

# Double Church for Two Faiths

Freiburg  
Germany

kister  
scheithauer  
gross  
koln/dessau





The bold originality of the church of St. Maria Magdalena in Rieselfeld, on the outskirts of Freiburg, Germany, is enough cause to celebrate the art of architecture making. Erected on Marion-von-Rudolf Platz, the central square of a new residential district rising on the site of a former sewage farm, this monumental concrete structure not only provides its emergent community with a religious focus but makes a formidable symbolic civic gesture in an otherwise unremarkable housing estate. →



→ For this is no church in the conventional sense. Scarcely recognizable as an ecclesiastical building from the outside, internally it houses two churches, one Catholic the other Protestant, under the one roof; the two separated by an erratic central spine to serve both congregations and the local community. When the churches were consecrated at a ceremony in July 2004, the local German media dubbed the building "God's bunker", while Kristin Feireiss, publisher of a book on the building, describes it in her preface as "a sculpturally moulded room with the spaciousness of extended marquees, a structure made completely of concrete which radiates fragility, a spatial experience which has Louis Khan-like dimensions."

Externally the building is a monolithic block of inclined folded concrete walls, rising to 13 metres, penetrated via a series of randomly placed slots and openings that echo back to Le Corbusier's Chapel of Notre Dame du Haut, Ronchamps. The interior is finished entirely in fair-faced concrete, save for timber ceilings and a series of long rooflights designed to wash light into the chapels. Massive eight metre sliding concrete walls, mechanically operated on steel rails, disappear into niches allowing the three parts of the building, with a central spine of common foyer and baptismal font, to be opened into a single space for larger ecumenical services.

Designed by Professor Susanne Gross of the architectural studio of kister scheithauer gross, koln/dessau, the commission for the church was the result of an architectural competition in 1999 which attracted 176 entrants in the first round. Reduced to 29 participants selected for the second stage, the jury's selection of ksg's design was unanimous. No second prize was awarded. In an unusual, though not unique, collaboration between faiths the two new parishes for the district decided that an iconic single structure, eine doppelkirche für zwei Konfessionen, with separate chapels and some shared facilities, could serve their respective congregations better.

The United States Air Force Academy Chapel in Colorado Springs, Colorado, by Skidmore Owings and Merrill (1962), in which Catholic, Jewish and Protestants worship in separate chapels within a single building comes to mind. The church shares its site on Marion-von-Rudolf Platz with a modest citizens' centre of translucent glass; the two separated by a row of plane trees, marking the starting point of a green belt that stretches into the centre of the new district.

"The notion of two churches within one building swept me away," Prof. Gross says. "In creating our design for the competition, we had the impression that those awarding the prize wanted it to be clear from the outside that the building comprised two churches. However, as the individual volumes of both churches seemed too small to us compared to the size of the square, we decided to consolidate both churches in a homogenous form"

The result is a highly sculptural, unadorned block of poured-in-place concrete, angled and folded to lend it plasticity, while inside it is essentially one large single volume split vertically into three distinct parts: the Catholic chapel and sacristy on the north western side; the smaller Protestant church and sacristy, as well as a kitchen and Catholic parish hall, to the north eastern; and an offset central hall and foyer separating the two, containing a baptismal font, two day chapels, a prayer alcove, a small shop and stairs leading to galleries overlooking each church plus other rooms for parish work.

The Protestant church is mainly lit via a large side window behind the altar, screened by a suspended timber panel which acts to cast a mystical aura over the chapel. The extended section of the larger Catholic chapel is shaped by an erratically folded double-skinned concrete chamber, two metres deep, which contains the church entrance, an alcove for prayer, the sacristy and vestment area and store rooms. It is lit by a long shaft of light cast from skylights above, as well as a narrow row of overhead lights in the timber ceiling. Strong vertical shadows are cast on the concrete wall from overhead beams. Nearly all of the internal concrete walls are actually great moveable concrete walls, eight metres tall, each weighing up to 22 tons, set on steel tracks and mechanically operated to slide into niches, transforming the church into a single space for ecumenical services and special events. Altars and communion tables are freestanding and can be moved aside and the seating, chairs rather than pews, can be rearranged in a semi circle focused on the sunken baptismal font, the only permanent feature of the central space. St Maria Magdalena, Freiburg is a testament to the spirit of ecumenism in a world fraught with division.

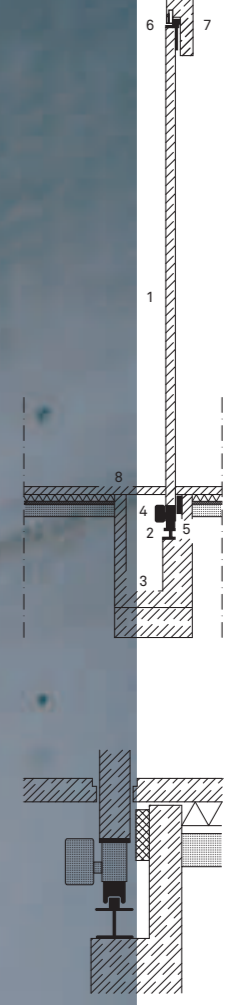


A sculpturally moulded room with the spaciousness of extended marquees, a structure made completely of concrete which radiates fragility, a spatial experience which has Louis Khan-like dimensions.

↑  
Kristin Feireiss

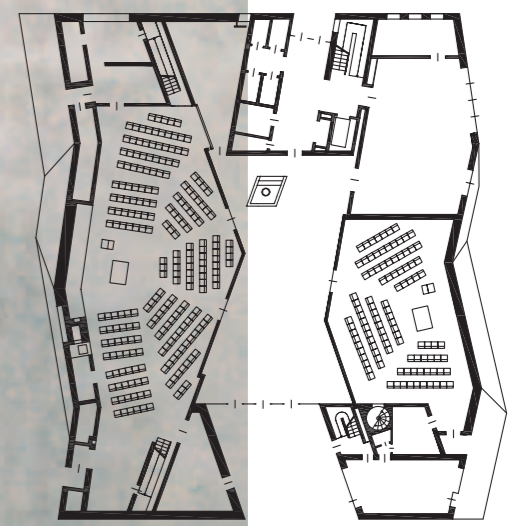
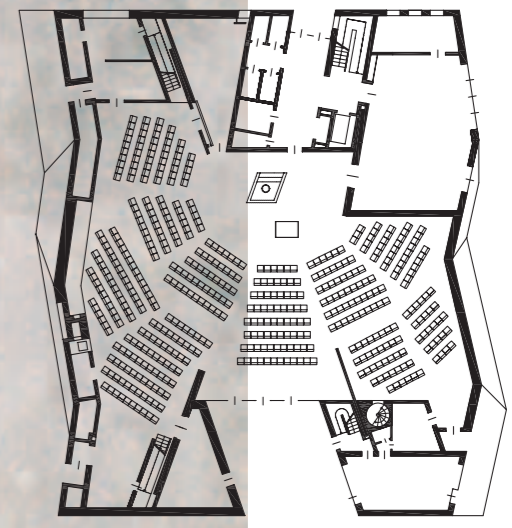
Sliding wall connection

- 1 Moveable wall element, wall thickness 18cm, in-situ concrete
- 2 Steel wheel on steel profile with guide
- 3 Service shaft
- 4 Electric drive
- 5 Sound absorption
- 6 Guide run of guide pulley
- 7 Wall-like support, in-situ concrete
- 8 Smooth-finish concrete floor





- 1 Entrance yard
- 2 Central hall
- 3 Baptismal area
- 4 Catholic church
- 5 Protestant church
- 6 Catholic parish hall
- 7 Kitchen
- 8 Small foyer
- 9 WC
- 10 Northern chapel
- 11 Catholic church sacristy
- 12 Vestment area
- 13 Alcove for prayer
- 14 Catholic church entrance
- 15 Southern chapel
- 16 Church shop
- 17 Protestant church sacristy
- 18 Protestant church entrance





#### Project Statement

In creating our design for the competition, we had the impression that those awarding the prize wanted it to be clear from the outside that the building comprised two churches. However, as the individual volumes of both churches seemed too small to us compared to the actual square, we decided to consolidate both churches in a homogeneous form and also develop the connecting central hall over the entire height to increase the volume further. The structure was intended to act as an erratic block and have a compact appearance with material homogeneity. These initial urbanistic considerations resulted in the immediate proximity of the three building parts (Catholic and Protestant churches and central hall). Only in developing the design further did we discover the opportunity of integrating the three spatial units together. As a small door cannot connect a high-walled room with another high-walled room, we thought it appropriate not to open doors but to move the wall aside. The idea of folding the wall came from the desire to lend the long room in the Catholic church a rhythm, thereby allowing the room to achieve a balance. This effect is supported by the fact that the wall sections are inclined outwards in the central, altar area. The result is a room that seems to "open up towards heaven", over a row of overhead lights along the wall. The differently inclined wall sections have the effect that, in the room's interior, the shadow from the overhead lights is interrupted at the breaks in the wall and changes direction. As a result, when sunlight enters the room, the interior appears just as plastic as the outer walls. Smooth fair-faced concrete surfaces form the surface of all the walls in the church, even that of the floor whose surface is waxed, however. The ceilings are made of wood. The windows and overhead lights are made of pale-grey (concrete-coloured) steel profiles. With a building height of 13 metres, the sliding walls are approximately 8 metres high and each weighs approximately 22 tons. The walls were covered with concrete outside the building and then raised onto the floor rails inside the church with the aid of heavy-duty armatures. Electric motors cause the walls to move. Services can take place independently in both churches at the same time. The central hall then acts to cushion the sound between the two churches. However, it is also possible to extend a church to include the central hall, or, as was the case in the first church service, open all the walls, allowing the ecumenical service to be focussed in the central hall and spread out into both church areas.

Susanne Gross



#### Construction

All the outer walls are made monolithically from lightweight aggregate concrete approximately 40 centimetres thick to avoid any necessary thermal insulating layer.

The construction firm contracted had the task of creating an almost non-porous surface homogenous in colour despite the high viscosity of the lightweight aggregate concrete and the inclined form panels. Another requirement was to design the breaks in the walls in a single, continuous line over the overall height of the building.

A hybrid building shell construction was developed, made from B25 lightweight aggregate concrete for thermally insulating the exterior fair-faced concrete walls and from B25 normal concrete for the remaining supporting constructions.

To create a very pale concrete from the natural colours of cement and aggregates without the addition of pigments, approximately eight sample walls were created. These samples were also used to test concreting the most geometrically complex parts, such as backwards-inclining walls.

The outer walls were concreted in three sections with a height of approximately four and a half metres.

Form panels were cut at the factory using digital patterns and were delivered to the construction site in complete modules. Due to the unusually high ambient temperatures during construction (summer 2003), in conjunction with the large wall thickness, the hydration heat when setting the concrete resulted in temperatures which meant that temporary formwork water cooling was required.

As the city of Freiburg functions as a role model with regard to low-energy buildings, all public buildings are constructed in accordance with the Low Energy Building Standard as per the Freiburg calculation method. This results in a permitted thermal energy consumption value of 65 kWh/(m<sup>2</sup>a) for areas with normal temperature. The existing energy consumption is 59 kWh/(m<sup>2</sup>a) and thereby clearly meets the specifications.







Project title Double Church for Two Faiths

Location Freiburg, Germany

Design year(s) 1999

Construction year(s) 2002 – 2004

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