$

The press conference room should have a minimum area of 100m². It should provide approximately 100 seats for reporters and be equipped with an appropriate sound system. It may also be used on occasions when there is no match.

At one end of the room, preferably at the end nearer to the access door from the dressing rooms, a platform should be erected to accommodate coaches, players, press officers and interpreters as required. A backdrop which can be easily adapted with various designs should be installed.

At the other end of the room, facing the platform, a podium should be erected, allowing at least ten television electronic news-gathering (ENG) crews to set up their cameras and tripods. A centralised split box should be installed to avoid having a huge number of microphones in front of coaches and players. A first-class sound system, with centralised sound removal for television and radio, should be installed.

The press conference room should be easily accessible from the dressing room area and should be constructed like a small theatre, with each row of seats slightly elevated above the one in front. For major matches, three booths should be provided for simultaneous interpretation.

$8.5 \rightarrow \text{Mixed zone}$ and flash interview positions

Mixed zone

In a new stadium, a mixed zone should be provided. This is a large, clear space between the players' dressing rooms and the private exit door through which the players must pass when leaving the stadium to their team buses. The purpose of the mixed zone is to permit representatives of the media to talk to and interview the players as they pass through. It is essential to have separate access for the media and the players.

There should be room for approximately 250 media personnel (including cameramen and technicians) and the area must be inaccessible to the public. The area should either be permanently under cover or there should be facilities for covering this area at major matches. For major matches, the mixed zone should be separated from the media area.

The space required will vary according to the importance of the match but it should be at least 200m². For good working conditions a journalist should have 2.5m² of space. The area could be used for other purposes on non-matchdays.

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Flash interview positions

At the top level in football, broadcasters are becoming increasingly demanding and require increasingly modern installations. One of these requirements is for the provision of flash interview positions which are used to transmit live interviews immediately after the match or interviews with coaches at the beginning or the end of the half-time interval. Such positions must be located between the dressing room area and the playing field. The most appropriate location would be one, preferably two, areas incorporated into the access tunnel leading to the playing field.

Broadcasters are increasingly asking for flash interview positions where players and coaches can be interviewed immediately after the match

$8.6 \rightarrow$ Facilities for photographers

The first requirement is suitable parking and drop-off facilities for equipment. Photographers should be offered a pitch-level (or easy-access alternative) reception room, where they can report for accreditation and collect the bibs or other devices which will give them access to the playing area. Large individual lockers must be set up where photographers can leave their material. Sufficient power and modem connections must be provided on desks to meet the demands of modern transmission technology. There should also be facilities for refreshments (before the match and at half-time) to prevent photographers having to use the media working room, as this is often located on an upper level. Toilet facilities for both sexes should be provided.

Technological advances may require the provision of power and modem connections behind the photographers' positions on the pitch. The use of computers will also require the provision of some sort of transparent cover to protect electrical equipment. This means that extra space, approximately 1.5m, will be required behind the photographers' positions.

For more on orientation and parking, see Chapter 3.

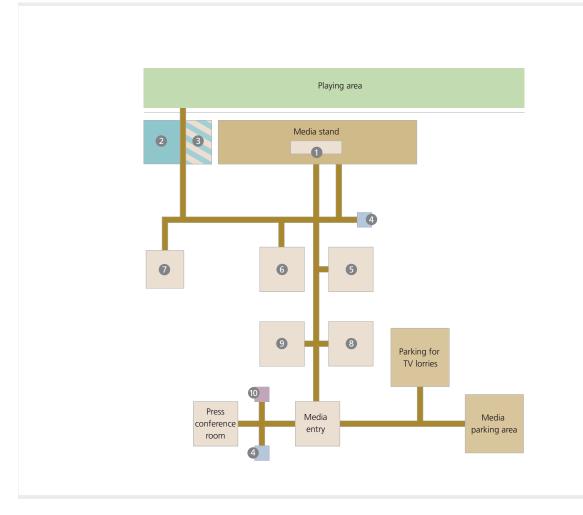


Diagram 8c: Media areas

- 1 TV/radio commentators' cabins
- 2 Team's dressing room
- Mixed zone
- 4 WC
- 6 Media working area
- 6 TV control centre
- Photographers' working area
- 8 Telephone operators
- Telecommunication facilities (telephones, fax, internet)
- 10 Bar



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$8.7 \rightarrow \text{Media requirements for FIFA World Cup}^{\text{TM}}$

The capacity of facilities for the media must be adapted according to the level of the match and to the number of media representatives anticipated. A comprehensive schedule of accommodation, detailing the media space requirements for the FIFA World CupTM, appears in the FIFA World CupTM Space Requirements document.

$8.8 \rightarrow$ Television infrastructure

The following requirements reflect current standards in stadiums for the FIFA World CupTM. However, exact capacities and quantities will be determined in each case by the organising authorities, the media services and the broadcasting organisations. In television in particular, flexibility is required in order to accommodate newly developing technologies to maximise coverage.

Lighting requirements change according to technical developments, such as the introduction of high-definition television (HDTV). For a new stadium, it is advisable to consult a leading television company or the appropriate continental television consortium.

Depending on the importance of the game, many installations (such as seats for radio and television commentators) may be temporary. They will be erected for a short time and then be dismantled. It is essential to provide easy access to and from these areas and an adequate electricity supply.

Multilateral coverage

All camera positions are subject to a joint agreement between the organisers and broadcasters. Attention must be paid to avoiding cameras being impeded by the public. Main cameras in the central stand must be situated at the halfway line, at the point of intersection between the line and the nearest touch line. The exact position of the multilateral cameras will be determined by the host broadcaster on inspection of the stadium.

For more on lighting, see Chapter 9.

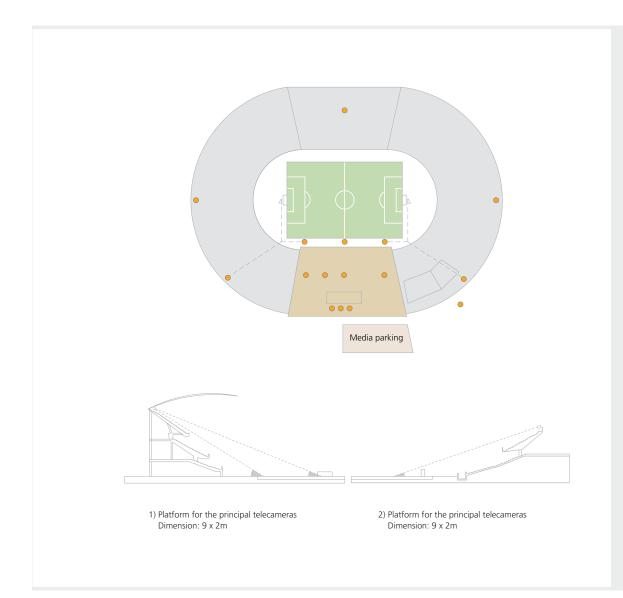


Diagram 8d: Media – possible TV camera positions

Camera position

Media

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.4	Press conference room	145	
.5	Mixed zone and flash interview positions	145	
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These cameras must face away from the sun, giving an unhindered view of the whole playing surface. The commentators' positions have to be situated on the same side of the ground. A space of approximately 2m x 3m should be allowed for each camera.

One goal camera should be situated behind each goal, on the longitudinal axis of the pitch, at a height which permits the penalty mark to be seen above the crossbar of the goal. The angle of the line of sight to the horizontal should be between 12° and 15° and a space of $2m \times 3m$ is required for each camera.

Depending on the importance of the match, between three and six portable atmosphere cameras may be used, allowing movement along the touch line and in the area behind the goals. This needs approval from the football governing body concerned.

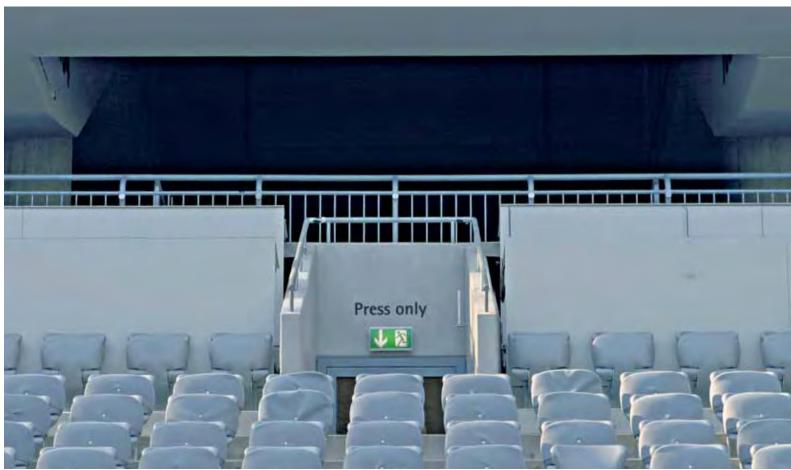
Given the developments in the television coverage of football, additional cameras and camera positions may include reverse-angle cameras, cameras level with the edge of the penalty areas, six-metre cameras and rail cameras.

Unilateral coverage

At each unilateral camera position in the main stands and behind the goals, a feed of the international sound should be available. Space of approximately 2m x 3m per camera should be provided alongside the multilateral cameras. There should be clearly defined and separate sectors behind the advertising boards behind each goal, measuring approximately 2m x 2m per camera. In both cases, the exact number of positions should be determined by the organisers and broadcasters.

Further positions may be located beside or behind the commentary area, as determined by the organisers and broadcasters. Observer seats without desks for broadcaster personnel should also be located in this sector.

Where possible, space should be provided at specified places near the players' entrance to the field. The allocation and use of this space, especially for interviews and presentations, will be subject to regulations.



$8.9 \rightarrow \text{Accreditation office}$

Provision should be made for accreditation procedures. This can be a relatively small area or even a desk, provided that it would not constitute an obstruction if queues were to form.

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FIFA World Cup™ space requirements

8.1 Press box and commentary positions

8.5 Mixed zone and flash interview positions

8.7 Media requirements for FIFA World Cup™

8.2 Television studios 8.3 Stadium media centre

8.4 Press conference room

8.6 Facilities for photographers

8.8 Television infrastructure

8.9 Accreditation office

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Playing	g area																
1.07	Photographers' positions	4	150 - 250			1	Media	Goal side and opposite touch line	Behind the goal line at the corner flags and extending up to halfway line on touch line on opposite side to main stand	Include media chairs behind goals		•	•		•	•	•
	interview areas																
11.01	Multilateral flash interview 1-2	2	4	6	12	1/2	Marketing/TV	Players' tunnel	In players' tunnel or direct access off tunnel			•	•		•	•	•
11.02	Unilateral flash interview 6	6	4	6	36	1/2	Marketing/TV	Players' tunnel	In players' tunnel or direct access off tunnel			•	•		•	•	•
11.03	Presentation studio – opening match and final	8	10	40	320	8	Marketing/TV	Provided via a hospitality suite or temporary construction within stands	View of the pitch	Min 4m height	•	•	•	•	•	•	•
11.04	Presentation studio – round of 16, quarter-finals and semi-finals	6	10	40	240	8	Marketing/TV	Provided via a hospitality suite or temporary construction within stands	View of the pitch	Min 4m height	•	•	•	•	•	•	•
11.05	Presentation studio – group match venues only	4	10	40	160	8	Marketing/TV	Provided via a hospitality suite or temporary construction within stands	View of the pitch	Min 4m height	•	•	•	•	•	•	•
11.06	TV studio – FIFA interview studio	4	8	40	160	8	Marketing/TV	Provided via a hospitality suite or temporary construction within stands	Behind tribunes close to the players' dressing rooms		•		•	•	•	•	•
11.07	Mixed zone – semi-finals and final	1	300	600	600	6	Media	Players' exit	Located near exit to team coaches			•	•	•	•	•	•
11.08	Mixed zone – other	1	250	600	600	6	Media	Players' exit	Located near exit to team coaches			•	•	•	•	•	•
Press c	onference room																
12.01	Head table	1	6	20	20	7	Media	Main stand	Close to dressing rooms and mixed zone			•	•	•	•	•	•
12.02	Press seats – extend for the final	1	200	70	70	7	Media	Main stand				•	•	•	•	•	•
12.03	Interpretation booths – final	4	2	4	16	7	Media	Main stand		FIFA official languages are English, French, German and Spanish		•	•	•	•	•	•

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¹⁶ Requires internet connectivity

¹⁷ Requires uninterrupted power supply

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8.2	Television studios	143	
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2 Press co	onference room																	
12.04	Interpretation booths – other	3	2	4	12	7	Media	Main stand		Provide interperter services for the two teams (in addition to the above languages)		•		•	•	•	•	•
12.05	Camera platform – opening match, semi-finals and final	20	1	2 x 20m	40	7	Media	Main stand				•		•	•	•	•	•
12.06	Camera platform – group matches	10-15	1	2 x 10 - 15m	20 - 30	7	Media	Main stand				•		•	•	•	•	•
3 Media	areas – tribune	<u>'</u>																
13.01	Desk positions	TBD			TBD	6	Media	Main stand	Above the VIP area, close to mixed zone and press conference	Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•		•	•	•
13.02	Observer seats	TBD			TBD	6	Media	Main stand		Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•				
13.03	Tribune photographers	TBD			TBD	7	Media	Main stand		Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•				
13.04	Refreshment area	TBD			TBD	6	Media	Main stand		Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•				
13.05	Commentary positions	TBD			TBD	6	Marketing/TV	Main stand		Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•		•	•	•
13.06	Cableways	TBD			TBD	6	Marketing/TV	Main stand		Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•				
4 Stadiu	m media centre (SMC)																	
14.01	Stadium media centre – final	1	2,000	10,000	10,000	7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	•	•
14.02	Stadium media centre – group matches	1	800	4,000	4,000	7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	•	•
14.03	Rate card service desk – final	1	8	incl. 14.01		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	•	•
14.04	Rate card service desk – group matches	1	4	incl. 14.02		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	•	•
14.05	Camera repair service	1		incl. 14.01 + 14.02		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	•	•

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	m media centre (SMC)	/	/	/	/	/	/			/							
14.06	Press conference room – daily media briefing	1		incl. 14.01		7	Media	SMC	Access from the media tribune and the	he field	•	•	•	•	•	•	•
14.07	Information desk	1		incl. 14.01 + 14.02		7	Media	SMC	Access from the media tribune and the	he field	•	•	•	•	•	•	•
14.08	Cafeteria and lounge	1		incl. 14.01 + 14.02		7	Media	SMC	Access from the media tribune and the	he field	•	•	•	•	•	•	•
14.09	Pigeon holes	1		incl. 14.01 + 14.02		7	Media	SMC	Access from the media tribune and the	he field	•	•	•	•	•	•	•
14.10	Welcome desk	1		incl. 14.01 + 14.02		7	Media	SMC	Access from the media tribune and the	he field	•	•	•	•	•	•	•
14.11	Ticket issue desk	1	2	incl. 14.01 + 14.02		7	МАТСН	SMC	Access from the media tribune and the	he field	•	•	•	•	•	•	•
14.12	Host city information desk	1		incl. 14.01		7	Media	SMC	Access from the media tribune and t	he field	•	•	•	•	•	•	•
14.13	Medical room	1		incl. 14.01 + 14.02		7	Media	SMC	Access from the media tribune and the	he field	•	•	•	•	•	•	•
14.14	SMC media work desks – final	1	1.000	incl. 14.01		7	Media	SMC	Access from the media tribune and t	he field	•	•	•	•	•	•	•
14.15	SMC media work desks – other	1	500	incl. 14.02		7	Media	SMC	Access from the media tribune and the	he field	•	•	•	•	•	•	•
14.16	SMC photographers' work desks – final	1	150	incl. 14.01		7	Media	SMC	Access from the media tribune and the	he field	•	•	•	•	•	•	•
14.17	SMC photographers' work desks – other	1	100	incl. 14.02		7	Media	SMC	Access from the media tribune and the	he field	•	•	•	•	•	•	•
14.18	SMC lockers – final	1	300	incl. 14.01		7	Media	SMC	Access from the media tribune and the	he field Size of lockers (trolleys for photographers)	•	•	•	•	•	•	•
14.19	SMC lockers – other	1	200	incl. 14.02		7	Media	SMC	Access from the media tribune and the	he field Size of lockers (trolleys for photographers)	•	•	•	•	•	•	•
14.20	Press agency offices	TBD		incl. 14.01		7	Media	SMC	Access from the media tribune and t	he field 3,000m² included in 10,000m² of SMC final venue	•	•	•	•	•	•	•
14.21	Vending machine	TBD		incl. 14.01+14.02		7	Media	SMC	Access from the media tribune and the	he field	•	•	•	•	•	•	•
14.22	Transportation desk	1		incl. 14.01 + 14.02		7	Media	SMC	Access from the media tribune and the	he field	•	•	•	•	•	•	•
14.23	FIFA media channel	1	5	50		7	Media	SMC	Access from the media tribune and tl	he field	•	•	•	•	•	•	•

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8.7 Media requirements for FIFA World Cup™

8.8 Television infrastructure

8.9 Accreditation office

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14 Stadiu	um media centre (SMC)				/	/	/		/									
14.24	Media storage room	TBD	40	incl. 14.01 + 14.02		7	Media	SMC	Located in main stand	Office area	•	•		•	•	•	• •	
14.25	Office for telecom partner	1		incl. 14.01 + 14.02		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	•)
14.26	Offices – editors	1	5	400		7	Media	SMC	Access from the media tribune and the field	400m² offices for editors	•	•		•	•	•	• •	•
15 FIFA m	nedia areas																	
15.01	Offices – SMC 1	1	12	48	48	7	Media	Main stand	Access to the FIFA office areas, part of the SMC		•	•		•	•	•	• •	
15.02	Offices – SMC offices	1	8	32	32	7	Media	Main stand	Access to the FIFA office areas, part of the SMC		•	•		•	•	•	• •	,
15.03	Copy area			incl. 15.02		7	Media	Main stand			•	•		•	•	•	• •	
15.04	Meeting room SMC final venue	1	20	80	80	7	Media	Main stand			•	•		•	•	•	•)
15.05	SMC meeting room – final and other	2	30	120	240	7	Media	Main stand		Two meeting rooms for final, one for 10 people and one for 20 people, meeting room for 10 people at all maches	•	•		•	•	•	•	
15.06	FIFA.com office – final	1	120	600	600	7	New media	Main stand	Main stand		•	•		•	•	•	• •	,
15.07	FIFA.com office – other	1	5	25	25	7	New media	Main stand	Main stand		•	•		•	•	•	• •	
15.08	New info	1	5	20	20	7	Media	Main stand			•	•		•	•	•	• •	,
15.09	Information services	1	5	20	20	7	Media	Main stand			•	•		•	•	•	• •	
15.10	IT office (rate card)	1	3	15	15	7	MATCH IT	Main stand			•	•		•	•	•	• •)
15.11	IT storage (rate card)	1		15	15	7	MATCH IT	Main stand			•	•		•	•	•	•	
17 Broad	cast areas																	
17.01	Commentary control room	1	20	80	80	8	Marketing/TV	Main stand	Media tribune next to commentary position		•	•		•	•	•	• •	ı
17.02	Announcer's platform	4	4	8	32	8	Marketing/TV	Main stand				•		•	•	•	• •)
17.03	Rate card technical areas	1	2	10	10	8	MATCH	Main stand				•		•	•	•	• •	
18 Camer	a positions																	
18.01	Camera 1	1	1	2 x 3m	6	3	Marketing/TV	Centre line – main stand	Media tribune and broadcast compound		•			•				
18.02	Camera 2	1	1	2 x 3 m	6	3	Marketing/TV	Next to 1			•			•				

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8.9 Accreditation office

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	positions												
18.03	Camera 3 & 4	2	1	2 x 3m	6	3	Marketing/TV	16m line				•	•
18.04	Camera 5 & 6	2	1	2 x 3 m	6	3	Marketing/TV	Main stand on goal line			•		•
18.05	Camera 7 & 8	2	1	2 x 3m	6	1	Marketing/TV	Behind goals				•	•
18.06	Camera 9	1	1	2 x 3 m	6	1	Marketing/TV	Halfway line – pitch			•		•
18.07	Camera 10	1	1	2 x 3 m	6	3	Marketing/TV	Raised on south stand				•	•
18.08	Camera 11	1	1	2 x 3 m	6	3	Marketing/TV	Raised on north stand		Only required for opening match, third-place play-off and final		•	•
18.09	Camera 12 & 13	2	1	2 x 3 m	6	1	Marketing/TV	On field next to goal				•	•
18.10	Camera 14	1	1	2 x 3 m	6	1	Marketing/TV	Crane behind goal				•	•
18.11	Camera 15	1	1	2 x 3 m	6	1	Marketing/TV	Crane behind goal				•	•
18.12	Camera 16 & 17	2	1	2 x 3 m	6	1	Marketing/TV	Pitch level of action			•		•
18.13	Camera 18	1	1	2 x 3 m	6	3	Marketing/TV	Raised reverse angle			•		•
18.14	Camera 19 & 20	2	1	2 x 3 m	6	3	Marketing/TV	Reverse angle for bench			•		•
18.15	Camera 21	1	1	2 x 3 m	6	3	Marketing/TV	Opposite 9			•		•
18.16	Camera 22	1	1	2 x 3 m	6	3	Marketing/TV	Main stand platform			•		•
18.17	Camera 23 & 24	2	1	2 x 3 m	6	3	Marketing/TV	Roving player camera				•	•
18.18	Camera 25	1	1	2 x 3 m	6	8	Marketing/TV	On south-east diagonal				•	•
	Unilateral camera position – centre left	1	1	2.5 x 10	25	3	Marketing/TV					•	•

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Media

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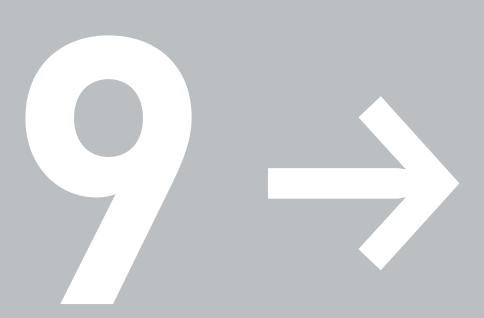
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																,
18.20	Unilateral camera position – centre right	1	1	2.5 x 10	25	3	Marketing/TV					•	•			
18.21	Unilateral camera position – goal left	1	1	2.5 x 5	12.5	3	Marketing/TV					•	•			
18.22	Unilateral camera position – goal right	1	1	2.5 x 5	12.5	3	Marketing/TV					•	•			
18.23	Unilateral camera position – field left 1	1	1	2.5 x 12	30	1	Marketing/TV					•	•			
18.24	Unilateral camera position – field left 2	1	1	2.5 x 9	22.5	1	Marketing/TV					•	•			
18.25	Unilateral camera position – field right 1	1	1	2.5 x 12	30	1	Marketing/TV					•	•			
18.26	Unilateral camera position – field right 2	1	1	2.5 x 9	22.5	1	Marketing/TV					•	•			
18.27	Unilateral camera position – reverse left	1	1	25 x 5	12.5	3	Marketing/TV					•	•			
18.28	Unilateral camera position – reverse right	1	1	2.5 x 5	12.5	3	Marketing/TV					•	•			
21 Accred	ditation centre									<u> </u>	<u> </u>					
21.01	Accreditation Centre				150						•	•	•			
21.02	Security desk	1		incl. 21.01		n/a	LOC	Outside turnstiles	Outside the ticketed zones	All areas are increased for the opening match	•	•	•	•	• •	•
21.03	Queuing area	1		incl. 21.01		n/a	LOC	Outside turnstiles			•	•	•	•	• •	•
21.04	Welcome desk	1		incl. 21.01		n/a	LOC	Outside turnstiles	Outside security perimeter		•	•	•	•	• •	•
21.05	Photograph desks	4		incl. 21.01		n/a	LOC	Outside turnstiles			•	•	•	•	• •	•
21.06	Print station	1		incl. 21.01		n/a	LOC	Outside turnstiles			•	•	•	•	• •	•
21.07	Offices	3		incl. 21.01		n/a	LOC	Outside turnstiles			•	•	•	•	• •	•
21.08	Lounge and refreshments	1		incl. 21.01		n/a	LOC	Outside turnstiles			•	•	•	•	• •	•
21.09	IT office	1		15	15	n/a	MATCH IT	Outside turnstiles			•	•	•	•	• •	•

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16 Requires internet connectivity
17 Requires uninterrupted power supply



Lighting and power supply

A lighting system must be installed which meets the needs of broadcasters, spectators, players and officials without spilling light into the environment and without creating a nuisance for the local community.







FOOTBALL STADIUMS

Lighting and power supply

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$9.1 \rightarrow Power supply$

The delaying or cancellation of an event due to the loss of electrical mains is unacceptable. A careful evaluation of the available utility service is crucial, but redundant services are necessary as are back-up and ride-through power sources. Redundant mains from the utility should be fully sized to carry the facility during event conditions.

The intake mains may be tied in a preferred/alternate arrangement (diagram 9a) or as in-use "hot" sources (diagram 9b) handling separate facility loads with manual or automatic tie switches. On loss of the intake mains, on-site back-up power should start immediately but there will be a time lag. Consequently, this back-up must include some ride-through capacity while the on-site source(s) start up since field lighting, which is typically high-intensity discharge (HID), will extinguish and require several minutes to re-start and the broadcasting of the event will be interrupted. This ride-through can be provided in several manners, including special generators and uninterruptible power supply (UPS) systems. Back-up power should have the capacity to operate for a minimum of three hours during an outage.

Delineation and separation of the essential event loads from the life safety system loads is necessary as the ride-through capacity is primarily needed for continuation of the event, not for exiting the facility in emergency conditions. Additional planning is necessary for space allocation of the equipment for intake and back-up sources. Maintaining separation and providing multiple points of distribution with some overlap and redundancy is recommended.

$9.2 \rightarrow Facility requirements$

Overview

The primary goal of the event lighting system is to illuminate the event to digital video quality for the media without creating nuisance glare for the players/officials and adding spill light/glare to the spectators and surrounding environment. Permanent lighting, temporary lighting and a combination of both systems should be considered.

- Environmental

Special care should be taken to limit the spill light and glare off the field, both inside and outside the stadium.

- Players and officials

The players and officials must be able to perform to their fullest ability within an illuminated environment that enhances play.

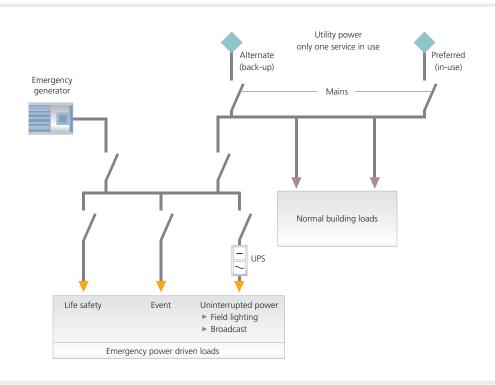


Diagram 9a: Power option 1

Two utility services are designed and installed – both fully sized – only one is used at a time. The loss of in-use mains would result in a time delay in closing the alternate source.

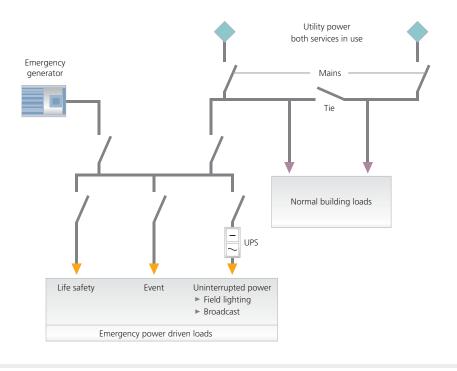


Diagram 9b: Power option 2

Two utility services are designed and installed and both are used – loss of either one gives only partial outage until tie is closed.

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- Spectators

The spectators must be able to view the event, scoreboard, video and all activities on the field in comfort, free from glare and excessive spill light.

- The media

The media video and broadcasts produced during an event shall be of digital quality, with balanced illumination and free from hard-line shadows and glare.

Competition categories

Five classes of lighting systems have been developed (I to V). There are two categories that need televised-quality lighting and three classes for non-televised events.

Class V	International televised	Event pitch shall be shadow free/glare free.
Class IV	National televised	Event pitch shall be shadow free/glare free.
Class III	National game non-televised	Event pitch shall be glare free with a minimum of eight poles (recommended).
Class II Leagues and clubs non-televised		Event pitch shall be glare free with a minimum of six poles (recommended).
Class I	Training and recreation non-televised	Event pitch shall be glare free with a minimum of four poles (recommended).

Mounting height of light fittings

The mounting height of the light fittings is critical to the success of the sports lighting system. The mounting height geometry for sideline head frames and poles is 25 degrees above the horizon, starting from the middle of the pitch and looking back towards the stadium seating bowl. The head frame and light structure may exceed this 25-degree minimum guideline but it may not exceed 45 degrees.

Camera views to be considered

There are many possible camera positions which can be used to create the televised experience. The camera positions illustrated are some of those which are popular. A lighting specification should take account of the actual camera positions to be used in order to ensure that each camera receives sufficient light, from which good-quality video can be created. Where required, the additional advice of an appropriate television broadcaster or a regional television consortium can be sought.

For more on the needs of the media, see Chapter 8.

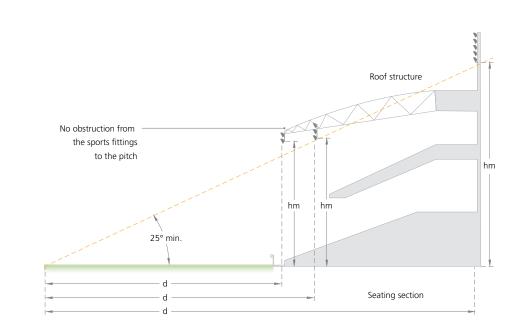


Diagram 9c: Mounting height of light fittings

Mounting height $\geq 25^{\circ}$ hm = d · tan(25)

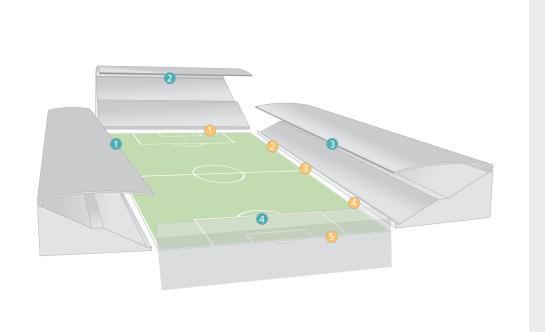


Diagram 9d: Standard camera views

Fixed camera

Field camera

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The principal goal of the lighting system is to ensure symmetrical lighting for both touch line and goal line conditions. Both fixed and field cameras can be added without affecting the digital video quality.

Player and broadcast view angles

Providing a glare-free environment for the players, officials and media is the most important design requirement. The following two areas are defined as "no floodlight zones" for all five categories of competition:

- Corner goal-line area:
- In order to maintain good visual conditions for the goalkeeper and attacking players in the corners, lighting equipment shall not be placed within an area of 15 degrees on either side of the goal line.
- Behind the goal line:
- In order to maintain good visual conditions for the attacking players in front of the goal and the goalkeeper, as well as for video media at the opposite end of the pitch, lighting equipment shall not be placed within 20 degrees behind the goal line and 45 degrees above the horizon from the goal line.

Shadow control (multi-zone aiming)

Limiting hard-line shadowing on the pitch is becoming one of the biggest problems facing high-definition, digital video quality media. Multi-zone aiming is the repetitive aiming from different head frame locations at similar locations on the pitch. This repetitive aiming from separate locations limits hard-line shadows created by the players.

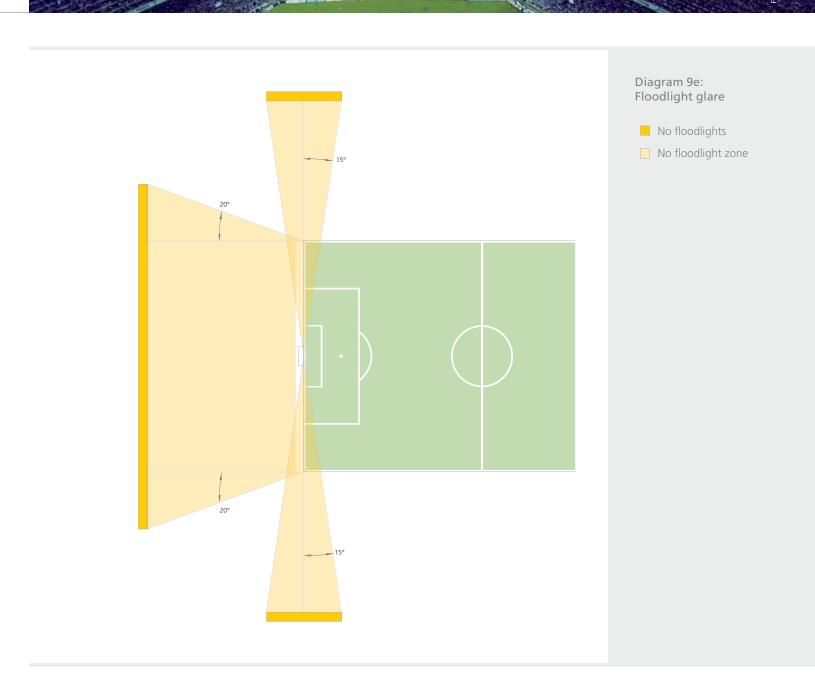
Diagrams 9f and 9g divide the pitch into three zones, with Zone 1 representing both end zones and Zone 2 representing the middle of the pitch. The aiming for each zone shall have a minimum of four overlapping lighting arrays per side for international events and three overlapping lighting arrays per side for national televised events.

Modelling is achieved when an event player is surrounded by illumination from different locations, creating a balanced illuminated environment. A shadow-free environment is achieved when hard-line shadows on the pitch do not exist.

Installation planning (non-televised)

For international and national televised events, the lighting head frames are positioned on the stadium for digital video quality lighting. Multi-zone aiming is not required for a non-televised pitch. For national, league and training non-televised events, the following standard lighting design guidelines apply (see diagram 9h, page 173):

Hard-line shadow on the pitch is one of the biggest problems facing high-definition digital broadcasting.



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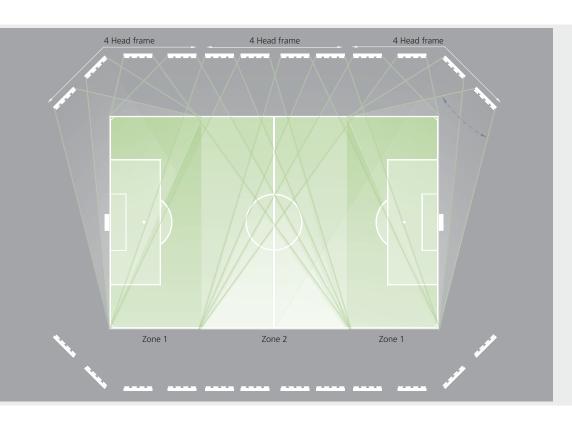


Diagram 9f: Class V Field aiming international

Fitting head frame

---- Aiming zone

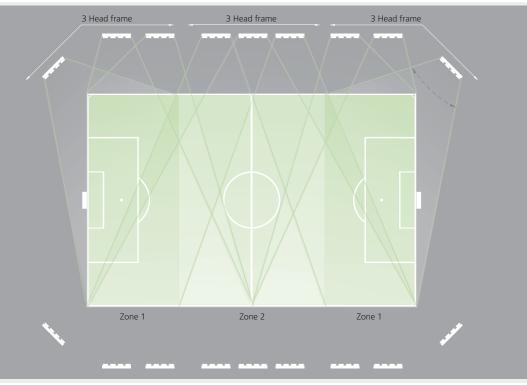


Diagram 9g: Class IV Field aiming national

Fitting head frame

---- Aiming zone

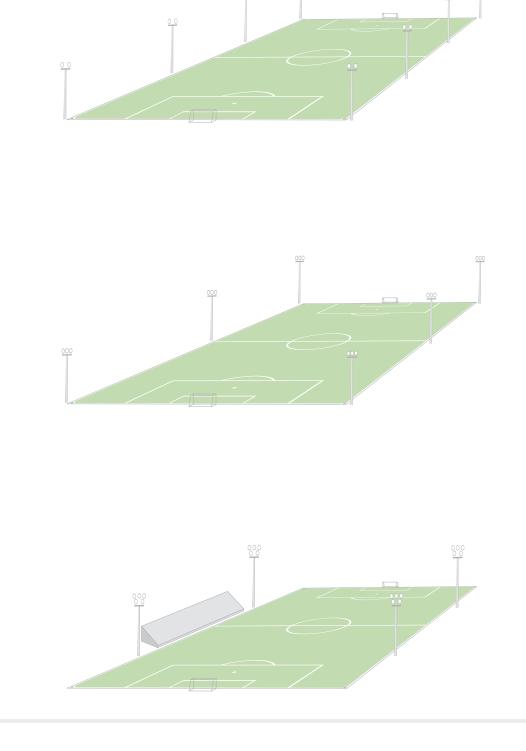


Diagram 9h: Installation planning (non-televised)

Class III National game

Class II League and club

Training and recreation

Exact pole location and details will vary with each installation; seating areas should be free from poles obstructing the view of spectators.

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$9.3 \rightarrow \text{Lighting design specifications and technology}$

Horizontal uniformity

Horizontal

Horizontal illuminance is a measure of light reaching a horizontal plane, one metre above the playing surface. A 10m x 10m grid across the playing field is used as a basis for collecting these measurements and calculating maximum/minimum/average illumination on the playing field.



Variation

Football is a high-speed sport and maintaining a uniform illumination across the playing field will enhance player performance and create excellent high-definition video. The methods for calculating uniformity are expressed below. Either method, CV or UG, can be used to calculate uniformity.

	Televised events	Non-televised events
Co-efficient of variation (CV)	CV ≤ 0.13-0.15	$CV \le 0.3 - 0.4$
Uniformity gradient (UG)	UG = 1.5-2	UG = 2 - 2.5

Vertical illumination

Field camera vertical

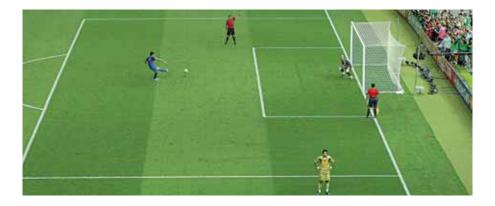
Vertical lighting at field level is the amount of illumination reaching the vertical surface of the players. This illumination helps to show close-up details of players, particularly their faces, at critical moments during the match. These images are captured by (both hand-held and motorised) field camera positions. Variations in vertical illumination will create poor digital video. The designer must consider balancing the illumination to reduce over-/under-illuminated areas during field camera operations.



Fixed camera vertical

Vertical light above the pitch captured by the upper touch-line and goal-line cameras is referred to as fixed camera vertical illumination. These cameras panning the pitch must capture the entire play during the event. Variation in illumination will create poor digital video. The designer must consider balancing the illumination to reduce these over-/under-illuminated areas during fixed camera operations.

The lighting system must illuminate the football match to digital video quality.



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Colour temperature

Colour temperature describes the feeling or appearance of how warm (red) or cool (blue), a certain type of illumination appears to be. It is measured in kelvins (Tk). Current digital camera technology allows the video-produced media to be altered to 'gain' colour and contrast, as needed to produce the desired colour quality. Acceptable colour temperature for outdoor stadiums for all classes of competition is $Tk \ge 4,000$.

Colour rendering

Colour rendering is the ability of an artificial illumination source to reproduce natural lighting. The colour rendering practical scale is Ra20 to Ra100, where the higher the rating, the better the colour quality. Good colour produced by the artificial illumination system shall be Ra \geq 65 for both televised and non-televised events.

Summary of lighting specifications for televised events

The following table is a summary of the criteria to be considered for televised events. It sets out the recommendations for vertical and horizontal illuminance, uniformity and the colour properties of lamps, for each class of activity.

Lighting specifications for televised events

		Vertical illuminance		Horizontal illuminance			Properties of lamps		
		Ev cam ave	Uniforr	mity	Eh ave	Unifo	ormity	Colour temperature	Colour rendering
Class	Calculation towards	Lux	U1	U2	Lux	U1	U2	Tk	Ra
Class V International	Fixed camera	2,400	0.5	0.7	3,500	0.6 0.8		> 4,000	≥ 65
	Field camera (at pitch level)	1,800	0.4	0.65					
Class IV National	Fixed camera	2,000	0.5	0.65	2,500	0.6	0.8	> 4,000	≥ 65
	Field camera (at pitch level)	1,400	0.35	0.6					

Notes:

- Vertical illuminance refers to illuminance towards a fixed or field camera position.
- Vertical illuminance uniformity for field cameras can be evaluated on a camera-bycamera basis and variation from this standard will be considered.
- All illuminance values indicated are maintained values. A maintenance factor of 0.7 is recommended; therefore initial values will be approximately 1.4 times those indicated above.
- In all classes, the glare rating is GR ≤ 50 for players on the pitch within the player primary view angle. This glare rating is satisfied when the player view angles are satisfied.
- Constant Illumination Lamp technology is acceptable and encouraged.

Summary of lighting specifications for non-televised events

The following table is a summary of the criteria to be considered for non-televised events. It sets out the recommendations for horizontal illuminance, uniformity and the properties of lamps, for each level of activity.

Lighting specifications for non-televised events

Activity level	Horizontal illuminance	Uniformity	Lamp colour temperature	Lamp colour rendering
Class	Eh ave (lux)	U2	Tk	Ra
Class III National games	750	0.7	> 4,000	≥ 65
Class II Leagues and clubs	500	0.6	> 4,000	≥ 65
Class I Training and recreation	200	0.5	> 4,000	≥ 65

Notes:

- All illuminance values indicated are maintained values.
- A maintenance factor of 0.70 is recommended. Initial values will therefore be approximately 1.4 times those indicated above.
- $\,-\,$ Illuminance uniformity shall not exceed than 30% every 10 metres.
- Primary player view angles must be free of direct glare. This glare rating is satisfied when the player view angles are satisfied.

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$9.4 \rightarrow Environmental impact$

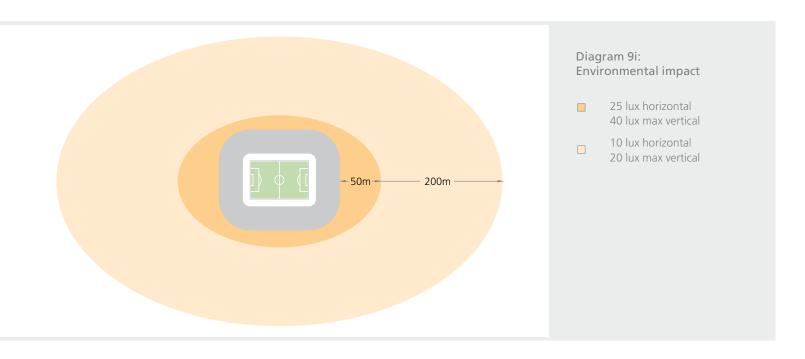
Light pollution and unwanted light trespass fall into two categories: spill illumination, which is light leaving the perimeter of the stadium that is measurable; and glare, which is excessive brightness in the normal field of view for pedestrians and motorists outside the stadium. This impact on local communities is critical to the safety, dark sky experience and well-being of the countries and cities they serve. Every effort needs to be made to limit both spill and glare inside and outside the stadium. New design specifications should include sharp cut-off reflectors and high efficiency reflectors for televised events.

Spill illumination leaving the stadium can be calculated and measured. These values are expressed in horizontal illumination values and maximum vertical illumination. In the absence of local guidelines, the following schedule should be considered:

Angle of illumination	Distance from stadium perimeter	
Horizontal spill	50m from stadium perimeter	25 lux
Horizontal spill	200m further	10 lux
Maximum vertical	50m from stadium perimeter	40 lux
Maximum vertical	200m from stadium perimeter	20 lux

For more on environmental compatibility, see Chapter 1

Every effort needs to be made to limit the overspill of stadium light onto the surrounding community.



$9.5 \rightarrow Installation commissioning$

Inspection and equipment

Measuring the actual illumination prior to play is required to ensure system performance. The following specifications are suggested standard guidelines:

Specifications	Symbol
Average horizontal illumination	Eh ave
Average fixed camera illumination	Ev ave (fixed camera)
Average field camera illumination	Ev ave (field camera)
Uniformity (min./max. illumination)	U1
Uniformity (min./average illumination)	U2

Both digital and analogue light meters are acceptable. Calibration of the instrument should be carried out yearly. The calibration date and the meter serial number must be noted on the worksheets submitted. Care should be taken while recording readings to limit the shadow created by the testing personnel. The light meter shall be attached to a tripod, level with the pitch and one metre above the pitch.

Televised measurements shall include three categories of readings: horizontal, fixed camera and field camera.

Horizontal: positioning the measuring cell one metre above the pitch at 90°,

perpendicular to the pitch (worksheet 1, page 182).

Fixed camera: positioning the measuring cell one metre above the pitch, 30° above

the horizon (worksheet 2, page 183).

Field camera: positioning the measuring cell one metre above the pitch and parallel

to the pitch (worksheet 3, page 184).

Non-televised measurements shall include one category of readings: horizontal.



Measurement worksheet and summary calculations

This worksheet shall be utilised for all classes of play. Horizontal, fixed camera and field camera calculations should be made for broadcast quality while only horizontal calculation is required for non-broadcast quality.

Project name
Reading taken by
Measuring equipment
Туре
Calibration date

Measurement type: Broadcast

Design	Achieved
Horizontal	
Fixed camera vertical	
Field camera vertical	

Measurement type: Non-broadcast

Design	Achieved
Horizontal value	

Summary of calculations

Illuminance	Design	Horizontal achieved		Design	Achieved	Uniformity
E min.			U1			Min./max.
E max.			U2			Min./ave.
E ave.			U2			Gradient
Illuminance		Fixed camera vertical				Uniformity
E min.			U1			Min./max.
E max.			U2			Min./ave.
E ave.			U2			Gradient
Illuminance		Field camera vertical				Uniformity
E min.			U1			Min./max.
E max.			U2			Min./ave.
E ave.			U2			Gradient

Notes:	
Signature on behalf of contractor	Signature on behalf of consultant
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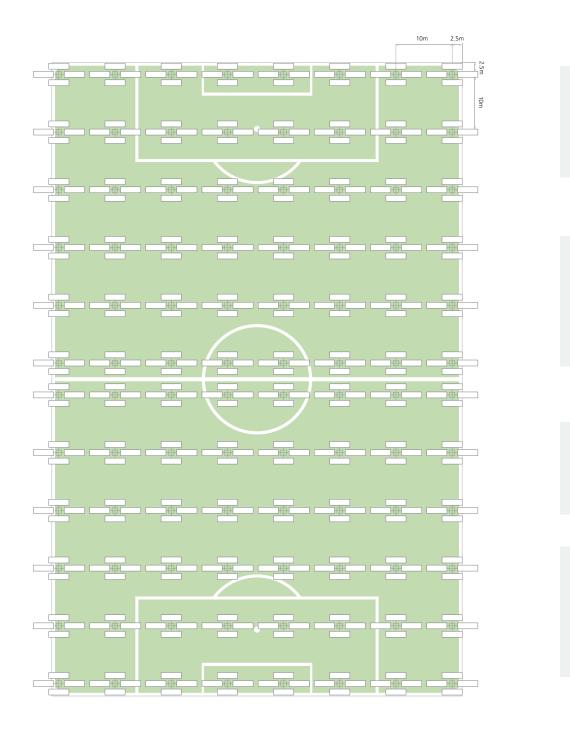
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Worksheet 1: Horizontal measurements and calculations



Worksheet 2: Field vertical measurements and calculations



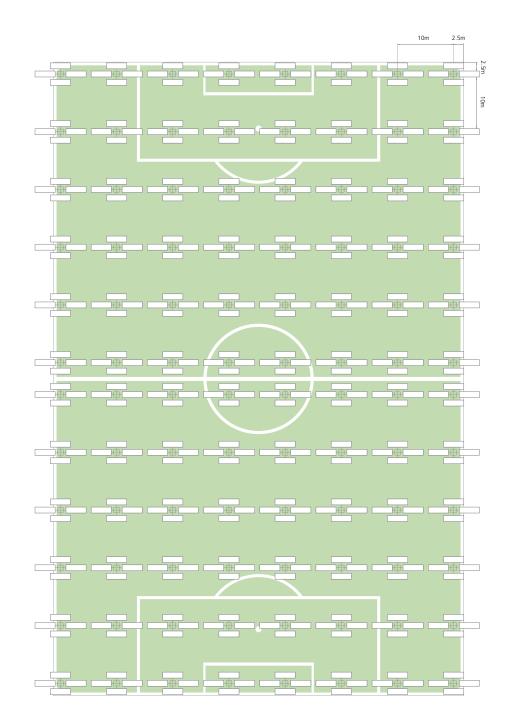
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Worksheet 3: Fixed vertical measurements and calculations





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$9.6 \rightarrow Glossary of lighting terms$

Colour rendering index: $Ra \rightarrow The$ degree to which a specific light source reproduces a set of reference colours compared with the same colours under daylight conditions. This index is measured on a scale of Ra0 to Ra100.

Colour temperature: $Tk \rightarrow The$ colour appearance of the light emitted by a light source, in kelvins.

Eye sensitivity curve: $V(\alpha) \rightarrow$ The human eye is more sensitive to some colours than to others, e.g. it is 20 times more sensitive to green and yellow light than to either red or blue light.

Field camera vertical: Efieldv → Illuminance on a plane 1m above the pitch and parallel with the pitch aimed towards the sideline.

Fixed camera vertical: Efv \rightarrow Illuminance on a plane 1m above the pitch and 20° above the horizon aimed towards the camera positions.

Glare rating → The degree to which a lighting installation is disturbing to a person on or near the pitch. GR is defined by the Commission Internationale de l'Eclairage in publication 112, 1994, Glare Evaluation System for use within Outdoor Sports and Area Lighting.

Horizontal illuminance: Eh/Eh ave → Light incident (falling) on a horizontal plane 1m above the pitch.

Illuminance: $E \rightarrow The$ quantity of light falling (incident) on a surface at a specific point, expressed in lux.

Illumination: E ave → Average horizontal illuminance as a result of either calculation or measurement.

Illuminance gradient % \rightarrow The difference in illuminance between two adjacent points on the pitch.

Illuminance towards camera: E cam \rightarrow Illuminance on a plane 1m above the pitch and perpendicular to the camera position.

Illuminance uniformity \rightarrow Describes how evenly light is distributed over the pitch surface and is expressed by the ratios of U1 and U2.

Initial illuminance: E init → The illuminance after the first 100 hours of use.

Initial lumens \rightarrow The output of a light source (lamp) after the first 100 hours of use.

Intake mains → The incoming utility service, which would be the metered feeders.

Light trespass → The amount of light spill and glare leaving the premises

Lumens: Lm \rightarrow The spectral power distribution of a lamp weighted by the eye sensitivity curve.

Lux \rightarrow The unit of illuminance in lumen/m², incident on a pitch surface. 1 lux = 1 lumen/m².

Maintained illuminance: E maint/E ave maint → The (average) illuminance below which the installation should not fall; below which the lamps should be replaced and or the installation cleaned.

Maintenance factor \rightarrow A factor less than 1. Initial illuminance x maintenance factor = the maintained illuminance. This compensates for the depreciation in lamp output and light fitting surfaces.

Maximum vertical \rightarrow Illuminance recorded on a light meter aimed at the brightest light source.

Mounting heights: $Hm \to The$ mounting height of the light fittings with respect to a point on the pitch. Hm = distance "d" $x tan \delta$.

Primary player view angle: $PPVA \rightarrow Normal$ players' view angle in relationship to the playing field and the spill light fittings.

Ride-through → The ability of a power system to maintain continuous uninterruptible stable power during an outage, or during bumps/spikes, while waiting for a generator to start.

Temporary lighting \rightarrow Light fitting poles and structures support event head frames that are removable after an event.

Vertical illuminance: Ev \rightarrow Light incident on a vertical plane 1m above the pitch. Orientation to be specified.



Communications and additional areas

Stadium developers must take account of the rapid development of technology to ensure that their facility can meet all of its communications requirements for many years to come.



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$10.1 \rightarrow$ Communications requirements

The escalating demand for a wide and reliable implementation of open-architecture electronic communications systems requires the immediate planning of core infrastructure. This should take place at the same time as the development of the architectural building programme.

Most electronic building systems are converging to a common and open data protocol, known as 'internet protocol' (IP), which typically uses Ethernet-based connectivity to link systems and networks. This is already mainstream technology for many building systems, including telephone, administrative data, wireless data (Wi-Fi), building management systems, electronic access control and intrusion detection, video surveillance, television and other low-voltage electrical systems.

Electronic building systems will continue to evolve using internet protocol, making the planning of these systems increasingly important. Given the increase in system convergence and integration, planning for both the present and the future is vital to ensure the longevity of systems. These criteria must be developed by following existing communication industry standards that help to anticipate future technologies. These standards include: ISO/IEC, ANSI/TIA/EIA, IEEE and BICSI.

Many electronic building systems now use internet protocol (IP) to link networks.

$10.2 \rightarrow Programme development$

The development of a technology programme can help identify all systems, users and applications necessary for the facility. The technology programme should be expanded to determine interoperability, convergence and network allocation and used to establish responsibilities for the scope of work and system implementation. It is common for the facility owner or operator to provide, allocate and maintain a unified cabling system for the entire stadium.

A technology programme is needed to identify all the communications requirements of a stadium.

The development of the programme should depend on the following:

- systems and applications implemented;
- level of system convergence to IP;
- support of systems, users and application;
- allocation of services;
- system reliability and redundancy;
- loss prevention;
- uninterruptible service and connectivity;
- future expansion and growth potential.

Communications systems have six fundamental elements which need to be reviewed and evaluated. These are:

I Core infrastructure

dedicated communications rooms, raceways and containment;

II Support systems

dedicated grounding (earthing), heating, ventilation and air conditioning, electrical power and lighting;

III Cable infrastructure

facility backbone and horizontal cabling;

IV System electronics

telephone switch, data switches, servers and computers;

V Implementation

support, applications, network allocation and services;

VI Administration

management, maintenance and upgrades.

For other planning decisions, see Chapter 1.

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$10.3 \rightarrow$ Communications systems, applications and users

The following are communications systems, applications and users that need to be considered and coordinated during the programme development and design of a venue:

- administrative data system;
- broadcast television;
- building management systems;
- cashpoint/ATM machines;
- clock system;
- fire alarm systems;
- food service point of sale;
- lighting control;
- mobile telephone service;
- police and fire radio;
- public telephones;
- retail point of sale;
- roof controls;
- scoreboard;
- secured telephone system;
- security electronic access control;
- security electronic intrusion detection;
- security video surveillance;
- signage;
- sound systems;
- telecommunications utility service;
- telephone system;
- ticketing;
- video boards;
- wireless internet and data.

$10.4 \rightarrow$ Communications rooms

Communications rooms should include: telecommunications utility demarcation rooms, a main cross-connect room (main communications room), computer equipment rooms (data centre or server rooms) and intermediate cross-connect rooms (communications distribution rooms).



The location of the communication distribution room is critical to ensure that the length limitations of horizontal cables are maintained. Communications rooms shall be located to ensure total cable length to any outlet device does not exceed 90m. Strict adherence to this is required. Segments exceeding this length will not function and certainly will not support future technologies.

Communications rooms should be dedicated and separate from electrical rooms. Rooms should align vertically to form risers to ease the installation of cable throughout facility. Co-locating or sharing rooms with communications and other low-voltage systems is recommended. The sizes of all communications rooms will depend on the type of room, the equipment supported and distribution densities.

The communications cable infrastructure system should be planned to support voice and data applications/systems operated over a multi-media cabling plant including fibre optics and twisted pair copper.

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$10.5 \rightarrow \text{Project development}$

The design team will need to evaluate and program the technology systems outlined in this book in conjunction with the space requirements data. Detailed discussions with the entire project team are necessary to define the scope of the work including specification, implementation, procurement and associated responsibilities.

$10.6 \rightarrow \text{Telephones}$

The stadium must have a central telephone switchboard with a taping facility for incoming calls.

Telephones must be provided at the following points:

- dressing rooms for teams;
- dressing room for referees;
- match delegates' room;
- doping control room;
- first aid and treatment room;
- stadium control room;
- stewards' control room;
- public address announcer's room;
- scoreboard operator's room;
- first aid rooms for the public;
- VIP areas;
- administrative offices;
- ticket sales offices;
- match control area between the substitutes' benches;
- media working areas.

These telephones must be interconnected and a list of extension numbers must be available at each point. The stadium should be equipped with an adequate number of telephones for use by the public.

$10.7 \rightarrow Additional areas$

Given the most recent developments in the organisation of major football events, a modern stadium should provide additional areas which may be used for the following purposes:

A modern stadium should provide rooms for stadium and competition management.

Competition management

A stadium should be provided with a minimum of three interconnecting offices of 25m² each.

Stadium management

A stadium should be provided with a minimum of six administrative offices of 25m² each.

Meeting rooms

A minimum of three rooms of 30m² each should be provided that can be sub-divided if the need arises.

IT patch rooms

A minimum of one room of 12m² should be provided.

Dressing room for musicians and for storage of their instruments

If the facility is used for shows and concerts, the space for artists and performers should be in the players' area.

Storerooms

The number of rooms, and the area of space required, should be determined by the stadium management.

It may be helpful to construct a number of rooms with partitioned walls so that their size may be varied according to their use.

$10.8 \rightarrow Flagpoles$

The stadium should be equipped with at least five flagpoles or, alternatively, should have the facility to display at least five flags by another suitable means.

Communications and additional areas

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	ng rooms								· · · · · · · · · · · · · · · · · · ·				`/			`/ ``	/ \/	
2.15	Entertainers'/ceremonies changing rooms (green room)	5	TBD	30	150	2	Competitions	Main stand	In players' corridor and/or adjacent to service tunnels	Required for opening and final matches	•	•	•		•	•	•	•
FIFA of	ffices and meeting rooms																	
5.01	General coordinator's office	1	2-3	40	40	2	Competitions	Main stand	Players' dressing rooms and tunnel		•	•		•	•	•	•	•
5.02	Players' escorts' room/ Youth programme	1	100	300	300	4	Marketing	Main stand	Within minimum walking distance from stadium, max. 300 - 400m from pitch	Provide boys' and girls' changing rooms with toilets	•	•	•		•	•	•	
5.03	FIFA media officer	1	4	incl. 5.07		6/7	Media	Main stand	Adjacent to media centre or general coordinator's office		•	•		•	•	•	•	•
5.04	FIFA IT room	1	16	75	75	4	MATCH IT	Main stand			•	•		•	•	•	•	•
5.05	FIFA hospitality office	1	2-4	25	25	9	Hospitality	Main stand	Adjacent to hospitality areas		•	•		•	•	•	•	•
5.06	Matchday operations ticketing office	1	3	24	24	4	MATCH Ticketing	Main stand	Can be located in conjunction with ticketing centre/ticket issue resolution booth		•	•	•		•	•	•	•
5.07	Match commissioner's office	1	1	60	60	2	Competitions	Main stand	As close as possible to general coordinator's office	May include areas listed in 5.8 - 5.13	•	•	•		•	•	•	•
5.08	Head of delegation office	1	1	incl. 5.07		2	Competitions	Main stand			•	•	•		•	•	•	•
5.09	Technical study group office	1	2-3	incl. 5.07		2	Competitions	Main stand			•	•	•		•	•	•	•
5.10	Referees Committee member's office	1	1	incl. 5.07		2	Competitions	Main stand			•	•	•		•	•	•	•
5.11	Referees' assessor		1	incl. 5.07		2	Competitions	Main stand			•	•	•		•	•	•	•
5.12	Referees' video specialist office (TBD)		1	incl. 5.07		2	Competitions	Main stand	Inside stadium – ideally next to FIFA M & TV office	Required for matchday (5 - 7 people)	•	•	•		•	•	•	•
5.13	Meeting room (crisis management)	1	10	incl. 5.07		2	Competitions	Main stand	Adjacent to or within general coordinator's or match commisioner's office		•	•	•		•	•	•	•
5.14	Marketing and TV Rights Protection Programme office	1	5-7	40	40	4	Marketing	Main stand	Inside stadium – ideally next to FIFA M & TV office	Required for matchday, 5 - 7 people, cold storage required – concessions issue	•			•	•	•	•	•
5.15	FIFA M & TV event management office	1	4	40	40	2/4	Marketing	Main stand	Within close proximity to general coordinator's office		•	•		•	•	•	•	•
5.16	Coca-Cola logistics office	1	2	25	25	3/4/9	Marketing	Main stand	Located within secure perimeter of stadium	Cold storage required for supplies to players' tunnel and pitch, easy access to parking area	•	•		•	•	•	•	•
5.17	Protocol office	1	4	25	25	9	Protocol	Main stand	VIP lounge of matchday operations office should be located close to VIP reception desk		•	•	•		•	•	•	•

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¹² Type of structure required 13 The space is dedicated to one function or shared with another 14 Requires heating, ventilation and air conditioning

¹⁵ Requires telecom connectivity ¹⁶ Requires internet connectivity

¹⁷ Requires uninterrupted power supply

10.1 Communications requirements	190	
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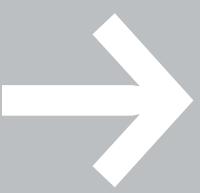
,	/	ffices and meeting rooms	un de la companya de	z ⁱ ocu	74 Con Co. 5		/ Vice	Solo to the time of time of time of the time of time o		Printing.	Comments	/.	Sold A	\$ 14 5 CO S.	Short 17.2 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10			1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
	5.18	Mascot dressing room	2-3	4	10	30	4	Marketing	Main stand	Close proximity to players' tunnel/pitch.		•	•		•	•	•	• •	
	5.19	Match coordination/ meeting room	1	40	100	100	2/4	Competitions	Main stand	Within stadium secure perimeter.	Match coodination room required for matchday minus one. Ideally, the room should have a pleasant ambience for greeting/meeting team representatives	•	•	•		•	•	• •	
	5.20	General coordinator's storage room	1		20	20	2	Competitions	Main stand	Can be located within the general coordinator's office.		•	•		•				
	5.21	Advertising boards storage	1		100	100	4	Marketing	TBD	Close proximity to service tunnels.		•	•	•	•				
	5.22	FIFA security office	1	2	20	20	2	Competitions	Main stand	Close proximity to general coordinator's office.		•	•	•	•	•	•	• •	
	5.23	FIFA IT storage	1		100	100	TBD	MATCH IT	TBD	Within stadium perimeter		•	•		•	•	•	• •	
	5.24	FIFA IT server room	1		30	30	TBD	MATCH IT	TBD	Within stadium perimeter		•	•		•	•	•	• •	
	5.25	Central results system	1		40	40	2/4	Information Services	Main stand	General coordinator's office, FIFA media officers		•	•		•	•	•	• •	
35	Flagpo																		
	35.01	Exterior stadium flags	TBD				3	Competitions			May include: FIFA, confederations, national, United Nations and IOC flags	•	•		•				

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 Requires internet connectivity
 Requires uninterrupted power supply



The spaces covered by this appendix are those required for hosting matches in the FIFA World Cup^{TM} .

Excluded are the following spaces: access control areas, facility management offices, maintenance areas, emergency services, spectator facilities, service areas and local organiser requirements.

FOOTBALL STADIUMS

1 Playing area Area must be large enough for warm-up area behind goal lines. Grass area should reach minimum 2m from the touch 1.01 4 1 25 105 x 68 125 x 85 Service tunnel, players' tunnel, FIFA offices Competitions line and 4m on the goal side Main stand 1.02 Players' tunnel 1 90 Min 90 Competitions Dressing rooms Tunnel protector (extendable) – width to accomodate six dimension people 6 x 15 Pitch to spectator seats at tunnel Competitions Main stand Incorporate barrier or seat kills depending on distance and (distance to first row of seats) height of spectator seats in relation to the pitch. Min. 8.5m 1.04 Substitutes' bench 2 22 22 seats x 1m 22 Competitions Main stand Main stand, players' tunnel Incorporate heat reflecting/minimising Plexiglas™ cover 1.05 Competitions Same design as substitute benches. Provides seating for Fourth official's bench 4 seats x 1m 4 Main stand Between substitutes' bench one referee and three event coordinators Either right or left of substitutes' benches 1.06 Infotainment desk 1 LOC Main stand Incorporate noise reduction elements in the design • 4 8 x 1 8 1 4 150-1.07 8 Photographers' positions Media Goal side and Behind the goal line at the corner flags and Include media chairs behind goals extending up to halfway line on touch line on opposite side to main stand 250 opposite touch Players' outdoor warm-up area 2 90 Goal side Behind both goals and photographer positions The warm-up area surface should be the same as the 1.08 6 3 x 30 Competitions playing surface 1.09 Pitch to spectator seat – goal side 2 10 Competitions Goal side Incorporate barrier or seat kills depending on distance and height of spectator seats in relation to the pitch. Min. 10m 1.10 1 6 Incorporate barrier or seat kills depending on distance and 4 Pitch to spectator seat -Competitions Opposite opposite tunnel main stand height of spectator seats in relation to the pitch. Min. 10m 1.11 Advertising board pitch perimeter TBD Pitch Access to field power for electronic advertising boards. Marketing Sponsor advertising boards to be 6.5m x 0.9m; supplier advertising boards to be 5m x 0.9m Directly onto field on grade 1.12 2 LOC Main stand Four tunnels are ideal to support field ventilation. Tunnel Service tunnel height to accomodate service vehicles (min. height 5m) 1.13 Scoreboards/video screens 2 LOC • • • 1.14 Interior stadium bowl flags TBD Competitions Sufficient space and erecting options to May include: FIFA, confederations, national, accommodate a minimum of seven flags United Nations and IOC flags opposite the main stand and five flags behind each goal and above the main stand 1.15 Floodlights TBD Competitions In accordance with current lighting guidlines 2 Dressing rooms Team A, dressing room 1 23 150 150 Competitions Main stand Coach drop-off, doping control, flash Includes 23 lockers, 2-3 massage tables, flipcharts, interview areas whitehoard and clocks 11 12 2.02 Showers 1 8 x 1.5m Main stand 5 2 Competitions 2.03 3 25 Kit manager's room, team A 1 25 2 Competitions Main stand Players' dressing rooms and, if provided, indoor warm-up area

¹ Area ² Drawing reference number ³ FIFA room designation ⁴ Quantity of spaces required ⁵ Anticipated occupants

⁶ Area dimensions ⁷ Sum of area dimensions ⁸ FIFA accreditation zone (see key on page 236) ⁹ Space owner/planner ¹⁰ Placement within stadium ¹¹ Affinity to other rooms/activities

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FOOTBALL STADIUMS

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2	Dressir	ng rooi	ms	/	/	/	/	/	/	/		/		//					
	2.04	5	Team technician	1	2	20	20	2	Competitions	Main stand	Players' dressing room		•		•	П	•	•	•
	2.05	5	Team B, dressing room	1	23	150	150	2	Competitions	Main stand	Coach drop off, doping control, flash interview areas	23 lockers, 2-3 massage tables, flipcharts, whiteboard, clocks	•			•	•	•	• •
	2.06	5	Showers	1	11	8 x 1.5m	12	2	Competitions	Main stand			•	•					
	2.07	5	Kit manager's room, team B	1	3	25	25	2	Competitions	Main stand	Players' dressing room		•		•		•	•	•
	2.08	5	Team technician	1	2	20	20	2	Competitions	Main stand	Players' dressing room		•		•		•	•	•
	2.09	5	Referees 1	1	5	24	24	2	Competitions	Main stand		Provide five lockers	•			•	•	•	•
	2.10	5	Referees 2	1	2	16	16	2	Competitions	Main stand		Provide two lockers	•			•	•	•	•
	2.11	5	Referees' showers 1	1	3	3 x 1.5m	5	2	Competitions	Main stand		Provide three showers and one toilet	•	•		•			
	2.12	5	Referees' showers 2	1	2	2 x 1.5m	3	2	Competitions	Main stand		Provide one shower and one toilet	•	•		•			
	2.13	5	Coaches and technical, team A	1	5	24	24	2	Competitions	Main stand	Next to players' dressing rooms or in mixed zone	Provide three lockers, chairs, one toilet and one shower	•	•		•	•	•	•
	2.14	5	Coaches and technical, team B	1	5	24	24	2	Competitions	Main stand	Next to players' dressing rooms or in mixed zone	Provide three lockers, chairs, one toilet and one shower	•	•			•	•	•
	2.15	10	Entertainers'/ceremonies changing rooms (green room)	5	TBD	30	150	2	Competitions	Main stand	In players' corridor and/or adjacent to service tunnels	Required for opening and final matches	•	•	•		•	•	• •
	2.16	5	Players' indoor warm-up area	2	23	100	200	2	Competitions	Main stand	Next to players' dressing rooms		•	•		•	•		
3	Medica	al facili	ities																
	3.01	5	Stretcher bearers and medical team area	2	6	8	16	1	LOC	Main stand	Close to players' tunnel, emergency services and adjacent to substitutes' benches			•		•			
	3.02	5	First aid and treatment room	1	4	50	50	2	Competitions	Main stand		Used for players, match officials, media and security personnel	•			•	•	•	•
	3.03	5	Medical officer's room	1	2	incl. 3.02		2	LOC	Main stand			•			•	•	•	•
4	Doping	g contr	ol																
	4.01	5	Waiting room	1	8	20	20	2	Competitions	Main stand	Close to players' dressing rooms	Doping control room is connected to waiting room and medical office	•			•	•		
	4.02	5	Medical office	1	4	12	12	2	Competitions	Main stand	Close to players' dressing rooms		•			•	•	•	• •
	4.03	5	WC	1	2	4	4	2	Competitions	Main stand	Close to players' dressing rooms		•			•			
5	FIFA of	fices a	nd meeting rooms																
	5.01	10	General coordinator's office	1	2–3	40	40	2	Competitions	Main stand	Players' dressing rooms and tunnel		•	•		•	•	•	• •
	5.02	10	Players' escorts' room/ Youth programme	1	100	300	300	4	Marketing	Main stand	Within minimum walking distance from stadium, max. 300-400m from pitch	Provide boys' and girls' changing rooms with toilets	•	•	•		•	•	•
	5.03	10	FIFA media officer	1	4	incl. 5.07		6/7	Media	Main stand	Adjacent to media centre or general coordinator's office		•	•		•	•	•	• •

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6 LOC office	es and meeting rooms																
6.01	LOC venue manager	1	2	30	30	1/2/4	LOC	Main stand	Close to operation areas and FIFA offices (especially GC office)		•		•	• •	•	•	•
6.02	LOC venue manager assistant		1	incl. 6.01		1/2/4	LOC	Main stand			•		•	• •	•	•	•
6.03	LOC stadium manager	1	TBD	75	75	1/2/4	LOC	Main stand			•		•	• •	•	•	•
6.04	LOC construction manager	1	TBD	30	30	1/2/4	LOC	Main stand			•		•	• •	•	•	•
6.05	LOC technical director	1	TBD	40	40	1/2/4	LOC	Main stand			•		•	• •	•	•	•
6.06	LOC IT coordinator	1	TBD	20	20	4	MATCH IT	Main stand			•		•	•	•	•	•
6.07	LOC signage office	1	TBD	40	40	4	LOC	Main stand			•		•	• •	•	•	•
6.08	LOC infotainment manager	1	TBD	incl. 6.05		4	LOC	Main stand			•		•	• •	•	•	•
6.09	LOC logistics manager	1	TBD	incl. 6.05		4	LOC	Main stand			•		•	• •	•	•	•
6.10	LOC transport manager	1	TBD	incl. 6.05		4	LOC	Main stand			•		•	• •	•	•	•
6.11	LOC marketing manager	1	TBD	incl. 6.05		4	LOC	Main stand			•		•	• •	•	•	•
6.12	LOC spare office	1	TBD	incl. 6.05		4	LOC	Main stand			•		•	• •	•	•	•
6.13	LOC accreditation manager	1	TBD	incl. 6.05		4	LOC	TBD	Accreditation centre		•		•	• •	•	•	•
6.14	LOC medical officer	1	TBD	incl. 6.05		4	LOC	Main stand			•		•	• •	•	•	•
6.15	Drivers' room	1	40	40	40	4	LOC	Main stand			•		•	• •	•	•	•
6.16	LOC security officer	1	TBD	30	30	1/2/4	LOC	Main stand			•		•	• •	•	•	•
6.17	LOC hospitality	1	TBD	40	40	4/9	LOC	Main stand			•		•	• •	•	•	•
6.18	LOC protocol	1	TBD	incl. 5.17		5	LOC	Main stand			•		•	• •	•	•	•
6.19	LOC catering manager	1	TBD	20	20	4/9/5	LOC	Main stand			•		•	• •	•	•	•
6.20	LOC coordination office	1	TBD	25	25	4	LOC	Main stand			•		•	• •	•	•	•
6.21	LOC volunteer manager	1	TBD	25	25	4	LOC	Main stand			•		•	• •	•	•	•
6.22	LOC general offices	9	TBD	16	144	4	LOC	Main stand			•		•		•	•	•
6.23	LOC media officer	1	2	20	20	4	LOC	Main stand		Can also be in SMC – depending on location of FIFA media officer's office	•		•	•	•	•	•
6.24	Ceremonies management	1	TBD	120	120	4	LOC	Main stand	Next to players' tunnel		•		•	D	•	•	•
7 Access coi	ntrol points																
7.01	Turnstiles					3	LOC		Separates the security zones		•	•		•			
7.02	Mag and bag area					3	LOC					•		•			
7.03	Vehicle search areas					3	LOC					•		•			

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7 A	ccess	contro	l points																
7	7.04		Matchday ticketing office	2	2	4		3	MATCH	Adjacent to main stadium entrance				•		•		•	•
8 Re	etail s	hops																	
8	8.01	6	Merchandise	TBD				3	Marketing	All public areas	Along all public circulation areas		•	•		•		•	•
3	8.02	6	Sponsor products	TBD				3	Marketing			1 point of sale per 250 spectators. 1-1.5m of counter space	•	•		•		•	•
9 H	ospita	ality ar	eas – stadium																
Ğ	9.01	7	Skyboxes/Hospitality suites	12-20	15-25	TBD	TBD	9	Hospitality			Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•			•	•		
Ğ	9.02	7	VIP lounge – opening match and final	1	1,130	1,130 x 1	1,130	5	Hospitality	Main stand	Behind the VIP seats with unobstructed view of pitch	Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•	•	•	•
Ğ	9.03	7	VIP lounge – semi-finals	1	1,130	1,130 x 1	1,130	5	Hospitality	Main stand	Behind the VIP seats with unobstructed view of pitch	Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•	•	•	•
Ğ	9.04	7	VIP lounge – quarter-finals	1	630	630 x 1	630	5	Hospitality	Main stand	Behind the VIP seats with unobstructed view of pitch	Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•	•	•	•
Ğ	9.05	7	VIP lounge – group matches	1	550	550 x 1	550	5	Hospitality	Main stand	Behind the VIP seats with unobstructed view of pitch	Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•	•	•	•
Ğ	9.06	7	VVIP lounge – opening match and final	1	70	70 x 1.8	126	5	Hospitality	Main stand	Adjacent to VIP and merchandise	Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•	•	•	•
Ğ	9.07	7	VVIP lounge – semi-finals	1	70	70 x 1.8	126	5	Hospitality	Main stand		Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•	•	•	•
Ğ	9.08	7	VVIP lounge – quarter-finals	1	70	70 x 1.8	126	5	Hospitality	Main stand		Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•	•	•	•
Ğ	9.09	7	VVIP lounge – group matches	1	50	50 x 1.8	90	5	Hospitality	Main stand		Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•	•	•	•
G	9.10	7	FIFA President's lounge	1	6	6x2.5	15	5	Hospitality	Main stand	Next to VVIP lounge unobstructed view of the field	Provide high-quality sofas and armchairs	•	•		•	•	•	•
9	9.11	7	LOC President's lounge	1	6	6x2.5	15	5	Hospitality	Main stand	Next to FIFA President's lounge	Provide high-quality sofas and armchairs	•	•		•	•	•	•
	9.12	7	Security personnel/drivers – opening match and final – 50 drivers	1	50	50 x 1	50	5	Hospitality		As close as possibe to VIP areas			•			•		•
	9.13	7	VIP flash interview	2	4	12	24	9	Protocol/PR	Main stand	Next to VIP lounge/seat			•		•	•	•	•

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9	Hospit	ality ar	eas – stadium	/		,			<i>'</i>	/									
	9.14	7	VIP medical room	1		according to capacity		5	Hospitality					•		•	•	•	
	9.15	7	VIP kitchen	1		according to capacity		5	Hospitality					•	•		•	•	•
	9.16	7	Commercial hospitality kitchen	1	TBD	according to capacity		9	Hospitality	Adjacent to VIP lounges			•	•	•		•	•	•
	9.17	7	VIP reception desk – opening match and final	1	10	40	40	5	Hospitality			Used by FIFA and LOC protocol	•	•	•		•	•	•
	9.18	7	VIP reception desk – semi-finals	1	10	30	30	5	Hospitality				•	•		•	•	•	•
	9.19	7	VIP reception desk – group matches and round of 16	1	10	20	20	5	Hospitality				•	•		•	•	•	•
10	Hospit	ality ar	eas – within stadium perimete	er															
	10.01	7	Commercial affiliate village – final	1	5,000 to 7,000	per	35,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium			•		•	•	•	•
	10.02	7	Commercial affiliate – semi-finals	1	3,500 to 4,000	5 to 5.6m ² per occupancy	20,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium			•		•	•	•	• •
	10.03	7	Commercial affiliate – quarter-finals	1	1,800 to 2,000	per	10,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium			•		•	•	•	• •
	10.04	7	Commercial affiliate – group matches and round of 16	1	1,400 to 1,600	5 to 5.6m ² per occupancy	8,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium			•		•	•	•	•
	10.05	7	Commercial hospitality – final	1	10,000	4.6m² per occupancy	50,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium			•		•	•	•	• •
	10.06	7	Commercial hospitality – semi-finals	1	4,300	4.6m² per occupancy	20,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium			•		•	•	•	• •
	10.07	7	Commercial hospitality – quarter-finals	1	2,200	4.6m² per occupancy	10,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium			•		•	•	•	• •
	10.08	7	Commercial hospitality – round of 16	1	1,900	4.6m² per occupancy	9,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium			•		•	•	•	• •
	10.09	7	Commercial hospitality – group matches	1	1,100	4.6m² per occupancy	9,000	9	Hospitality	300m from centre of stadium	150m from the seats minimum, max. 300m from centre of stadium			•		•	•	•	•
11	Media	intervi	ew areas																
	11.01	8	Multilateral flash interview 1-2	2	4	6	12	1/2	Marketing/TV	Players' tunnel	In players' tunnel or direct access off tunnel			•		•		•	• •
	11.02	8	Unilateral flash interview 6	6	4	6	36	1/2	Marketing/TV	Players' tunnel	In players' tunnel or direct access off tunnel			•		•		•	• •

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		,	· tribune			/			/	/									
	13.03	8	Tribune photographers	TBD			TBD	7	Media	Main stand		Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•			
	13.04	8	Refreshment area	TBD			TBD	6	Media	Main stand		Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•			
	13.05	8	Commentary positions	TBD			TBD	6	Marketing/TV	Main stand		Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•		•	• •
	13.06	8	Cableways	TBD			TBD	6	Marketing/TV	Main stand		Seat allocations, by constituent groups, and infrastructure requirements will vary according to the specific event and stadium	•	•		•			
14 9	Stadiu	m med	ia centre (SMC)																
	14.01	8	Stadium media centre – final	1	2,000	10,000	10,000	7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
	14.02	8	Stadium media centre – group matches	1	800	4,000	4,000	7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
	14.03	8	Rate card service desk – final	1	8	incl. 14.01		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
	14.04	8	Rate card service desk – group matches	1	4	incl. 14.02		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
	14.05	8	Camera repair service	1		incl. 14.01+14.02		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
	14.06	8	Press conference room – daily media briefing	1		incl. 14.01		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
	14.07	8	Information desk	1		incl. 14.01+14.02		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
	14.08	8	Cafeteria and lounge	1		incl. 14.01+14.02		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
	14.09	8	Pigeon holes	1		incl. 14.01+14.02		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
	14.10	8	Welcome desk	1		incl. 14.01+14.02		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
	14.11	8	Ticket issue desk	1	2	incl. 14.01+14.02		7	MATCH	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
	14.12	8	Host city information desk	1		incl. 14.01		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
	14.13	8	Medical room	1		incl. 14.01+14.02		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
	14.14	8	SMC media work desks – final	1	1,000	incl. 14.01		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
	14.15	8	SMC media work desks – other	1	500	incl. 14.02		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •

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			lia centre (SMC)		450			_											
12	4.16	8	SMC photographers' work desks – final	1	150	incl. 14.01		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
14	4.17	8	SMC photographers' work desks – other	1	100	incl. 14.02		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
14	4.18	8	SMC lockers – final	1	300	incl. 14.01		7	Media	SMC	Access from the media tribune and the field	Size of lockers (trolleys for photographers)	•	•		•	•	•	• •
14	4.19	8	SMC lockers – other	1	200	incl. 14.02		7	Media	SMC	Access from the media tribune and the field	Size of lockers (trolleys for photographers)	•	•		•	•	•	• •
14	4.20	8	Press agency offices	TBD		incl. 14.01		7	Media	SMC	Access from the media tribune and the field	3,000m ² included in 10,000m ² of SMC final venue	•	•		•	•	•	• •
14	4.21	8	Vending machine	TBD		incl. 14.01+14.02		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
14	4.22	8	Transportation desk	1		incl. 14.01+14.02		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	•
14	4.23	8	FIFA media channel	1	5	50		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	• •
14	4.24	8	Media storage room	TBD		incl. 14.01+14.02		7	Media	SMC	Located in main stand		•	•		•	•	•	•
14	4.25	8	Office for telecom partner	1		incl. 14.01+14.02		7	Media	SMC	Access from the media tribune and the field		•	•		•	•	•	•
14	4.26	8	Offices – editors	1	5	400		7	Media	SMC	Access from the media tribune and the field	400m² offices for editors	•	•		•	•	•	• •
15 FIF	FA me	dia ar	eas																
15	5.01	8	Offices – SMC 1	1	12	48	48	7	Media	Main stand	Access to the FIFA office areas, part of the SMC		•	•		•	•	•	• •
15	5.02	8	Offices – SMC offices	1	8	32	32	7	Media	Main stand	Access to the FIFA office areas, part of the SMC		•	•		•	•	•	• •
15	5.03	8	Copy area			incl 15.02		7	Media	Main stand			•	•		•	•	•	• •
15	5.04	8	SMC meeting room – final	1	20	80	80	7	Media	Main stand			•	•		•	•	•	• •
15	5.05	8	SMC meeting room – final and other	2	30	120	240	7	Media	Main stand		Two meeting rooms for final, one for 10 people and one for 20 people, meeting room for 10 people at all games	•	•		•	•	•	•
15	5.06	8	FIFA.com office – final	1	120	600	600	7	New media	Main stand	Main stand		•	•		•	•	•	• •
15	5.07	8	FIFA.com office – other	1	5	25	25	7	New media	Main stand	Main stand		•	•		•	•	•	• •
15	5.08	8	New info	1	5	20	20	7	Media	Main stand			•	•		•	•	•	• •
15	5.09	8	Information services	1	5	20	20	7	Media	Main stand			•	•		•	•	•	• •
15	5.10	8	IT office (rate card)	1	3	15	15	7	MATCH IT	Main stand			•	•		•	•	•	• •
15	5.11	8	IT storage (rate card)	1		15	15	7	MATCH IT	Main stand			•	•		•	•	•	• •
16 Br	oadca	st con	npounds																
16	6.01		Broadcasting compound	1	TBD	5,000	5,000	8	Marketing/TV	Behind main stand	External to stadium, behind main stand			•		•		•	• •

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17	Broadc	ast are	eas															
	17.01	8	Commentary control room	1	20	80	80	8	Marketing/TV	Main stand	Media tribune next to commentary position		•	•	•	•	•	• •
	17.02	8	Announcer's platform	4	4	8	32	8	Marketing/TV	Main stand				•	•	•	• (• •
	17.03	8	Rate card technical areas	1	2	10	10	8	MATCH	Main stand				•	•	•	• (• •
18	Camera	a posit	ions															
	18.01	8	Camera 1	1	1	2 x 3m	6	3	Marketing/TV	Centre line – main stand	Media tribune and broadcast compound		•		•			
	18.02	8	Camera 2	1	1	2 x 3m	6	3	Marketing/TV	Next to 1			•		•			
	18.03	8	Camera 3 & 4	2	1	2 x 3m	6	3	Marketing/TV	16m line				•	•			
	18.04	8	Camera 5 & 6	2	1	2 x 3m	6	3	Marketing/TV	Main stand on goal line			•		•			
	18.05	8	Camera 7 & 8	2	1	2 x 3m	6	1	Marketing/TV	Behind goals				•	•			
	18.06	8	Camera 9	1	1	2 x 3m	6	1	Marketing/TV	Centre line – pitch			•		•			
	18.07	8	Camera 10	1	1	2 x 3m	6	3	Marketing/TV	Raised on south stand				•	•			
	18.08	8	Camera 11	1	1	2 x 3m	6	3	Marketing/TV	Raised on north stand		Only required for opening match, third-place play-off and final		•	•			
	18.09	8	Camera 12 & 13	2	1	2 x 3m	6	1	Marketing/TV	On field next to goal				•	•			
	18.10	8	Camera 14	1	1	2 x 3m	6	1	Marketing/TV	Crane behind goal				•	•			
	18.11	8	Camera 15	1	1	2 x 3m	6	1	Marketing/TV	Crane behind goal				•	•			
	18.12	8	Camera 16 & 17	2	1	2 x 3m	6	1	Marketing/TV	Pitch level of action			•		•			
	18.13	8	Camera 18	1	1	2 x 3m	6	3	Marketing/TV	Raised reverse angle			•		•			
	18.14	8	Camera 19 & 20	2	1	2 x 3m	6	3	Marketing/TV	Reverse angle for bench			•		•			
	18.15	8	Camera 21	1	1	2 x 3m	6	3	Marketing/TV	Opposite 9			•		•			
	18.16	8	Camera 22	1	1	2 x 3m	6	3	Marketing/TV	Main stand platform			•		•			
	18.17	8	Camera 23 & 24	2	1	2 x 3m	6	3	Marketing/TV	Roving player camera				•	•			
	18.18	8	Camera 25	1	1	2 x 3m	6	8	Marketing/TV	On south-east diagonal				•	•			

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18	Camera	positi	ions															
	18.19	8	Unilateral camera position – centre left	1	1	2.5 x 10	25	3	Marketing/TV					•	•			
	18.20	8	Unilateral camera position – centre right	1	1	2.5 x 10	25	3	Marketing/TV					•	•			
	18.21	8	Unilateral camera position – goal left	1	1	2.5 x 5	12.5	3	Marketing/TV					•	•			
	18.22	8	Unilateral camera position – goal right	1	1	2.5 x 5	12.5	3	Marketing/TV					•	•			
	18.23	8	Unilateral camera position – field left 1	1	1	2.5 x 12	30	1	Marketing/TV					•	•			
	18.24	8	Unilateral camera position – field left 2	1	1	2.5 x 9	22.5	1	Marketing/TV					•	•			
	18.25	8	Unilateral camera position – field right 1	1	1	2.5 x 12	30	1	Marketing/TV					•	•			
	18.26	8	Unilateral camera position – field right 2	1	1	2.5 x 9	22.5	1	Marketing/TV					•	•			
	18.27	8	Unilateral camera position – Reverse left	1	1	25 x 5	12.5	3	Marketing/TV					•	•			
	18.28	8	Unilateral camera position – reverse right	1	1	2.5 x 5	12.5	3	Marketing/TV					•	•			
19	Spectat	tor are																
	19.01	6	Commercial display – partners	6	TBD	200	1,200	3	Marketing	Stadium perimeter	Between search area and turnstiles			•	•			
	19.02	6	Commercial display – supporter	8	TBD	100	800	3	Marketing	Stadium perimeter				•	•			
	19.03	6	Commercial display – supplier	6	TBD	50	300	3	Marketing	Stadium perimeter				•	•			
	19.04	6	Commercial display – host city	1	TBD	100	100	3	Marketing	Stadium perimeter				•	•			
	19.05	6	Commercial display – LOC	1	TBD	100	100	3	Marketing	Stadium perimeter				•	•			
	19.06	6	ATM	min. 1				3	Marketing	Internal stadium perimeter	In larger stadium media centres (semi-final and final)	Depends on contract with service provider, ISDN line and normal power supply	•	•	•		•	
	19.07	6	Official licensed product – concessions A	6-10	TBD	6 x 3	18	3	Marketing	Internal stadium perimeter	Provide storage close to spectator areas	Size and quantity is dependent on the event hosted (opening match and final)	•	•	•		•	
	19.08	6	Official licensed product – concessions B	6-10	TBD	10 x 5	50	3	Marketing	Internal stadium perimeter	Provide storage close to spectator areas	Size and quantity is dependent on the event hosted (i.e. opening match and final)	•	•	•		•	

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19	Spectat	tor are	as									_							
	19.09	6	Official licensed product – concessions C	6-10	TBD	10 x 15	150	3	Marketing	Internal stadium perimeter	Provide storage close to spectator areas	Size and quantity is dependent on the event hosted (i.e. opening match and final)	•	•	•		•	•	
20	Ceremo	nies																	
	20.01		Entertainers' changing room					4	Competitions	Main stand and tunnels	Away from public routes and close to player/service tunnels	Ceremonies requirements will be decided when the ceremony concept is made available; five additional camera positions may be used for opening and closing ceremonies	•	•	•	•	•	•	•
	20.02		Participants' holding area					4	Competitions	Main stand and tunnels	Away from public routes and close to player/service tunnels		•	•	•				
	20.03		Participants' changing rooms					4	Competitions	Main stand and tunnels	Away from public routes and close to player/service tunnels		•	•	•	•			
	20.04		Prop store					4	Competitions	Main stand and tunnels	Away from public routes and close to player/service tunnels		•	•	•				
21	Accredi	itation	centre																
	21.01	8	Accreditation centre				150						•	•	•				
	21.02	8	– Security desk	1		incl. 21.01		n/a	LOC	Outside turnstiles	Outside security perimeter	All areas are increased for the opening match	•	•	•	•	•	•	•
	21.03	8	- Queuing area	1		incl. 21.01		n/a	LOC	Outside turnstiles			•	•	•	•	•	•	•
	21.04	8	– Welcome desk	1		incl. 21.01		n/a	LOC	Outside turnstiles			•	•	•	•	•	•	•
	21.05	8	– Photographers' desks	4		incl. 21.01		n/a	LOC	Outside turnstiles			•	•	•	•	•	•	•
	21.06	8	– Print station	1		incl. 21.01		n/a	LOC	Outside turnstiles			•	•	•	•	•	•	•
	21.07	8	– Offices	3		incl. 21.01		n/a	LOC	Outside turnstiles			•	•	•	•	•	•	•
	21.08	8	– Lounge and refreshments	1		incl. 21.01		n/a	LOC	Outside turnstiles			•	•	•	•	•	•	•
	21.09	8	– IT office	1		15	15	n/a	MATCH IT	Outside turnstiles			•	•	•	•	•	•	•
22	Public a	addres	s systems																
	22.01	6	Sound control room	1	3	20	20	4	LOC	VOC	Security area		•		•	•	•	•	•
	22.02	6	Security room	1	30	50	50	4	LOC	VOC	Emergency services' area		•		•	•	•	•	•
23	Service	comp	ounds																
	23.01		Merchandise storage	1	20	500	500	4	LOC	Back of house	Away from public routes	4.8m min. height		•	•				
	23.02		Volunteer rest area	1	200	400	400	4	LOC	Back of house				•	•	•	•	•	
	23.03		Security assembly area	1	TBD	TBD	TBD	4	LOC	Back of house				•	•				
	23.04		Waste removal	1	TBD	TBD	TBD	TBD	LOC	Back of house			•	•	•				
	23.05		Official licence concession store	TBD	TBD	TBD	TBD	9	Marketing	Back of house			•	•	•		•	•	

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Requires internet connectivity
Requires uninterrupted power supply</sup>

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25	Parking	facilit	ties													
	25.15	3	Commercial hospitality – semi-finals	800 ⊆ 15 ≡			9	Hospitality	Close to main stand entrance				•	•		
	25.16	3	Commercial hospitality – opening match and final	1,000 = 20 =			9	Hospitality	Close to main stand entrance				•	•		
	25.17	3	Commercial display	TBD			9	Marketing	Close to main stand entrance				•	•		
	25.18	3	Partner operations – group matches	25			9	Hospitality	Close to main stand entrance				•	•		
	25.19	3	Partner operations – quarter-finals	30			9	Hospitality	Close to main stand entrance				•	•		
	25.20	3	Partner operations – host nation, group	40			9	Hospitality	Close to main stand entrance				•	•		
	25.21	3	Partner operations – semi-finals	40			9	Hospitality	Close to main stand entrance				•	•		
	25.22	3	Partner operations – opening match and final	50			9	Hospitality					•	•		
	25.23	3	FIFA parking	50			4	LOC	Within stadium	Within stadium close to the main entrance		•		•		
	25.24	3	LOC parking	50			4	LOC	Within stadium	Within stadium close to the main entrance		•		•		
	25.25	3	TV broadcasting parking – opening match, semi-finals and final	250			TBD	Marketing/TV			Outside broadcasting area		•	•		
	25.26	3	TV broadcasting parking – other	170			TBD	Marketing/TV			Outside broadcasting area		•	•		
	25.27	3	Media parking – final	200			TBD	Media			Photographers' drop-off in front of stadium media centre		•	•		
	25.28	3	Media parking – other	150			TBD	Media			Photographers' drop-off in front of stadium media centre		•	•		
	25.29	3	Media drop-off	1	Sh	uttle bus	TBD	Media		Closest to media tribune entrance or stadium media centre entrance			•	•		
26	Transpo	ort are	as													
	26.01		Airports					LOC								
	26.02		Rail stations					LOC								
	26.03		Coach drop-off					LOC								
	26.04		Park and ride					LOC								
	26.05		Spectator parking					LOC								

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27	Remote med	ia centre			/			/	,									
	27.01	Main media centre	1	TBD		10,000	7	Media	Off site	Large clear span structure like exhibition centre	This centre will conduct the daily media briefing, be the largest SMC, and accommodate the major press agencies	•	•	• •	•	•	• •	
	27.02	International broadcasting centre	1	TBD		30,000	7	Marketing/TV			Ideally in the city hosting opening match	•	•	• •	•	•	• •	
28	Official hotel	s																
	28.01	FIFA hotel				40		LOC/MATCH	Off site	Easy access to airport and stadium		•				•	•	
	28.02	Ticketing office	TBD		40	100		MATCH			Details will be given at a later stage	•	•	•	•	•	• •	
	28.03	Ticketing back office	1		100			MATCH				•	•	•	•	•	• •	
29	Training venu	ıes																
	29.01	Pitch	1		105 x 68		1/2/6	Competitions	Off site	Ideally 20 minutes max. from venue-specific team hotel		•		•				
	29.02	Dressing rooms	1	23	150	150	2	Competitions	Off site		Should the locker room not be large enough, the team can use two dressing rooms available on the training site	•	•	•	•	•		
	29.03	Showers	1	11			2	Competitions				•	•	•				
	29.04	Spectator stands		TBD	TBD			Competitions				•	•	•				
	29.05	Press conference	1	TBD	TBD			Competitions				•	•	•				
	29.06	Floodlights	1					Competitions				•	•	•				
	29.07	Security fences						Competitions				•	•	•				
	29.08	Parking facilities	TBD					Competitions				•	•	•				
30	Team base ca	mps																
	30.01	Team base camps	TBD				1/2/6	Competitions	Off site		As per training venue							
31	Referees' hot	tel																
	31.01	Referees' hotel	1	TBD			n/a	Competitions	Off site	High security and away from main public routes								
	LOC fan park																	
	32.01	LOC fan parks	TBD	TBD			5/9	Marketing	Main public gathering	Exciting public areas that are normally frequented by people			•	•	•	•	•	
33	LOC public vi	ewing areas																
	33.01	VIP area	TBD				5/9	Marketing	Existing stadiums									
34	Scoreboards	and video screens																
	34.01 6	Scoreboards and video screens	TBD				n/a	LOC	Main and opposite stands	Must be seen from every seat in the stadium		•	•	•		•	• •	

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35 Flagpoles																	
35.01 10	Exterior stadium flags	TBD				3	Competitions			May include: FIFA, confederations, national, United Nations and IOC flags	•	•	•				
36 Ticketing cer	ntre																
36.01	Welcome desk	1	TBD	TBD			MATCH			Not applicable to the stadium, applicable to the FIFA hotel	•	•	•	•	•	•	
36.02	Front office – group matches, round of 16	1	20	50	50		MATCH				•	•			•	•	•
36.03	Front office – quarter-finals and semi-finals	1	30	70	70		МАТСН				•	•	•		•	•	•
36.04	Front office – opening match and final	1	40	100	100		МАТСН				•	•	•	•	•	•	•
36.05	Queuing area – group matches, round of 16	1	75	120	120		MATCH				•	•	•	•	•	•	•
36.06	Queuing area – quarter-finals	1	100	150	150		MATCH				•	•	•	•	•	•	•
36.07	Queuing area – opening match and final	1	150	200	200		МАТСН				•	•	•	•	•	•	•
36.08	Trouble-shooting area	1	10	12	12		MATCH			5 people at counter, 5 solving issues	•	•	•	•	•	•	•
36.09	Back office – group matches, round of 16	1	5	25	25		МАТСН				•	•	•	•	•	•	•
36.10	Back office – quarter-finals, semi-finals	1	10	40	40		МАТСН				•	•	•	•	•	•	•
36.11	Back office – opening match and final	1	10	40	40		МАТСН				•	•	•	•	•	•	•
36.12	Venue manager's office	1	2	30	30		MATCH				•	•	•	•	•	•	•
36.13	Meeting rooms	2	10	30	60		MATCH				•	•			•	•	•
36.14	Secure storage			incl. in 37.04			MATCH				•	•					
36.15	Rest area	1	10	30	30		MATCH				•	•	•				
36.16	Vending machine	incl. in 37.04					MATCH				•	•	•				
37 Volunteers'	centre																
37.01	Reception desk	1	25	40	40		LOC	Outside perimeter			•		•		•		
37.02	Offices	4	2	12	48		LOC					•			•		
37.03	Volunteers' areas	1	250	250	250		LOC				•	•	9	•	•	•	

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38 IT technic	al areas			<i>'</i>				· · · · ·	·						
38.01	Primary technical area 1	1		30	30	MATCH IT				• •	•	•	•	•	.
38.02	Primary technical area 2	1		30	30	MATCH IT				• •	•	•	•	•	D
38.03	Secondary technical areas	TBD		10	10	MATCH IT			Quantity depending on the stadium layout (number and location will be dependent on basic infrastructure)	• •	•	•	•	•	•
39 Others															
39.01	Central logistics warehouse	TBD		100	100	MATCH IT				• •	•	•	•	•	
40 Venue ticl	ket process centres														
40.01	Venue ticket process centres	1	20	200-300	300	MATCH				• •	•	•	•	•	•
40.02	Back office	1	5	incl. in 42.01		MATCH				• •	•	•	•	•	D
40.03	Secure storage for blank stock	TBD		incl. in 42.01		MATCH				•	•				
41 Main tick	et process centre														
41.01	Multi-lingual call centre	1	8	40	40	MATCH			Handles VIP telephone sales, operates 24/7	• •	•	•	•	•	•
41.02	Ticketing operations centre for general public	1	TBD	100	100	MATCH				• •	•	•	•	•	D
42 Ticketing	kiosk in airports														
42.01	Ticketing kiosk in airports	1		20	20	MATCH			Installation of ticketing kiosks at selected airports						

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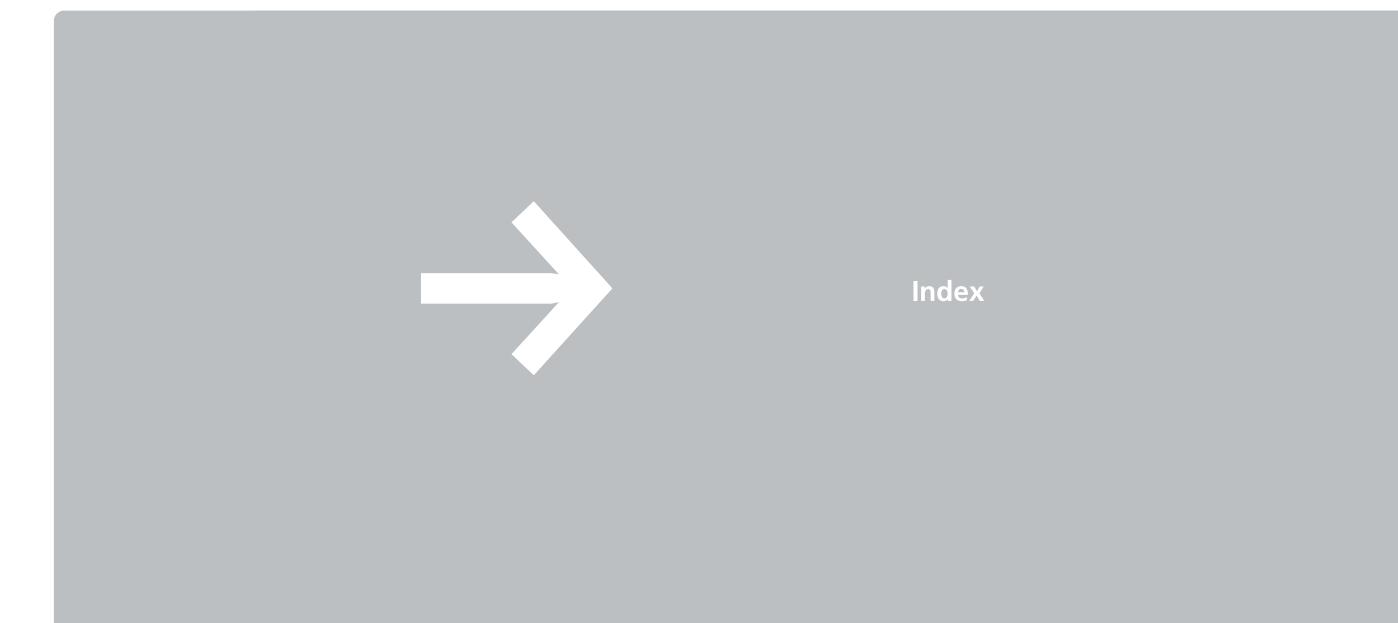
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FIFA accreditation zones

Zone	Area	Details
Zone 1*	Field	 Pitch area Substitutes' benches Fourth official's bench Photographers' area Pitch access and tunnel
Zone 2*	Competition area	 Dressing rooms, players Dressing rooms, referees First aid room FIFA delegation offices LOC venue manager's office Doping control room Corridors (with access to dressing rooms) and offices
Zone 3	Public area	 General public entrance and areas Public toilet facilities Public points of sale First aid facilities Commercial and host cities' display
Zone 4	Operations-related areas (offices)	 FIFA offices (IT room, announcer's room, police/firemen, radio control room, screen sound room, electricity generator, emergency medical facilities) LOC offices FIFA storage rooms LOC storage rooms
Zone 5*	VIP area	VIP reception room FIFA banquet area
Zone 6*	Media stands	Written press seats Radio and TV commentators' and observers' seats
Zone 7	Media centre	 Media working area Media catering area Press conference room Photographers' room Development and service centres

Zone	Area	Details
Zone 8	Broadcast area	TV compoundTV and radio studiosCamera platform
Zone 9*	Hospitality area	Official sponsor and supplier villageHospitality villageHospitality loungesSkyboxes

^{*} Some areas (indicated with *) will require additional credentials. Supplementary Access Devices (SAD) will give access to certain defined areas on site; e.g. the pitch, stands and studios during this period.



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