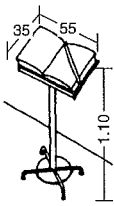
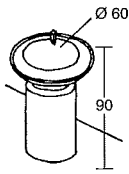


## CHRISTIAN CHURCHES

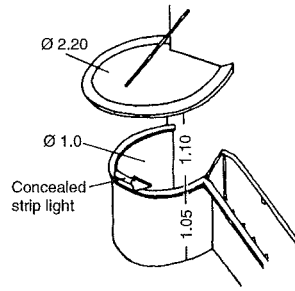
### Liturgical Elements



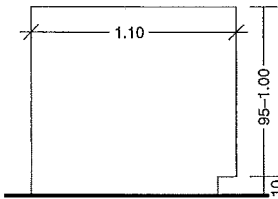
1 Lectern



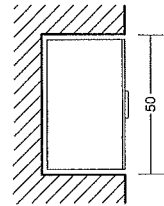
2 Font



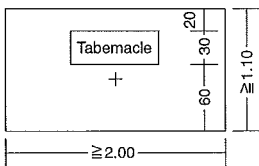
3 Pulpit with acoustic ceiling to reflect the sound towards the congregation



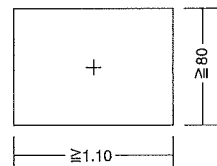
4 Altar with toe-kick, section



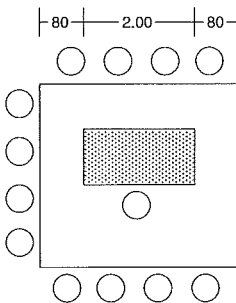
5 Tabernacle integrated into the wall



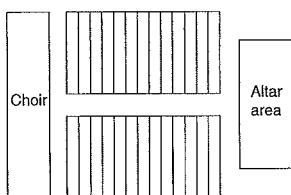
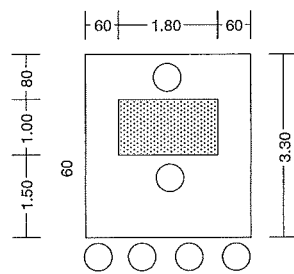
6 Altar with tabernacle, plan



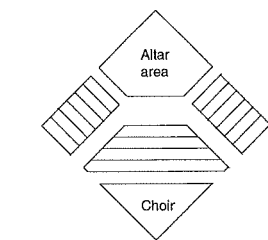
7 Altar without tabernacle, plan



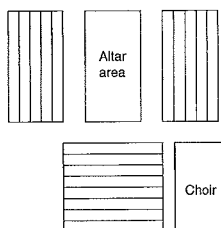
8 Variants of area around altar



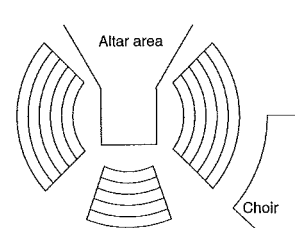
9 Arrangement of seating in chancel and choir



10 Rhombus-shaped arrangement



11 Three-sided arrangement



12 Central arrangement in 1/4 circle

### Guidelines for church building

The individual state Churches and bishoprics have special guidelines for the churches to be built in their areas. In addition, the Places of Assembly Regulations also apply to spaces which are not predominantly intended for church services. For new building, alteration and refurbishment, the advice of the diocesan commission should be requested. Approvals are issued by the bishop's representative.

Because churches serve religious faiths, the form of the building should be developed from the belief and the liturgy.

### Liturgical elements

Religious elements required for all regular acts of worship.

#### Pulpit → 3

Raised enclosed platform for preaching and the proclamation of the Word. The pulpit stands in a close liturgical relationship to the altar, but there are no precise regulations regarding its location. This is frequently to the right of the altar as seen from the nave. The height of the pulpit is 1.00–1.20 m (pulpit floor level) above the church floor.

#### Lectern → 1

In early Christian churches this was a mobile reading desk called the ambo for the reading of the Gospels and Epistles. The lectern should, despite being mobile, be placed in the immediate vicinity of the altar.

#### Altar

'God's table', focus of the celebration of the Eucharist. Fixed and mobile altars or sacrament tables are possible. The shape and material are not regulated. The altar is mostly rectangular, 0.95–1.00 m high and free-standing, so that it is possible to walk around it without difficulty → 8. In reformed churches, however, other shapes are possible. An altar should not be used before it is consecrated by the bishop.

#### Altar steps

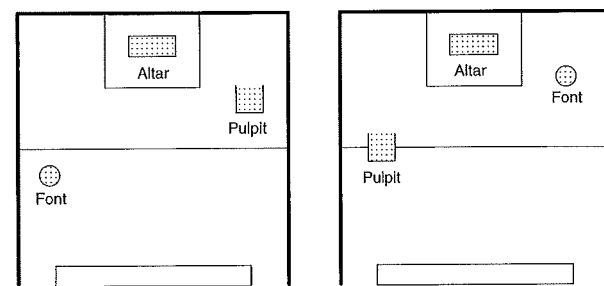
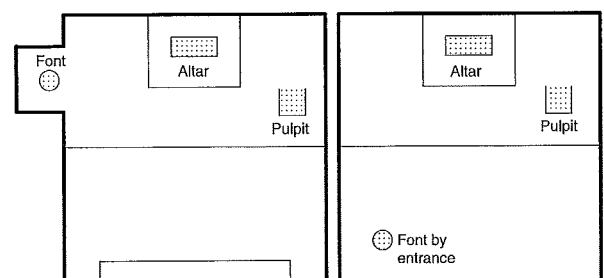
There should be an at least 1.50 m level area in front of the altar, next to and behind the altar min. 0.80 m (if the altar can be walked around). This area is often raised by one or two steps.

#### Tabernacle → 5

Shrine for the storage of the reserved sacrament. Tabernacle and altar are in a close liturgical and spatial relationship to one another.

Religious buildings

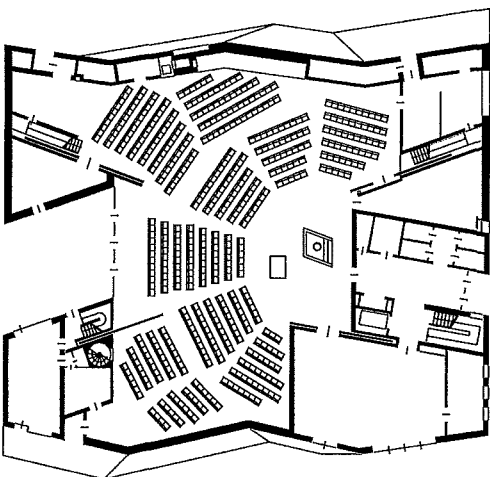
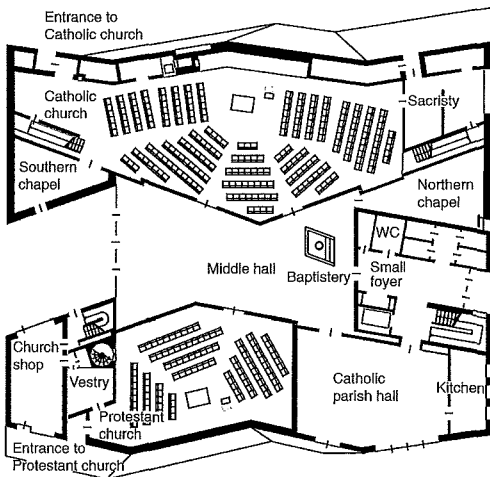
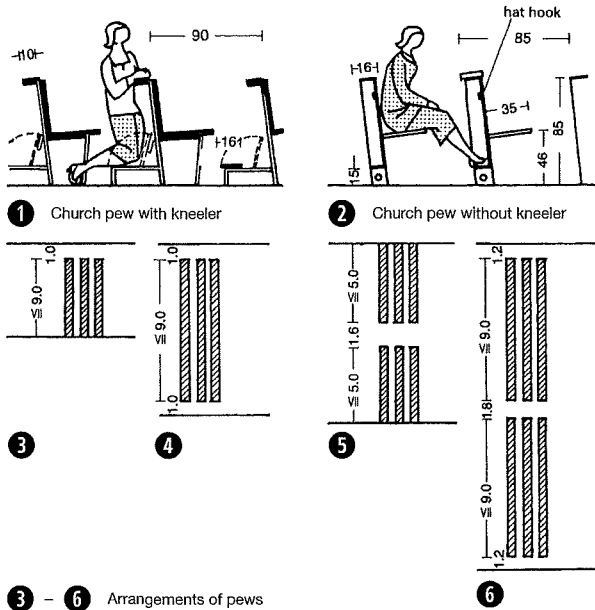
CHRISTIAN CHURCHES  
Liturgical elements  
Furnishing  
Vestry  
Bell towers



13 Layouts of altar, pulpit and font

## CHRISTIAN CHURCHES

### Furnishing, Vestry



Arch.: Kister Scheithauer Gross

#### Arrangement of seating

Space requirement for pew without kneeler (Protestant) → 2  
 = 0.4–0.5 m<sup>2</sup> (without aisles), for pew with kneeler (Catholic) → 1  
 = 0.43–0.52 m<sup>2</sup> (without aisles).

The layout and form of seating is of great importance for the dimensions and effect of the space, quality of hearing and view. In smaller churches (chapels), an aisle of 1.00 m width is sufficient → 3 with pews containing 6–10 seats, or a central aisle of 1.60 m width with seating both sides as → 5.

Because of possibly noticeable cold emanating from the external walls, two side aisles with pews in between → 6 containing 12–18 seats is normal.

Wider churches will have correspondingly more aisles. The total space requirement for each seat is therefore approx 0.63–1.0 m<sup>2</sup>. For standing places, 0.25–0.35 m<sup>2</sup> each is sufficient; for these a large part of the aisles, particularly in front of the back wall, is occupied. The width of the exit doors and steps must comply with the Places of Assembly Regulations.

A central aisle on the altar axis is often desired for weddings, processions etc.

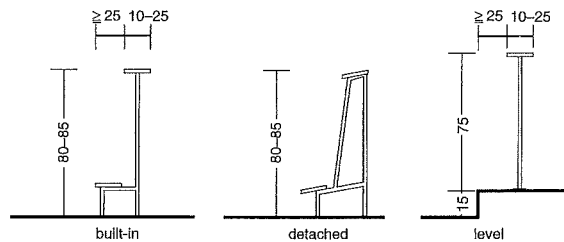
#### Confessional → 10

Three-compartment enclosed booth made of wood, in the central part of which the Catholic priest sits to hear confession. The person confessing speaks to the Catholic priest through one of the two side compartments through a grille of approx. 30 × 40 cm. The lower edge of the opening should be approx. 1.00 m above floor level. The confessional should be situated inside the church at a location which is not too bright. Sufficient ventilation and extraction should be provided.

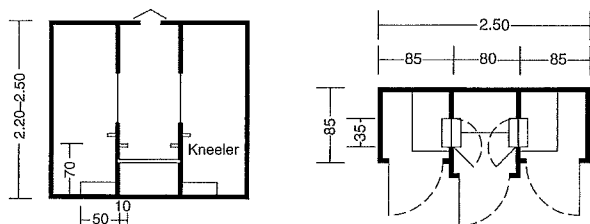
Today, a confessional room is possible as an alternative.

#### Vestry → 11

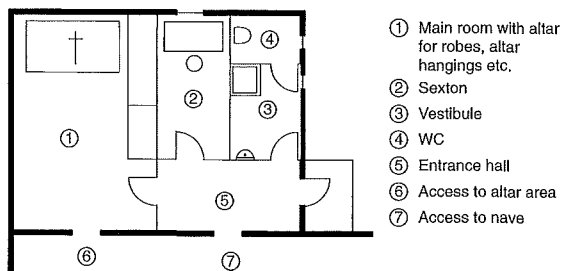
The vestry (also known as sacristy) is a side room in the church for the clergy, vestments and equipment for the service. It is best placed near and to the side of the altar.



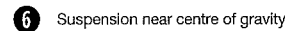
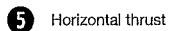
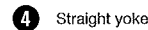
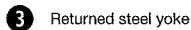
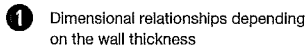
10 Two-sided, enclosed confessional, vertical and horizontal sections



11 Example of a vestry



## Bell Towers



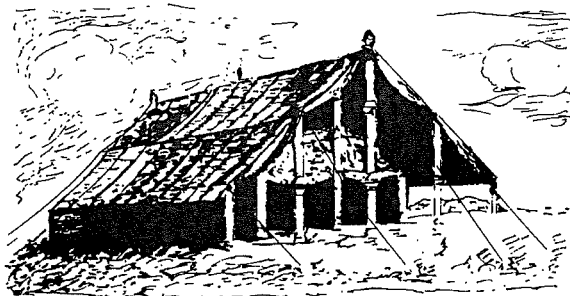
The standards on bell towers should be complied with. A bell specialist can provide advice about the size and pitch of the bells, acoustics and weights. A bell founder designs the bell frame as the basis for the dimensions and layout of the belfry and sound openings, and also contributes loadings for the structural engineer, who has to consider static and dynamic loadings.

A fair number of small openings at right angles to the direction of the bell swing is better than a few larger ones. The sound transmission angle should not be more than 30° from the horizontal (to protect the neighbourhood). The clapper strike should not radiate, which should also be considered in the layout of the sound shutters. The total openings should be max. 5% of the interior walls of the belfry if the wall surfaces are smooth, and max. 10% if rough. Concrete ceilings and floors can be clad with wood.

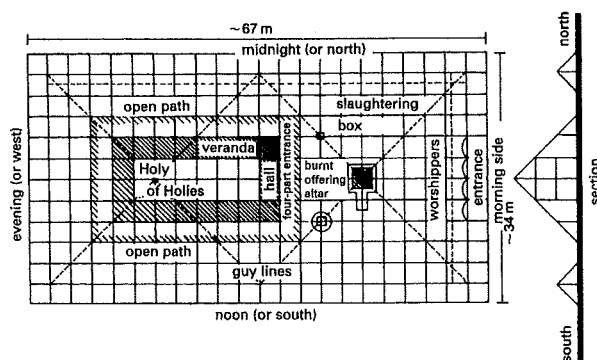
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## SYNAGOGUES

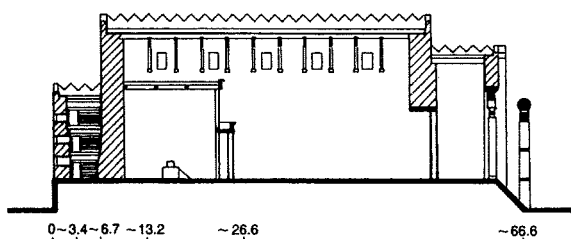
### General Design Notes



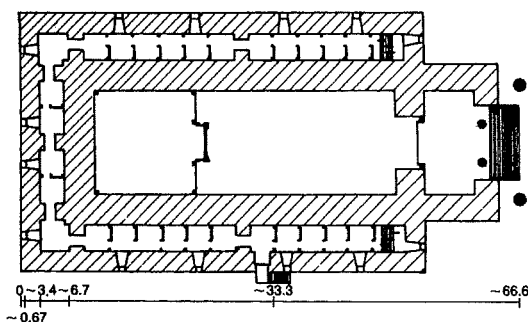
1 The Tabernacle, the Jews' first place of worship → 2



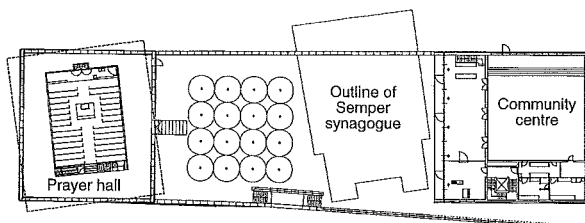
2 Court of the Tabernacle → 1



3 Solomon's Temple, Jerusalem, longitudinal section → 4



4 Solomon's Temple, Jerusalem, plan → 3



5 Prayer hall and community centre divided by a courtyard into separate buildings, New Dresden synagogue Arch.: Wandel-Hoefler Lorch + Hirsch

The first building commission from God, for a religious sanctuary, with exact technical and design specifications for the erection of the Tabernacle (dwelling place), can be found in the Bible (Exodus 25-27).

In a synagogue, the focal point is not an altar but the raised preaching rostrum (almemor → 1), from where Torah excerpts are read. The synagogue is aligned towards Jerusalem. In the front wall is the ark or chest (Aron Hakodesh), where the Torah scrolls are kept → 6.

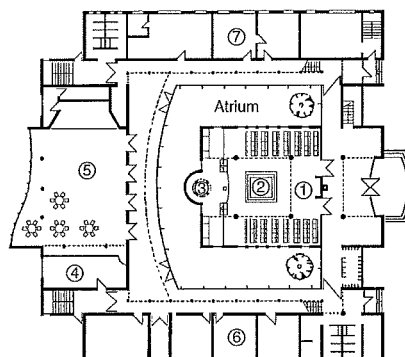
Between the rostrum and the ark is an aisle for the ceremonial procession before the reading from the scrolls.

Constructing the plan of a synagogue is always an attempt to solve anew a spatial conflict defined by the positioning of two room elements of equal significance – the preaching rostrum (almemor) and the holy ark (Aron Hakodesh) – in a sacred room. In orthodox synagogues, the ark is mostly located on the east (mirach) wall and the rostrum in the middle of the room. In more liberal synagogues, the two elements are spatially combined and orientated toward the east wall.

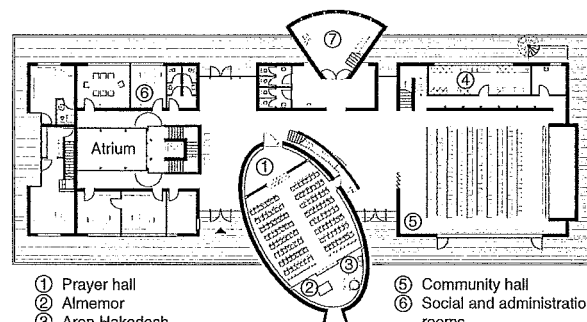
The space for women is at least symbolically separated from, and out of the view of, the men, often in the form of a balcony. At the entrance to the synagogue, there is a fountain or washbasin for handwashing. The ritual bath (mikva) for women, with immersion pool, is normally in the cellar. It should have natural running water that has not flowed through metal pipes. A more liberal synagogue might have an organ, but it would be unobtrusive.

The symbols of the Star of David, the seven-branched candlestick (menorah) and tablets of the Mosaic law are essential elements. The decoration consists of plant, geometrical or written ornamentation: depictions of people are excluded.

- 1 Prayer hall
- 2 Almemor
- 3 Aron Hakodesh
- 4 Kosher kitchen
- 5 Community hall
- 6 Administration area
- 7 Social rooms



6 Prayer hall surrounded by inner courtyard, Darmstadt synagogue Arch.: Alfred Jacoby

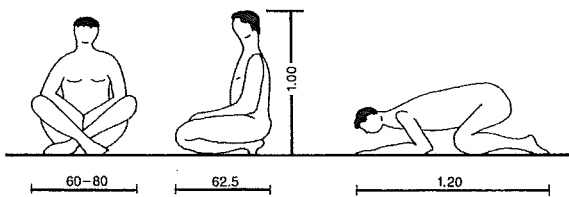


- 1 Prayer hall
- 2 Almemor
- 3 Aron Hakodesh
- 4 Kosher kitchen
- 5 Community hall
- 6 Social and administration rooms
- 7 Library

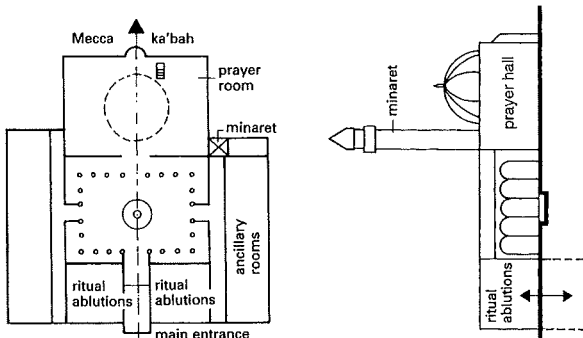
7 Oblique, oval prayer hall in unusual position in relation to synagogue courtyard

## MOSQUES

General Design Notes

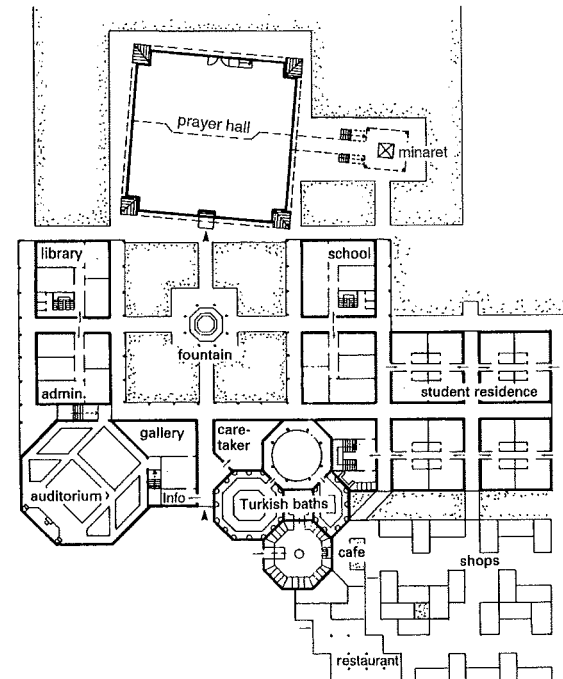


1 Men at prayer

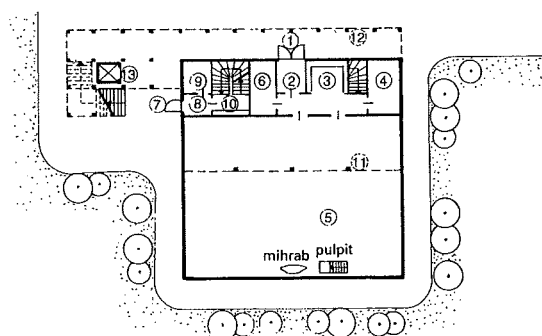


2 Functional scheme of mosque

3 Section → 2



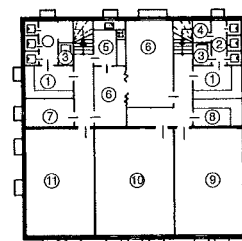
4 Islamic cultural centre in Cologne



5 Islamic cultural centre in Frankfurt, ground floor

### Ground floor

- ① entrance/men
- ② draught lobby
- ③ shoe racks
- ④ office
- ⑤ prayer hall
- ⑥ ground floor/ men
- ⑦ information/ men
- ⑧ women's entrance
- ⑨ draught lobby
- ⑩ information/ women
- ⑪ shoe racks
- ⑫ prayer hall
- ⑬ gallery/ women
- ⑭ balcony
- ⑮ minaret with lift



6 Basement → 5

### Basement

- ① rows of wash basins
- ② WCs
- ③ shower
- ④ hoist
- ⑤ kitchen
- ⑥ dining room
- ⑦ heating
- ⑧ hairdresser
- ⑨ classroom/ men
- ⑩ library and lecture room
- ⑪ classroom/ women

The mosque – in Arabic, masjid (smaller), jamia masjid (larger) – is a prayer house, cultural centre, community place of assembly, courthouse, school and university, with the Qur'an being the central source of life rules, teaching, law and religion for Islam.

In Islamic countries, the mosque stands in the bazaar (souk) at the centre of public life. Where bazaars are missing in other countries, they should be designed into the mosque (hairdresser, shop for halal food, café).

There are basic categories of mosque design and seven distinctive regional styles, e.g. the pillared hall and courtyard in much of the Middle East, Spain and North Africa, and the triple domes and courtyard of the Indian sub-continent. In the decoration, depictions of people or animals are not allowed. Plant and geometrical ornaments (arabesques) and verses from the Qur'an in Arabic calligraphy are popular and have developed into a high art form.

### Minaret

Smaller mosques seldom have a minaret, but larger ones always do. There are neither organ nor bells in Islam. From the minaret, with stair or lift to the mostly roofed upper walkway, the muezzin calls to prayer five times daily, today often with a loudspeaker (which in some countries is not allowed).

### Prayer hall

The prayer hall is laid out with a praying area of 0.85 m<sup>2</sup> for each person. The hall is normally rectangular to square, often with a central dome and is aligned to Mecca as prayer direction (qibla). On the interior of the front wall, there is the prayer niche (mihrab), and next to that the pulpit for the Friday prayers (minbar), always with an odd number of steps, for the mosque prayer leader (imam). An often only symbolic separation or a balcony serves to segregate the men and the women.

### Entrance

At the entrance, there are shelves for the shoes of the believers and rooms for ritual washing and showers, always with flowing water. The WCs are mostly as squatting closets aligned at right angles to the direction of Mecca. Mosques often have separate entrances for men and women, or the stairs to the women's balcony can be in the entrance area.

### Decorative well

Many mosques have an inner courtyard of the same size as the prayer hall, which can also be used as an extension for festivals and a decorative fountain or well (sabil) for ritual washing. In warm countries, geometrically arranged trees are planted here to give shade.

### Subsidiary rooms

Office, library, lecture and tuition room, store rooms and flats for at least the imam and muezzin complete the room allocation plan.

Religious  
buildings

MOSQUES  
General design  
notes